

Software version V1.0.00

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GLP® Fusion EXO Wash User Manual – Revision B

This document covers fixture software version V1.0.00

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## 1. Safety

## Key to symbols

The following symbols are used in the Fusion EXO Wash 30 lighting fixture's user documentation:



**Warning!** Safety hazard. Risk of severe injury or death.



**Warning!** See user manual for important safety information.



Warning! Risk of eye injury.



**Warning!** Hazardous voltage. Risk of lethal or severe electric shock.



Warning! Fire hazard.



## General safety information

# Read this manual carefully before installing, using or servicing the Fusion EXO Wash 30 lighting fixture.

If you have any doubts or questions about how to use the fixture safely, contact your GLP® supplier for assistance. Your GLP supplier will be happy to help.

The user documentation for GLP Fusion EXO Wash 30 lighting fixtures consists of:

- This document, the **EXO Wash 30 User Manual**, supplied with the fixture and available for download from www.glp.de. The User Manual contains important safety information and installation instructions that the installer and user must read.
- The **EXO Wash 30 DMX Channel Index**, available for download from www.glp.de. The Channel Index is a separate guide to the DMX control channel layout and DMX commands available.

All documents are available for download from www.glp.de.

The Fusion EXO Wash 30 is intended for use by experienced professionals with the knowledge and skills to set up, operate, and maintain high-powered, remotely controlled lighting equipment safely and efficiently. These operations require expertise that may not be provided in this Manual or in the User Manual.

• Respect all warnings and directions given in the fixture's user documentation and on the fixture. Read the user documentation and familiarize yourself with the safety precautions it contains before installing or using the fixture. GLP and affiliated



companies will take no responsibility for damage or injury resulting from disregard for the information in the user documentation.

- Check the GLP website at www.glp.de and make sure that you have the latest version of this manual. Check the fixture software version indicated on page 2 of this manual and then use the fixture's control panel to check the version installed in the fixture. If the versions are not the same, this manual may still cover the fixture, because software updates do not always affect the way you use the fixture. However, it is possible that this manual does not match the fixture perfectly. Software release notes can help clarify this question. You can consult software release notes and download the correct version of this manual on the GLP website if necessary.
- Make all user documentation available to all installers and operators. Save this document for future reference.
- If you have any questions about the safe operation of the fixture, please contact an authorized GLP distributor (see list of distributors at www.glp.de).
- Use the fixture only as directed in this manual. Observe all markings in this manual and on the fixture.
- Refer all repairs and any service operation not described in this manual to a technician authorized by GLP.
- The light source in this fixture must not be changed by the end user.
- Read and follow the user documentation for all additional equipment.



#### **Electrical safety**

- Do not allow the fixture to become immersed. Do not expose the fixture to highpressure water projections.
- Keep any unused connectors on the fixture sealed with their protective caps at all times, both when the fixture is in use and when not in use.
- Use only a source of AC mains power that complies with local building and electrical codes and has both overload and ground fault (earth fault) protection.
- Ensure that the fixture is electrically connected to ground (earth).
- Disconnect the fixture from AC mains power before carrying out any installation or maintenance work and when the fixture is not in use.
- Disconnect the fixture from power immediately if any seal, cover, cable, connector or other component is damaged, defective, deformed or showing signs of overheating. Do not reapply power until the fixture has been repaired and made safe by a technician authorized by GLP.
- Check that all power distribution equipment, cables and connectors are in perfect condition, rated for the electrical requirements of all connected devices, suitable for their application and suitable for the installation environment.



- Use only Neutrik PowerCON TRUE1 cable connectors for AC mains power input at the fixture's Mains IN connector and for relaying AC mains power from one fixture's Mains OUT (Thru) connector to another fixture's Mains IN connector.
- Use minimum 14 AWG or 1.5 mm<sup>2</sup> power input and relay cables that are minimum 16 A-rated and temperature-rated to suit the application. In the USA and Canada the cables must be UL-listed, type SJT or equivalent. In the EU the cables must be type H05VV-F or equivalent.
- Do not connect devices to power in a chain if the total maximum current draw of all the devices in the chain when added together will exceed the current rating of any cable or connector used at any point in the chain. The supplied power input cable is rated as follows:
  - US power cable: 16 A, 14 AWG, UL-listed, E304117, SJT, 4.9 ft.
  - EU power cable: 16 A, 1.5 mm<sup>2</sup>, H07RN-F, 1.5 m.

Do not connect more than four (4) Fusion EXO Wash 30 fixtures to power in a chain at 100-120 V, 60 Hz.

Do not connect more than eight (8) Fusion EXO Wash 30 fixtures to power in a chain at 200-240 V, 50 Hz.

- The voltage and frequency at the Mains OUT socket are the same as the voltage and frequency applied to the Mains IN socket. Only connect devices to the Mains Out socket that accept this voltage and frequency.
- Fusion EXO Wash 30 fixtures do not have a user-replaceable fuse. If you suspect that a fuse has blown, disconnect the fixture from power and send it to a technician authorized by GLP for repair.



## Fire safety and protection from burns

- Do not operate the fixture if the ambient temperature (Ta) exceeds 40° C / 104° F.
- The surface of the fixture's casing can reach up to 90° C / 194° F during operation. Avoid contact by persons and materials. Do not install the fixture in a location where there is a risk of accidental contact. Allow the fixture to cool for at least 20 minutes before handling
- Keep the fixture well away from flammable materials.
- Keep all combustible materials (e.g. fabric, wood, paper) at least 0.5 m / 20 in. away from the fixture.
- Ensure that there is free and unobstructed airflow around the fixture.
- Do not illuminate surfaces within 0.5 m / 20 in. of the fixture. The light output from the fixture is powerful enough to cause burns or fire in illuminated objects at very close range.
- Do not stick filters, masks or other materials onto the fixture. Do not block the light output in any way. The front surface becomes hot during operation and can melt or



ignite objects that are in contact with the surface. Ensure that the front surface Is clean and unobstructed at all times in order to prevent a fire hazard and damage to the fixture.

• The fixture's optical components can focus the sun's rays, creating a risk of fire and damage. Do not expose the front of the fixture to sunlight or any other intense light source, even from an angle.



## Eye safety

- The EXO Wash 30 is classified as a Risk Group 3 lighting fixture according to EN 62471. Possibly hazardous radiation emitted. Do not stare into the light output from the fixture. May be harmful to the eyes.
- Do not look at the fixture's light output with optical instruments or any device that may concentrate the light output.
- Make sure that persons near to or working on the fixture are not looking directly into the light output when the fixture lights up suddenly. This can happen when power is applied, when the fixture receives a DMX signal, or when certain control menu items are selected.
- The warning below is printed on the fixture. If the warning becomes impossible to read, replace it with a label reproduced from this illustration:

Risk Gr	oup 3	- W	/ARNING
			optical
			product.
			ing lamp.
Eye injur	y may r	result!	

• Provide well-lit conditions to reduce the pupil diameter of anyone working on or near the fixture.



#### Strobe safety

- Flashing light, particularly at 5 30 Hz, may cause seizures in persons with photosensitive epilepsy. Do not use strobe effects for extended periods.
- Comply with local regulations on the use of strobe lighting and notify the public in advance with highly visible warning signs when strobe effects are used.
- If a seizure occurs, stop using strobe effects. Seek professional medical help. Note the time that the seizure starts and finishes. Call emergency medical help urgently if

the seizure lasts more than five minutes, if it is the person's first seizure, or if the person is injured. While waiting for help to arrive, protect the affected person from injuring themselves on hard or sharp objects. If necessary, move the person to a safe place. Lay them on their side with their head supported to prevent it from hitting the floor. Loosen any tight clothing around their neck. Do not use force to hold the person or restrict their movements. Do not put anything in their mouth, including your fingers.



#### Installation safety and protection from personal injury

- Installation must be performed by qualified personnel only and carried out in accordance with all locally applicable regulations such as DIN VDE 0711-217.
- The fixture is not portable when installed.
- Ensure that the supporting structure and installation hardware used can hold at least ten times the weight of the load that they support.
- Fasten the fixture to a structure or surface only as directed in this manual and only with hardware that is specifically designed and rated for its purpose. Do not use a safety cable as the primary means of support. Check that installation hardware is in perfect condition. Fasteners must be steel grade 8.8 strength or better. Rigging clamps must be half-coupler type that completely encircle the rigging truss chord.
- If the fixture is installed in a location where it may cause injury or damage if it falls, install as directed in this manual a safety cable or similar secondary attachment that will hold the fixture if a primary attachment fails. The secondary attachment must be approved by an official body such as TÜV as a safety attachment for the weight that it secures, it must comply with EN 60598-2-17 Section 17.6.6, and it must be able to support a static suspended load that is ten times the weight that it secures.
- If the fixture is installed in a location where it may be exposed to forces such as wind pressure, vibration or movement, make sure that the installation can withstand these forces. Monitor weather forecasts constantly. Take down the installation immediately if there is any risk of weather conditions that could destabilize the installation.
- Check that all covers and items of rigging hardware are secure before using the fixture. Do not operate the fixture with missing or damaged covers, shields or any optical component.
- Restrict access below the work area and work from a stable platform whenever installing, servicing or moving the fixture.
- If the fixture becomes damaged, stop using it immediately and disconnect it from power. Do not attempt to use a fixture that is obviously damaged.
- Do not modify the fixture in any way not described in its user documentation.
- Install genuine GLP parts only.

## 2. Avoiding damage to the fixture

# Important! Follow the directions in this section carefully, or the fixture may suffer damage that is not covered by the product warranty.

#### **General precautions**

Do not drop the fixture or expose it to mechanical stress.

Protect the onboard LCD display and control panel from shocks, or they may suffer damage that is not covered by the product warranty.

Do not expose the fixture to heat (from other lighting fixtures for example).

Clean optical components only as directed. Oils, solvents, and other chemicals commonly used for cleaning can damage the lens coatings and surfaces.

Use only original spare parts. Do not make any structural modifications to the fixture or you will void the product warranty.

#### Avoiding damage from light sources and heat

Do not point the front of the fixture towards the sun or other strong light sources. Strong light can cause internal damage to the fixture, melting components or starting an internal fire within seconds.

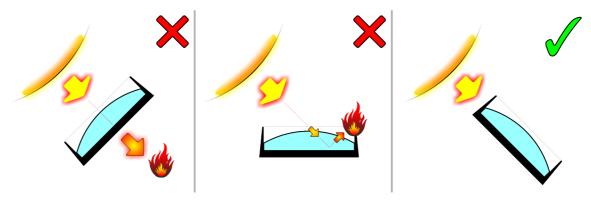


Figure 1. Avoiding damage from light sources

Damage can occur whether the fixture is powered on or off. See Figure 1. Damage can also occur if the light hits the front of the fixture at an angle: the fixture does not need to be pointing *directly* at the sun or other light source.

To avoid problems from strong light sources:

- Do not expose the front of the fixture to sunlight or any other strong light source.
- In outdoor applications during daylight, make sure that the front face of the fixture is shielded or points away from the sun, even when not in use.
- Do not aim other high-powered beam lights directly at the fixture.

Do not operate the fixture in ambient temperatures above 40° C / 104° F. Allow free airflow around the fixture.

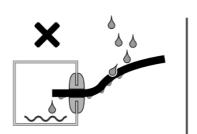
## IP rating

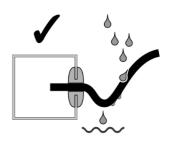
EXO Wash 30 fixtures are IP65-rated:

- IP stands for Ingress (entry into the fixture) Protection.
- The first figure **6** in the rating means that fixtures are protected against the entry of dust and airborne particles.
- The second figure **5** in the rating means that fixtures are protected against the entry of rain and water projections from all angles. Fixtures are not protected against immersion in water and they are not protected against high-pressure water jets.

## Avoiding damage from water and humidity

- Do not install EXO Wash 30 fixtures in a location where water can pool around the fixture or allow EXO Wash 30 fixtures to become submerged in any other way. Do not aim low- or high-pressure water jets at fixtures.
- Keep all unused connectors on the fixture sealed with their protective caps, both when the fixture is being used and when it is not in use.
- In outdoor and high-humidity environments, use IP65-rated power and data connectors and cable (an IP65 rating means that the item is protected against the entry of water from rain, projections and low-pressure jets as well as the entry of dust). When assembling connectors and installing them on cable, follow the manufacturer's instructions (see www.neutrik.com) and ensure that an IP65 rating is maintained for the complete assembly. Use only the following cable connectors:
  - IP65-rated 5-pin XLR connectors for data IN and OUT (THRU)
  - Neutrik powerCON TRUE1 NAC3FX-W for Power IN
  - Neutrik powerCON TRUE1 NAC3MX-W for Power OUT (THRU).
- Apply a dielectric grease (available from electrical suppliers) to connector terminals and caps to prevent corrosion and/or electrical short circuits.
- Make sure that cables open into dry areas or sealed junction boxes. Moisture can be drawn along cables by capillary action or pressure variations resulting from thermal expansion.
- See drawing on right. Arrange cables so that they arrive at connectors from below. Make sure that it is impossible for water to flow down cables and accumulate at connectors. If necessary, provide extra





cable slack and create 'drip loops' before connectors.

• Create loose cable bends only. Do not subject connections to bending forces or allow connections to bear the weight of long lengths of cable.

#### Avoiding damage from dust and airborne particles

- Carry out regular visual inspections of the fixture to make sure that there is no accumulation of dirt, especially on the front of the fixture.
- If cleaning is necessary, follow the instructions in 'Service' on page 48.

#### Transportation and storage

- Transport the fixture in its original packaging or a suitably designed flight case to protect it from damage caused by shocks during transportation.
- Release the tilt lock and support the fixture's head with the original packaging inserts or flight case inserts during transportation.
- Store the fixture in a dry location when not in use.

#### **GLP Service and Support**

Contact information for the nearest GLP Service and Support is available online at www.glp.de/en/service, by email at info@glp.de, or by telephone at the following numbers:

- GLP Germany: +49 (7248) 927 19-55
- GLP N. America: +1 818 767-8899
- GLP UK: +44 1392 690140
- GLP Asia: +852 (3151) 7730
- GLP Nordic: +46 737 57 11 40

## 3. EXO Wash 30 overview

The Fusion EXO Wash 30 from GLP is a powerful LED-based wash light fixture with fast pan and tilt, 4 to 54 degree variable zoom and seven independently controllable RGBW zones.

The fixture can be controlled by DMX or by settings on its built in color LCD control panel. An optional wireless DMX module can be fitted to enable LumenRadio wireless control. The fixture has a built-in battery to allow the display to be operated for setup before mains power is connected.

The EXO Wash 30 can be used indoors in permanent and temporary installations. Its rugged construction and IP65 rating mean that it can also be used outdoors in temporary installations if precautions are taken to prevent immersion in water and damage from direct sunlight. It can stand on a horizontal surface or be suspended from a suitable structure as described in Section 4.

The EXO Wash 30 is not suitable for household use, for use in any location where unattended children have access to it, or for use in permanent outdoor installations.

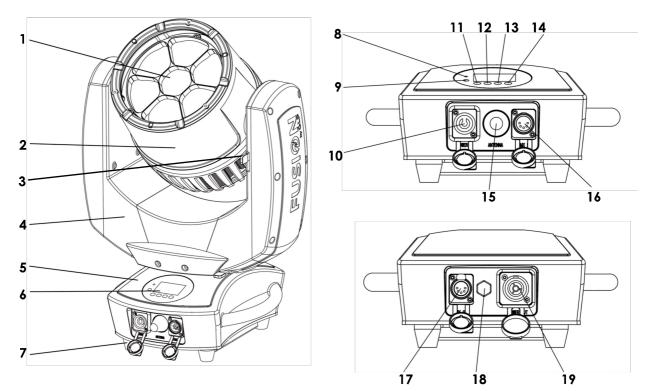


Figure 2. EXO Wash 30 overview

- 1 Output lens
- 2 Head
- 3 Tilt lock
- 4 Yoke
- 5 Base
- 6 Control panel
- 7 Rubber feet

- 8 Wireless indicator
- 9 Battery button
- 10 PowerCON TRUE1 input
- 11 Mode / Esc button
- 12 Up button
- 13 Down button
- 14 Enter button
- 15 Optional wireless antenna
- 16 5 pin XLR DMX input
- 17 5 pin XLR DMX link out
- 18 Vent valve
- 19 PowerCON TRUE1 link out

## 4. Installation



**Warning!** Read 'Safety' starting on page 5 for important safety information that you must understand before you install or operate the fixture. Install EXO Wash 30 fixtures only as described in this chapter, or you may create an installation that is unsafe.

Install the fixture at least 0.5 m / 20 in. away from combustible materials (wood, textiles, paper, etc.), 0.5 m / 20 in. away from any surface that will be illuminated, and a safe distance away from any flammable materials (volatile spirits, etc.).

It is the installer's responsibility to provide a stable, secure supporting structure that is suitable for the environment and application and that meets all applicable codes and legal requirements. Note the requirement to secure lighting fixtures with safety cables in temporary installations.

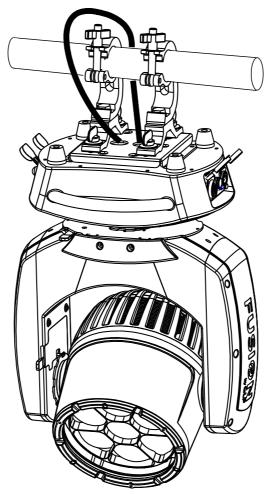
#### Permitted mounting options

An EXO Wash 30 fixture may be installed in one of the following ways:

- 1. Fastened to a rigging truss or similar structure at any angle by means of truss couplers or other clamps fixed to the two Omega brackets which attach to the half-turn couplers on the underside of the base.
- 2. Standing upright on the base on a horizontal surface.

#### Securing fixtures with a safety cable

In temporary installations, if a fixture can cause injury or damage if it falls you must secure it with a secondary attachment such as a safety cable that will hold it if the primary means of attachment fails. The safety cable must be approved for the weight that it secures. In multiple installations, each fixture must have its own safety cable.



To secure an EXO Wash 30 fixture with a safety cable:

Figure 3. Safety cable attachment

1. Loop a safety cable around a secure anchoring point such as a truss beam or fixed structure so that it will catch the fixture if a rigging clamp fails. Take up as much slack as possible in the safety cable (by looping it more than once around the bar, for example).

2. See Figure 3 and Figure 4. Fasten the safety cable through the slot "B" on the underside of the fixture base. Check that the fixture is now secured.

#### Installing on a rigging truss or similar structure

You can suspend an EXO Wash 30 fixture from a rigging truss or pipe using suitable clamps attached to the Omega Brackets supplied with the EXO Wash 30.

If you are going to install the fixture hanging vertically downwards from a horizontal rigging truss or pipe, you can fasten it to the truss using G-clamps. If you are going to install the fixture in any other orientation, you must use half-coupler clamps that completely surround the truss chord or pipe.

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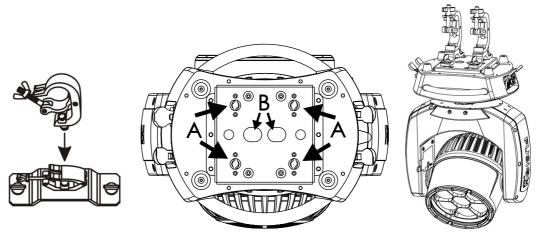


Figure 4. Omega bracket fasteners

1. Attach suitable clamps to the Omega brackets.

2. Line up the fasteners of the Omega bracket with the holes "A" in the base of the EXO Wash 30 as shown in Figure 4. The brackets may be installed either way round so the cabling is in line with the bar or at right angles to it.

3. Lock the Omega brackets onto the EXO Wash 30 by turning the fasteners through 90 degrees.

4. Attach the clamp to the truss or structure. Ensure that the head and yoke of the fixture will not collide with any fixed objects as the fixture moves. Ensure that the fixture has sufficient clearance to any adjacent surfaces or objects.

5. Secure the fixture with a safety cable through slots "B" as described in the previous section.

#### Standing on a horizontal surface

To install an EXO Wash 30 fixture on a horizontal surface:

1. Check that the surface is secure and can safely hold the weight of the fixture plus all hardware and cables.

2. Stand the fixture firmly on the rubber feet fitted to the base of the unit. Ensure that the head and yoke of the fixture will not collide with any fixed objects as the fixture moves. Ensure that the fixture has sufficient clearance to any adjacent surfaces or objects.

## 5. AC mains power



**Warning!** Read 'Safety' starting on page 5 for important safety information that you must understand before you install or operate the fixture.

Check that all cables and connectors are suitable for the installation environment and application (see recommendations in 'Avoiding damage to the fixture' on page 10).

Use H07 RN-F 3 x 2.5mm / SJT 12 AWG cables with original Neutrik powerCON TRUE1 connectors to supply power to fixtures.

Line up the keyways in connectors carefully. Do not try to insert or twist a connector if it feels excessively stiff. Resistance to insertion or twisting is a sign that connectors may be incorrectly lined up.

Keep connectors sealed with their rubber caps at all times when not in use.

#### Included items

The EXO Wash 30 is supplied with a power cord with Neutrik powerCON TRUE1 connector.

#### Connecting to power

The AC mains power supply must include a connection to ground / protective earth. It must be protected against ground / earth leakage and overload. The fixture's internal auto-sensing power supply accepts AC power at 100-240 V, 50/60 Hz. Do not connect the fixture to power at any other voltage or to an external dimmer.

The EXO Wash 30 does not have a power ON/OFF switch. Power is applied to the fixture as soon as the power cable becomes live.

The EXO Wash 30 has a 3-conductor Neutrik powerCON TRUE1 Mains IN power input socket that accepts AC power from a TRUE1 female cable connector. Although TRUE1 connectors support hot plugging, it is still good practice to shut down power to power cables before connecting them to fixtures.

To connect the fixture to power:

1. If convenient, shut down power to the power input cable.

2. Note the position of the keys and keyways on the TRUE1 power cable connector and Mains IN socket and align them with each other. Insert the cable connector into the socket and twist clockwise to lock. Do not use force. If the connector feels excessively stiff, remove it and check again that it is lined up correctly.

3. Before applying power to the power cable, check that nobody is looking directly into the front of the fixture.

To disconnect the fixture from power, pull the latch on the cable connector outwards to release it, then twist the connector counterclockwise and pull to remove it from the socket.

#### Installing power connectors

If you intend to draw power from convenience receptacles / consumer mains power sockets, it is possible to install a suitable cord cap / power plug on the supplied power cord / input cable. If you do this, check that the cord cap / plug is rated minimum 250 V, 16 A, that it has a connection to ground / earth and that it has an integral cable grip. Follow the cord cap / plug manufacturer's assembly instructions.

If you need to install a Neutrik powerCON TRUE1 connector on a power cable, follow the instructions given in the Support area of the Neutrik website at www.neutrik.com.

Respect the color coding used in the supplied power cable and in your local mains power wiring system. US and EU systems use the color coding shown below:

	Live or L	Neutral or N	Ground / Earth or 🕀
US system	Black	White	Green
EU system	Brown	Blue	Yellow/green

#### Connecting multiple fixtures to power in a chain

You can connect fixtures to power in a daisy-chain to simplify your power circuit layout.

EXO Wash 30 fixtures have 2.5 mm<sup>2</sup> internal wiring from Power IN to Power THRU connectors.



**Warning!** Do not connect more than four (4) EXO Wash 30 fixtures in total to power in one chain at 100-120 V, 60 Hz. Do not connect more than eight (8) EXO Wash 30 fixtures in total to power in one chain at 200-240 V, 50 Hz.

The power input cable supplied with the fixture is rated 16 A maximum. Add together the maximum current draw ratings of all the devices that you intend to connect to power in a daisy chain and do not create a chain with a total maximum current draw of more than 16 A, or you will create a risk of fire and electric shock.

To connect fixtures to power in a chain:

1. Obtain power relay cables that have male and female Neutrik powerCON TRUE1 connectors. Cables must be minimum 14 AWG or 1.5mm<sup>2</sup>, rated minimum 16 A and suitable for the environment and application.

2. Connect the power input cable to the Mains IN socket of the first fixture as described under 'Connecting to power' on page 18.

3. Connect a relay cable to the Mains OUT / THRU socket of the first fixture and to the Mains IN socket of the second fixture.

4. If you are using 100-120 V, 60 Hz AC mains power you can continue connecting EXO Wash 30 fixtures Mains OUT / THRU socket to Mains IN socket until the chain contains a maximum of four (4) fixtures in total. If you are using 200-240 V, 50 Hz AC mains power you can continue connecting fixtures Mains OUT to Mains IN until the chain contains a maximum of eight (8) fixtures total.

## 6. Connecting to DMX data

Check that all cables and connectors are suitable for the installation environment and application (see recommendations in 'Avoiding damage to the fixture' on page 10).

Use digital 110 Ohm DMX cable with IP65 5-pin XLR connectors to supply DMX data to fixtures.

Keep connectors sealed with their rubber caps at all times when not in use.

The EXO Wash 30 has two 5-pin XLR sockets for IN and THRU connections to a DMX data link. EXO Wash 30 fixtures support the USITT DMX 512A signal protocol. They also support RDM (Remote Device Management).

The 5-pin XLR connectors use standard pin allocations:

1	Signal Ground
2	Data –
3	Data +
4	Not used
5	Not used

The DMX cable should start at the console and be daisy-chained through each fixture to be controlled using the DMX input and DMX link out connectors. If you need to split the DMX cable, use a powered DMX splitter.

If you would like advice with planning and installing a DMX link, your GLP supplier will be happy to provide assistance.

## 7. Starting and stopping operation



**Warning!** Before you apply power to the fixture or operate it after a blackout, make sure that nobody is looking directly into the front of the fixture.

The EXO Wash 30's TRUE1 mains power input connector supports hot-plugging, and connecting and disconnecting a live power cable is an option, especially if you need to shut down power urgently, but it is still good practice to shut down power to the AC mains power circuit before connecting and disconnecting power cables.

To start operation, check that nobody is looking into the front of the fixture, then apply power to the AC mains power circuit.

To stop operation, shut down power to the AC mains power circuit.



## 8. Features

The EXO Wash 30 unit has the following features:

#### Position

Pan rotation 630°(3.9 sec) or 540°(4.3 sec), Tilt rotation 267°(2.2 sec) with 16 bit resolution. The fixture will automatically reposition if knocked – this option can be disabled from the menu. The Pan and Tilt movements can be inverted using the menu.

#### Color

The fixture has seven zones of Red/Green/Blue/White (RGBW) color mixing LEDs. Depending on the DMX mode these have up to 16-bit dimming and can be controlled independently, or using macro patterns.

The zones/pixels are arranged as shown in the diagram below.

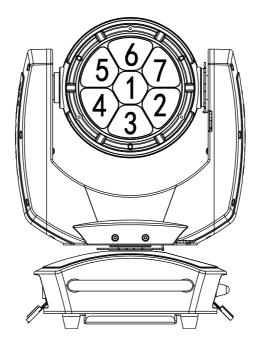


Figure 5. Pixel order

#### Dimming

See Figure 6. You can select from two dimming curves using the control panel or the *Control / Settings DMX* channel:

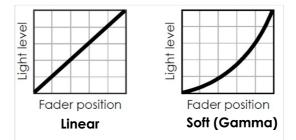


Figure 6. Dimming curves

- Linear sets dimming so that it appears to increase and decrease evenly throughout the dimming range.
- Soft gives finer control at low light levels and coarser control at high light levels.

The default setting is Soft.

#### Strobe / shutter

A variety of strobing and fading effects can be produced by the fixture.

#### Zoom

The beam angle of the fixture can be adjusted (zoom) from 4° to 54°. The zoom operation can be inverted using the menu.

#### Behavior when the fixture is not receiving a DMX signal

You can set the fixture to react in three different ways if no DMX signal is present (if the fixture is being controlled by DMX but the DMX signal stops, or if you apply power to the fixture when no DMX signal is present):

- Blackout sets the fixture to black out. This is the default setting.
- Hold sets the fixture to continue obeying the last DMX values it received. If no DMX signal was being received, the fixture will black out.
- **Preset Scene** sets the fixture to output a preset scene which you have previously captured from an incoming DMX state using the Manual Control > Capture Scene menu option. You can also manually set the control values (or edit the captured values) using the attribute settings in the Manual Control menu.

All these settings are available via DMX on the *Control / Settings* channel and in the fixture's control panel.

## 9. Control menus and onboard display



**Warning!** DMX control is disabled when the control menus are active. Be prepared for the fixture to emit strong light as soon as you exit the control menus.

The control panel and onboard LCD display provide access to user settings, readouts and utilities.

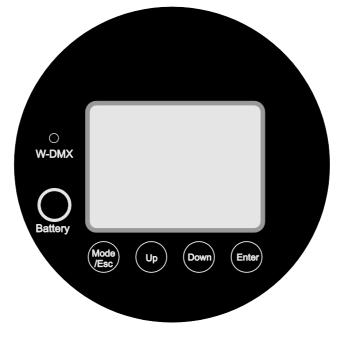


Figure 7. Onboard display

The four control buttons have the following functions:

**MODE/ESC**: Activate the menus or go back one level towards the top of the menu.

UP: Scroll up or increase a number.

**DOWN**: Scroll down or reduce a number.

**ENTER**: Activate the control panel if it is in sleep mode. Then enter a menu, select a setting or implement a command.

When you apply power to the fixture, it boots up. After it has booted, the panel displays the default screen.

The **Battery** button is used to power up the control panel for setup before mains is connected to the unit. Battery mode can be disabled in the menu.

The **W-DMX** indicator shows when wireless DMX is being received, if the optional wireless module has been fitted.

DMX control is disabled when the control menus are active.

#### **Display options**

The illuminated LCD display lets you change fixture settings. The display has a battery backup so that you can change the settings before mains is connected to the fixture. See Chapter 9 for more details.

Using the Control / Settings DMX channel or the fixture's control panel you can:

Set **display modes** using the Fixture Settings > Display Mode option:

- **On**: The display stays on constantly. This setting can be useful when you are configuring or servicing the fixture.
- **Auto**: The display will automatically switch off after a few seconds even if the fixture is not receiving a valid control signal or if it has detected an error.

**Invert the display** using the Fixture Settings > Display Orientation option, so it is easier to read if the fixture is hanging upside down.

#### **Display Locking**

On the Fixture Settings > Lock menu, you can configure the display to lock after a period of time to prevent accidental changes to the options.

You can set a custom lock code using the Fixture Settings > Lock > Set Passcode option. If you do not set a custom code, the default code is 0000.

#### **Manual Control**

Using the Manual Control menu you can set fixed values to the fixture's control channels, as if it was in DMX control mode 1. This is useful when testing.

#### LED PWM frequency

The LEDs in the unit are dimmed using Pulse Width Modulation (PWM) which can sometimes cause flickering on cameras. The *Fixture Settings > PWM* option allows you to select different frequencies for the PWM to fix such issues. The higher frequencies may cause reduced dimming performance.

#### Fan control

The fixture has internal cooling fans. In a noise critical situation you can slow these down using the *Fixture Settings > Fan Mode* option. The normal setting is *Regulated* which will adjust the fan speed automatically. If you set the option to *Low* the fan speed is kept slow but this may result in the fixture overheating and reducing its output.

The fixture has an additional fan near the lens to clear condensation. You can control how this fan works using the *Fixture Settings > Defog* option.

#### Fixture information

The **Information** menu in the control panel gives access to items of information from the fixture's sensors and memory. You can check temperature sensor readouts, see total operating hours counters, and see software version number, for example.

## Pan disable / Tilt disable

These options allow you to disable the startup reset movements or disable the drive of the pan and/or tilt motors. The options are

- Off: Normal motor control
- **Reset Disabled**: The fixture will not do its power on reset sequence on this motor but the motor is still controlled. This can be used when a fixture is mounted in a confined space and would collide with an obstruction if it did the reset sequence.
- **Current Disabled**: The motor drive function is completely disabled. This is mostly used for service or diagnostics.

#### Preset settings and factory defaults

You can store three different versions of option settings using the Service > Service Advanced > Save Settings menu and load them using the Load Settings > Preset 1-2-3 options. These allow you to quickly set up the fixture in a particular configuration. Settings are stored after a power off/on cycle and after a reset.

Two options are available in the fixture's control panel for deleting multiple custom settings and restoring defaults:

- Service > Default Settings reloads all the fixture's factory default settings except DMX address, DMX mode, captured scene, preset settings and offset values. This option returns the fixture to baseline settings without affecting its basic configuration in an installation.
- Service > Service Advanced > Factory Backup reloads all the fixture's factory default settings including DMX address, DMX mode, and erases all storage. This option reinitializes the fixture completely and returns to its state when it left the factory.

## 10. Control menu layout

Menus			Notes
DMX ADDRESS	<b>1</b> - 512		Enter DMX address
	Compressed – 13 channels		
CONTROL	Standard – 22 channels		Select DMX control mode
MODE	Extended – 37 channels		
	Pixel – 50 channels		
CONTROL	DMX		Wired DMX control
PROTOCOL	WIRELESS		Wireless DMX control (optional module)
	Pan Invert	Off / On	Invert Pan movement
	Tilt Invert	Off / On	Invert Tilt movement
	Position Feedback	Off / <b>On</b>	If On, fixture repositions if knocked
	Pan Disabled	Off / Reset Disabled / Current Disabled Off / Reset Disabled /	Disable motor drive for service
	Tilt Disabled	Current Disabled	service
	Zoom Invert	Off / On	Inverts Zoom movement
	Dimmer Curve	Soft (Gamma) / Linear	Dimming curve
	No Signal	Blackout / Hold / run Captured Scene	Action when no DMX signal
	Capture Scene	Press ENTER to capture scene	Store scene for no signal
fixture settings	PWM	600 Hz / 2200 Hz / <b>3000 Hz</b> / 4800 Hz / 9600 Hz / 25000 Hz	Frequency of LED dimming
SETTINGS	Display Mode	Auto / On / Off	Display blanking
	Display Orientation	Normal / Upside Down	Display reversing
	Max Temperature	60 – <b>90C</b> / 140-194F	Sets overheat temperature where shutdown will occur
	Fan Mode	<b>Regulated</b> / High / Medium / Low	Set fan speed control
	Load Settings	Preset 1 / Preset 2 / Preset 3	Press ENTER for 3 sec to confirm
	Lock	Off / On /. Set Passcode	Lock the control panel
	Defog	Off / <b>On</b> / Quick	Settings for lens defogging fan
	Battery	<b>On</b> / Off	Disable the battery operation of the control panel
	Reboot		Press ENTER for 3 sec to confirm
		Pan Coarse 0-255	
	Manual function control	Pan Fine 0-255	]
MANUAL		Tilt Coarse 0-255	These values can be set
CONTROL		Tilt Fine 0-255	manually or from a DMX
	(DMX Mode 1)	Dimmer 0-255	state using Capture Scene
		Shutter 0-255	
		Virtual color wheel 0-255	-

		Red 0-255	
		Green 0-255	
		Blue 0-255	
		White 0-255	
		Zoom 0-255	
		Control 0-255	
	Capture Scene		Press ENTER for 3 sec to capture incoming DMX state
	Firmware Version	ver x.x	Fixture firmware version
	Fixture Details	Serial xx / RDM xx	Show fixture serial, RDM unique ID
INFORMATIO	Device Life	Total / User	Shows power cycles, Power Hours, LED Hours
N	DMX Link Status	Refresh Rate (Hz) / Frame Length / Mode Length	Details of DMX signal
	Temperatures	XXX	Unit temperatures
	Fan Speeds	Fan1	
	Error Log	Ххх	
	Test All	Running	Press Enter to start test, Menu or Enter to stop
	Test Pan only	Running	
	Test Tilt only	Running	
SERVICE	Test LED only	Running	
	Test Zoom only	Running	
	Default Settings		See Note 1 below
	Service Advanced	See below for menu	Hold Enter for 6 sec to enter this menu
FACTORY MENU	This menu is for use by au	thorized service technicians only	

Note 1: Default Setting will return all options to default except DMX address, Control Mode. It does not erase captured scene, preset settings or offset values

Default settings are written in **BOLD type.** 

#### Service Advanced menu

Hold down Enter for 6 seconds to access this menu.

#### Menus

Notes

Pan Disable	Off/On		
Tilt Disable	Off/On		
Units	°C / °F		
Offsets	Tilt	XXX	
Oliseis	Zoom	XXX	
	Power Hours		
	Power Cycles		
Reset Counter	LED Hours		
Coomer	Max Temperature		
	Temperature Unit		
	Preset 1		
Save Settings	Preset 2		
	Preset 3		
Factory Backup			See Note 2 below

Note 2: Factory backup will reset all options to default, erase captured scene, erase preset settings, erase offset values. User Hour counter and Temperature Unit will not be affected.

## 11. DMX control modes overview

The following DMX control modes are available in the EXO Wash 30.

#### DMX Mode 1: Compact

Compact Mode uses 13 DMX channels.

It provides 16-bit control of pan and tilt, dimming and a shutter with strobe and ramp up/down effects. It has a virtual color wheel effect (color presets with rotation effects) and RGBW color mixing.

Compact Mode also provides control of zoom and a control / settings channel that lets you configure the feature and adjust settings remotely via DMX.

#### Mode 1 Compact

1	Pan
2	Pan fine
3	Tilt
4	Tilt fine
5	Dimmer
6	Shutter
7	Virtual color wheel
8	Red
9	Green
10	Blue
11	White
12	Zoom
13	Control / Settings

#### DMX Mode 2: Standard

Standard Mode uses 22 DMX channels.

It provides 16-bit control of pan and tilt, 16-bit control of dimming and a shutter with strobe and ramp up/down effects. It has a virtual color wheel effect (color presets with rotation effects), color temperature control and 16-bit RGBW color mixing.

Standard Mode also gives access to a range of Pattern FX with variable speed and crossfading parameters, control of zoom and a control / settings channel that lets you configure the feature and adjust settings remotely via DMX.

#### Mode 2 Standard

1	Pan		
2	Pan fine		
2 3	Tilt		
4	Tilt fine		
5	Dimmer		
6	Dimmer fine		
7	Shutter		
8	Virtual color wheel		
9	CTC		
10	Red		
11	Red fine		
12	Green		
13	Green fine		
14	Blue		
15	Blue fine		
16	White		
17	White fine		
18	Pattern		
19	Pattern Speed		
20	Pattern Fading		
21	Zoom		
22	Control / Settings		

#### DMX Mode 3: Extended

Extended Mode uses 37 DMX channels.

It provides 16-bit control of pan and tilt, 16-bit control of dimming and a shutter with strobe and ramp up/down effects. It has a virtual color wheel effect (color presets with rotation effects), color temperature control and 16-bit RGBW color mixing.

Extended Mode also has two layers:

- Layer 1, the background layer, has 16-bit color dimming and a shutter effect that includes a random pixel strobe.
- Layer 2, the top layer, has a range of Pattern FX with 16-bit dimming, shutter effects and color control via a virtual color wheel (color presets) and 16-bit RGBW color mixing. Layer 2 also has variable speed and crossfading parameters

Extended Mode also provides control of zoom and a control / settings channel that lets you configure the feature and adjust settings remotely via DMX.

#### Mode 3 Extended

1	Pan		
2	Pan fine		
3	Tilt		
4	Tilt fine		
5	Dimmer		
6	Dimmer fine		
7	Shutter		
8	Virtual color wheel		
9	CTC		
10	Red		
11	Red fine		
12	Green		
13	Green fine		
14	Blue		
15	Blue fine		
16	White		
17	White fine		
18	Layer 1 Color dimmer		
19	Layer 1 Color dimmer fine		
20	Layer 1 Shutter		
21	Layer 2 Pattern dimmer		
22	Layer 2 Pattern dimmer fine		
23	Layer 2 Pattern shutter		
24	Layer 2 Pattern color wheel		
25	Layer 2 Pattern red		
26	Layer 2 Pattern red fine		
27	Layer 2 Pattern green		
28	Layer 2 Pattern green fine		
29	Layer 2 Pattern blue		
30	Layer 2 Pattern blue fine		
31	Layer 2 Pattern white		
32	Layer 2 Pattern white fine		
33	Layer 2 Pattern		
34	Layer 2 Pattern speed		
35	Layer 2 Pattern fading		
36	Zoom		
37	Control / Settings		

#### DMX Mode 4: Pix

Pix Mode uses 50 DMX channels.

It provides 16-bit control of pan and tilt, 16-bit control of dimming and a shutter with strobe and ramp up/down effects. It has a virtual color wheel effect (color presets with rotation effects), color temperature control and 16-bit RGBW color mixing.

Pix Mode also gives access to a range of Pattern FX with variable speed and crossfading parameters, control of zoom and a control / settings channel that lets you configure the feature and adjust settings remotely via DMX.

Finally, Pix Mode provides independent RGBW color mixing on each of the fixture's seven pixels.

#### Mode 4 Pix

1	Pan
2	Pan fine
3	Tilt
3 4	Tilt fine
5	Dimmer
6	Dimmer fine
7	Shutter
8	Virtual color wheel
9	СТС
10	Red
11	Red fine
12	Green
13	Green fine
14	Blue
15	Blue fine
16	White
17	White fine
18	Pattern
19	Pattern Speed
20	Pattern Fading
21	Zoom
22	Control / Settings
23	Pixel 1 Red
24	Pixel 1 Green
25	Pixel 1 Blue
26	Pixel 1 White
27	Pixel 2 Red
28	Pixel 2 Green
29	Pixel 2 Blue
30	Pixel 2 White
31	Pixel 3 Red
32	Pixel 3 Green
33	Pixel 3 Blue
34	Pixel 3 White
35	Pixel 4 Red
36	Pixel 4 Green
37	Pixel 4 Blue
38	Pixel 4 White
39	Pixel 5 Red
40	Pixel 5 Green
41	Pixel 5 Blue
42	Pixel 5 White
43	Pixel 6 Red
44	Pixel 6 Green
44	Pixel 6 Blue
46	Pixel 6 White
40	Pixel 7 Red
47	
40	Pixel 7 Green Pixel 7 Blue
49 50	Pixel 7 White
50	

## 12. DMX control channel layout tables

# DMX Mode 1: Compact

#### 11 DMX Channels

11	DMX Channe	215					Default	
Channel		Command	DMX range P			Defa		-
1				ige	Percent		DMX	Fade
1	Pan Pan fine	– Pan left–right	0	65535	0	100	32767	Fade
2	Tilt							
4	Tilt fine	— Tilt up–down	0	65535	0	100	32767	Fade
5	Dimmer	Intensity 0–100%	0	255	0	100	0	Fade
-	Binnie	Shutter closed	0	4	0	1.6	0	1000
		Single flash when change on dimmer channel	5	9	2.0	3.5		
		Sync ramp up slow-fast	10	39	3.9	15.3		
		Sync ramp down slow-fast	40	69	15.7	27.1		
6	Shutter	Sync ramp up-down slow-fast	70	99	27.5	38.8	0	Snap
		Sync double flash (slow–fast)	100	129	39.2	50.6		Shap
		Random strobe pixel (slow-fast)	130	159	51.0	62.4		
		Random strobe all (slow–fast)	160	199	62.7	78.0		
		Sync strobe (1 Hz–10 Hz)	200	250	78.4	98.0	-	
		Shutter open	251	255	98.4	100		
		Off (RGBW)	0	7	0	2.7	0	Snap
		Color 01 - Red	8	15	3.1	5.9		Snap
		Color 02 - Amber	16	23	6.3	9.0		Snap
		Color 03 - Warm Yellow	24	31	9.4	12.2		Snap
		Color 04 - Yellow	32	39	12.5	15.3		Snap
		Color 05 - Green	40	47	15.7	18.4		Snap
		Color 06 - Turquoise	48	55	18.8	21.6		Snap
		Color 07 - Cyan	56	63	22.0	24.7		Snap
	Color wheel	Color 08 - Blue	64	71	25.1	27.8		Snap
7	effect	Color 09 - Lavender	72	79	28.2	31.0		Snap
	ellect	Color 10 - Mauve	80	87	31.4	34.1		Snap
		Color 11 - Magenta	88	95	34.5	37.3		Snap
		Color 12 - Pink	96	103	37.6	40.4		Snap
		Color 13 - White 3200K	104	111	40.8	43.5		Snap
		Color 14 - White 5600K	112	119	43.9	46.7		Snap
		Color 15 - White 7200K	120	127	47.1	49.8	-	Snap
		Stop	128	128	50.2	50.2		Snap
		Rainbow colors crossfade slow > fast	129	223	50.6	87.5		Fade
		Random colors crossfade slow > fast	224	255	87.8	100		Fade
8	Red	Red intensity 0-100%	0	255	0	100	0	Fade
9	Green	Green intensity 0-100%	0	255	0	100	0	Fade
10	Blue	Blue intensity 0-100%	0	255	0	100	0	Fade
11 12	White Zoom	White intensity 0-100%	0	255 255	0	100	0	Fade
12	200m	Wide-narrow	U	200	U	100	U	Fade

DMX MODE 1

|--|

		No function	0	9	0.0	3.5		
		Dimmer curve: Extra-soft (3s hold)	10	15	3.9	5.9		
		Dimmer curve: Linear (3s hold)	16	21	6.3	8.2		
		Display mode: Auto (3s hold)	22	27	8.6	10.6		
		Display mode: On (3s hold)	28	33	11.0	12.9		
		Display mode: Off (3s hold)	34	39	13.3	15.3		
		Display orientation: Normal (3s hold)	40	45	15.7	17.6		
		Display orientation: Inverted (3s hold)	46	51	18.0	20.0		
		No DMX: Blackout (3s hold)	52	57	20.4	22.4		
		No DMX: Hold (3s hold)	58	63	22.7	24.7		
		No DMX: Stand-alone (3s hold)	64	69	25.1	27.1		
		Fan mode: Regulated (3s hold)	70	75	27.5	29.4		
		Fan mode: High (3s hold)	76	81	29.8	31.8		
		Fan mode: Medium (3s hold)	82	87	32.2	34.1		
		Fan mode: Low (3s hold)	88	93	34.5	36.5		
		Position feedback: Off (3s hold)	94	99	36.9	38.8		
		Position feedback: On (3s hold)	100	105	39.2	41.2		
		No function	106	117	41.6	45.9		
		Tilt inversion: Off (3s hold)	118	123	46.3	48.2		
	Control /	Tilt inversion: On (3s hold)	124	129	48.6	50.6		
13	Settings	Pan inversion: Off (3s hold)	130	135	51.0	52.9	0	Snap
	Jennigs	Pan inversion: On (3s hold)	136	141	53.3	55.3		
		Zoom inversion: Off (3s hold)	142	147	55.7	57.6		
		Zoom inversion: On (3s hold)	148	153	58.0	60.0		
		Defog: Off	154	159	60.4	62.4		
		Defog: On	160	165	62.7	64.7		
		Defog: Quick	166	171	65.1	67.1		
		Load Settings Preset1	172	177	67.5	69.4		
		Load Settings Preset2	178	183	69.8	71.8		
		Load Settings Preset3	184	189	72.2	74.1		
		PWM 600 Hz (5s hold)	190	195	74.5	76.5		
		PWM: 2200 Hz (5s hold)	196	201	76.9	78.8		
		PWM: 3000 Hz (5s hold)	202	207	79.2	81.2		
		PWM: 4800 Hz (5s hold)	208	213	81.6	83.5		
		PWM: 9600 Hz (5s hold)	214	219	83.9	85.9		
		PWM: 25 kHz (5s hold)	220	225	86.3	88.2		
		No function	226	231	88.6	90.6		
		Return to default settings	232	237	91.0	92.9		
		Reset Pan/Tilt (3s hold)	238	243	93.3	95.3		
		Reset Head (3s hold)	244	249	95.7	97.6		
		Reset All (3s hold)	250	255	98.0	100		

## DMX Mode 2: Standard

#### 22 DMX Channels

1         Pan         Pan leff-right         0         65535         0         100         32767         Fc           3         Tilt         Tilt up-down         0         65535         0         100         32767         Fc           5         Dimmer         Intensity 0-100%         0         65535         0         100         32767         Fc           6         Dimmer         Intensity 0-100%         0         65535         0         100         32767         Fc           6         Dimmer         Intensity 0-100%         0         4         0         1.6           Single flash when change on dimmer         5         9         2.0         3.5         3.5           7         Shufter         Sync ramp up-down slow-fast         40         69         15.7         27.1           8         Sync ramp up-down slow-fast         100         129         32.2         50.6         88.8         80         51.0         62.4         80.0           Sync ramp up-down slow-fast         130         159         51.0         62.4         80.0         80.0         80.0         80.0         80.0         80.0         80.0         80.0         80.0         80.0<	Channel		Command		DMX range		Percent		Fade
2         Pon fine         Pon fine         Pon fine         O         65535         0         100         32/67         Prof.           3         Tilt         Tilt up-down         0         65535         0         100         32767         Fc           5         Dimmer         Intensity 0-100%         0         45535         0         100         32767         Fc           6         Dimmer fine         Shutter closed         0         4         0         1.6         Signer comp up slow-fost         10         39         3.9         15.3           7         Shufter         Sync romp up clown slow-fost         100         122         3.8         0         Sr           8         Sync romp up-clown slow-fost         130         159         51.0         62.4         Random strobe pikel (slow-fost)         130         159         51.0         62.4         Random strobe pikel (slow-fost)         160         197         62.7         78.0           8         Off (RGBW)         0         7         0         2.7         78.0         Sr	1			Tur					Tuuc
3         Tilt 4         Tilt up-down         0         65335         0         100         32767         Fc           6         Dimmer binmer         Intensity 0-100%         0         65335         0         100         32767         Fc           6         Dimmer fine         Intensity 0-100%         0         45335         0         100         32767         Fc           7         Shufter         Single fish when change on dimmer channel         5         9         2.0         3.5         3.5           9         Color comp up slow-fast         40         69         15.7         27.1         8.8         0         Sr           9         Shufter         Sync ramp up-down slow-fast         100         129         92.2         50.6         62.4         Ra           9         Color double fidsh (slow-fast)         130         159         51.0         62.4         Ra         63.0           9         Color 01 - Red         8         15         31.1         57         51.0         62.4         Ra           9         Color 03 - Warm Yellow         24         31         9.4         12.2         63.7         55         55         55         55			Pan left-right	0	65535	0	100	32767	Fade
4         11H fine         11H fine         11H fine         11U p-30Wn         0         65335         0         100         32/67         Fc           5         Dimmer fine         Intensity 0-100%         0         65535         0         100         32/67         Fc           6         Dimmer fine         Shutter closed         0         4         0         1.6         3.5           7         Shutter         Single flash when change on dimmer channel         5         9         2.0         3.5           9         Sync ramp up slow-fast         100         39         3.9         15.3         3.7           7         Shutter         Sync ramp up-down slow-fast         100         129         39.2         50.6           8         Color dom strobe pixel (slow-fast)         130         159         51.0         62.7         78.0           9         Color 01 - Red         8         15         3.1         5.9         50.6         62.7         78.0           9         Off (RG8W)         0         7         0         2.7         78.4         79.5           100         12.2         12.5         15.3         12.5         15.3         75.7     <									
5         Dimmer fine Dimmer fine         Intensity 0-100%         0         65535         0         100         32767         Fc           6         Dimmer fine         Shutter closed         0         4         0         1.6         5         9         2.0         3.5         5         7         7         Shutter closed         0         4         0         1.6         5         9         2.0         3.5         5         7         7         Snot for cramp up slow-fast         10         39         3.9         15.3         5         5         7         7         3.5         5         Sync ramp up-down slow-fast         40         69         15.7         27.1         5         3.8         0         Sr         Sync ramp up-down slow-fast         100         129         32.2         50.6         8         8         60         Sr         Sr         Sr         Sr         Sr         Color         62.0         7         78.0         Sync strobe (1 Hz-10 Hz)         200         250         78.4         100         122         78.0         Sr         Sr <th></th> <th></th> <th>Tilt up-down</th> <th>0</th> <th>65535</th> <th>0</th> <th>100</th> <th>32767</th> <th>Fade</th>			Tilt up-down	0	65535	0	100	32767	Fade
6         Dimmer fine         Internstry U-100%         0         65333         0         100         32/6/         rc           Shutter closed         0         4         0         1.6         0         0         7         0         2.7         78.0         0         0         7         0         2.7         78.0         0         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5 </th <th></th> <th></th> <th></th> <th>•</th> <th>15505</th> <th>•</th> <th>100</th> <th>007/7</th> <th>- I</th>				•	15505	•	100	007/7	- I
Shutter closed         0         4         0         1.6           Single flash when change on dimmer channel         5         9         2.0         3.5           Sync ramp up slow-fast         10         39         3.9         15.3           Sync ramp down slow-fast         40         69         15.7         27.1           Sync ramp up down slow-fast         70         97         27.5         38.8         0         5           Sync double flash (slow-fast)         100         129         39.2         50.6         6           Random strobe pixel (slow-fast)         130         159         51.0         62.4         8           Random strobe oll (slow-fast)         130         159         51.0         62.4         8         15         3.1         5.9           Color 01 - Red         8         15         3.1         5.9         5.7 </th <th></th> <th></th> <th>Intensity 0–100%</th> <th>0</th> <th>65535</th> <th>0</th> <th>100</th> <th>32/6/</th> <th>Fade</th>			Intensity 0–100%	0	65535	0	100	32/6/	Fade
8         Color wheel effect         Single flash when change on dimmer channel         5         9         2.0         3.5           7         Shutter         Sync ramp up slow-fast         10         39         3.9         15.3           Sync ramp up slow-fast         40         69         15.7         27.1         3.8.8           Sync double flash (slow-fast)         100         129         39.2         50.6           Random strobe pixel (slow-fast)         130         159         51.0         62.4           Random strobe oll (slow-fast)         130         159         51.0         62.4           Random strobe oll (slow-fast)         160         199         62.7         78.0           Sync strobe (1 Hz-10 Hz)         200         255         98.4         100           Off (RGBW)         0         7         0         2.7         Color 03 - Nam Yellow         24         31         9.4         12.2         Color 04 - Yellow         32         39         12.5         38.4         100         100         12.4         31         9.4         12.2         12.2         12.4         31         9.4         12.2         12.2         12.5         38.3         16.5         31.4         34.1			Shutter closed	0	4	0	1.6		
Shutter         Sync ramp down slow-fast         40         69         15.7         27.1           Sync ramp up-down slow-fast         70         99         27.5         38.8         0         Sr           Sync double flash (slow-fast)         100         129         39.2         50.6         30.6           Random strobe pixel (slow-fast)         130         159         51.0         62.4         62.4           Random strobe oli (slow-fast)         160         199         62.7         78.0         5           Sync strobe (1 Hz-10 Hz)         200         255         78.4         98.0         5         5           Shutter open         251         255         84.4         100         5			•	5	9	2.0	3.5		
7         Shutter         Sync ramp up-down slow-fast Sync double flash (slow-fast)         70         99         27.5         38.8         0         Sr           Random strobe pixel (slow-fast)         130         129         39.2         50.6         Signe double flash (slow-fast)         130         159         51.0         62.4         Random strobe all (slow-fast)         130         159         51.0         62.4         Random strobe all (slow-fast)         130         159         51.0         62.4         Random strobe all (slow-fast)         130         159         62.7         78.0           Sync strobe (1 Hz-10 Hz)         200         250         78.4         98.0         51.1         5.7         57.7         56.4         100         70         0         2.7         75.0         55.7         57.7			Sync ramp up slow-fast	10	39	3.9	15.3		
8         Color wheel effect         Sync double flash (slow-fast)         100         129         39.2         50.6           Random strobe pikel (slow-fast)         130         159         51.0         62.4           Random strobe pikel (slow-fast)         160         199         62.7         78.0           Sync strobe (1 Hz-10 Hz)         200         250         78.4         98.0           Shutter open         251         255         98.4         100           Off (RGBW)         0         7         0         2.7           Color 02 - Amber         16         23         6.3         9.0           Color 03 - Warm Yellow         24         31         9.4         12.2           Color 04 - Yellow         32         39         12.5         15.3           Color 05 - Green         40         47         15.7         18.4           Color 06 - Turquoise         48         55         18.8         21.6           Color 07 - Cyan         56         63         22.0         24.7           Color 10 - Mauve         80         87         31.4         34.1           Color 12 - Pink         96         103         37.6         40.4 <td< th=""><th></th><th></th><td>Sync ramp down slow-fast</td><td>40</td><td>69</td><td>15.7</td><td>27.1</td><td></td><td></td></td<>			Sync ramp down slow-fast	40	69	15.7	27.1		
Sync double flash (slow-fast)         100         129         39.2         50.4           Random strobe pikel (slow-fast)         130         159         51.0         62.4           Random strobe pikel (slow-fast)         160         199         62.7         78.0           Sync strobe (1 Hz-10 Hz)         200         250         78.4         98.0           Shutter open         251         255         98.4         100           Color 01- Red         8         15         3.1         5.9           Color 02 - Amber         16         23         6.3         9.0           Color 03 - Warm Yellow         24         31         9.4         12.5           Color 04 - Yellow         32         39         12.5         18.4           Color 05 - Green         40         47         15.7         18.4           Color 07 - Cyan         56         63         22.0         24.7           Color 08 - Blue         64         71         25.1         27.8           Color 10 - Mauve         80         87         31.4         34.1           Color 12 - Pink         96         103         37.6         40.4           Color 13 - White 3200K         104	7	Shutter	Sync ramp up-down slow-fast	70	99	27.5	38.8	0	Snap
Random strobe pixel (slow-fast)         130         159         51.0         62.4           Random strobe all (slow-fast)         160         199         62.7         78.0           Sync strobe (1 Hz-10 Hz)         200         255         78.4         98.0           Shutter open         251         255         78.4         98.0           Off (RGBW)         0         7         0         2.7           Color 01 - Red         8         15         3.1         5.9           Color 02 - Amber         16         23         6.3         9.0           Color 04 - Yellow         32         39         12.5         15.3           Color 05 - Green         40         47         15.7         18.4           Color 07 - Cyan         56         63         22.0         24.7           Color 08 - Blue         64         71         25.1         27.8           Color 01 - Mauve         80         87         31.4         34.1           Color 11 - Magenta         88         95         34.5         37.3           Color 12 - Pink         96         103         37.6         40.4           Color 13 - White 3200K         111         40.8				100	129		50.6		
Random strobe all (slow-fast)         160         199         62.7         78.0           Sync strobe (1 Hz-10 Hz)         200         250         78.4         98.0           Shutter open         251         255         98.4         100           Shutter open         251         255         98.4         100           Color 01 - Red         8         15         3.1         5.9           Color 02 - Amber         16         23         6.3         9.0           Color 03 - Warm Yellow         24         31         9.4         12.2           Color 04 - Yellow         32         39         12.5         15.3           Color 05 - Green         40         47         15.7         18.4           Color 06 - Turquoise         48         55         18.8         21.6           Color 07 - Cyan         56         63         22.0         24.7           Color 10 - Mauve         80         87         31.4         34.1           Color 11 - Magenta         72         79         28.2         31.0           Color 13 - White 3200K         104         111         40.8         43.5           Color 13 - White 3200K         102         127									
Sync strobe (1 Hz-10 Hz)         200         250         78.4         98.0           Shutter open         251         255         98.4         100         0         7         0         2.7         Sr           Color 01- Red         8         15         3.1         5.9         Sr         Sr         Color 02- Amber         16         23         6.3         9.0           Color 02- Amber         16         23         6.3         9.0         Sr         Color 03- Warm Yellow         24         31         9.4         12.2         Sr           Color 03- Warm Yellow         32         39         12.5         15.3         Sr         Sr           Color 05- Green         40         47         15.7         18.4         Sr         Sr         Color 07- Cyan         56         6.3         22.0         24.7         Sr         Sr           Color 06- Turquoise         48         55         18.8         21.6         Sr         Sr <th></th> <th></th> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
Shutter open         251         255         98.4         100           Image: Shutter open         0         7         0         2.7         Sr           Color 01 - Red         8         15         3.1         5.9         Sr           Color 02 - Amber         16         2.3         6.3         9.0         Sr           Color 03 - Warm Yellow         24         31         9.4         12.2         Sr           Color 04 - Yellow         32         39         12.5         15.3         Sr           Color 05 - Green         40         47         15.7         18.4         Sr           Color 07 - Cyan         56         63         22.0         24.7           Color 10 - Mauve         80         87         31.4         34.1           Color 11 - Magenta         88         95         34.5         37.3           Color 12 - Pink         96         103         37.6         40.4									
8         Color wheel effect         Off (RGBW) Color 02 - Amber         0         7         0         2.7         Sr Color 02 - Amber         Sr Color 02 - Amber         16         23         6.3         9.0           Color 03 - Warm Yellow         24         31         9.4         112.2         15.3         Sr Color 03 - Warm Yellow         32         39         12.5         15.3           Color 04 - Yellow         32         39         12.5         15.3         Sr         Sr           Color 05 - Green         40         47         15.7         18.4         Sr         Sr           Color 06 - Turquoise         48         55         18.8         21.6         Sr         Sr           Color 07 - Cyan         56         63         22.0         24.7         Sr         Sr           Color 09 - Lavender         72         79         28.2         31.0         Sr         Sr           Color 11 - Magenta         88         95         34.5         37.3         Sr         Sr           Color 13 - White 3200K         104         111         40.8         43.5         Sr         Sr           Color 15 - White 7200K         120         127         47.1         44.8								-	
8         Color 01 - Red         8         15         3.1         5.9           Color 02 - Amber         16         23         6.3         9.0           Color 03 - Warm Yellow         24         31         9.4         12.2           Color 04 - Yellow         32         39         12.5         15.3           Color 05 - Green         40         47         15.7         18.4           Color 07 - Cyan         56         63         22.0         24.7           Color 08 Blue         64         71         25.1         27.8           Color 10 - Mauve         80         87         31.4         34.1           Color 11 - Magenta         88         95         34.5         37.3           Color 12 - Pink         96         103         37.6         40.4           Color 13 - White 3200K         104         111         40.8         45.5           Color 14 - White 5600K         112         129									Snap
8         Color 02 - Amber Color 03 - Warm Yellow         24         31         9.4         12.2 (3)         Sr           Color 04 - Yellow         32         39         12.5         15.3 (5)         Sr           Color 05 - Green         40         47         15.7         18.4 (2)         Sr           Color 06 - Turquoise         48         55         18.8         21.6         Sr           Color 07 - Cyan         56         63         22.0         24.7           Color 07 - Cyan         56         63         22.0         24.7           Color 07 - Lavencier         72         79         28.2         31.0           Color 10 - Mauve         80         87         31.4         34.1           Color 10 - Mauve         80         87         31.4         34.1           Color 11 - Magenta         88         95         34.5         37.3           Color 12 - Pink         96         103         37.6         40.4           Color 13 - White 3200K         104         111         40.8         43.5           Stop         120         127         47.1         48.7           Stop         120         127         7.1         48.6 <th></th> <th></th> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Snap</td>									Snap
B         Color 03 - Warm Yellow         24         31         9.4         12.2           Color 04 - Yellow         32         39         12.5         15.3         Sr           Color 05 - Green         40         47         15.7         18.4         Sr           Color 06 - Turquoise         48         55         18.8         21.6         Sr           Color 06 - Turquoise         48         55         18.8         21.6         Sr           Color 07 - Cyan         56         63         22.0         24.7         Sr           Color 07 - Cyan         56         64         71         25.1         27.8           Color 07 - Lavender         72         79         28.2         31.0         O         Sr           Color 11 - Magenta         88         95         34.5         37.3         Color 12 - Pink         Sd         104         111         40.8         43.5           Color 13 - White 3200K         104         111         40.8         43.5         Sr         Sr           Color 14 - White 5600K         112         119         43.9         46.7         Sr           Color 15 - White 7200K         120         127         47.1         49									Snap
B         Color wheel effect         Color 04 - Yellow         32         39         12.5         15.3           8         Color 05 - Green         40         47         15.7         18.4         Sr           Color 06 - Turquoise         48         55         18.8         21.6         Sr         Sr           Color 08 - Blue         64         71         25.1         27.8         Sr         Sr           Color 09 - Lavender         72         79         28.2         31.0         Sr         Sr           Color 10 - Mauve         80         87         31.4         34.1         Sr         Sr           Color 11 - Magenta         88         95         34.5         37.3         Sr         Sr           Color 12 - Pink         96         103         37.6         40.4         Sr         Sr           Color 14 - White 3200K         112         119         43.9         46.7         Sr         Sr           Color 15 - White 7200K         120         127         47.1         49.8         Sr         Sr           Stop         128         128         50.2         50.2         Sr         Sr           Random colors crossfade slow > fast								0	Snap
8         Color wheel effect         Color 05 - Green         40         47         15.7         18.4           8         Color 06 - Turquoise         48         55         18.8         21.6         Sr           Color 07 - Cyan         56         63         22.0         24.7         Sr         Sr           Color 08 - Blue         64         71         25.1         27.8         31.0         Sr           Color 10 - Mauve         80         87         31.4         34.1         Sr         Sr           Color 11 - Magenta         88         95         34.5         37.3         Sr         Sr           Color 12 - Pink         96         103         37.6         40.4         Sr         Sr           Color 13 - White 3200K         104         111         40.8         43.5         Sr         Sr           Color 15 - White 7200K         120         127         47.1         49.8         Sr         Sr           Stop         128         128         50.2         50.2         Sr         Sr           Rainbow colors crossfade slow > fast         129         223         50.6         87.5           Random colors crossfade slow > fast         128									Snap
8         Color wheel effect         Color 06 - Turquoise         48         55         18.8         21.6         Sr           0         Sr         Color 07 - Cyan         56         63         22.0         24.7         Sr         Sr           Color 08 - Blue         64         71         25.1         27.8         Sr         Sr           Color 09 - Lavender         72         79         28.2         31.0         Sr         Sr           Color 11 - Magenta         88         95         34.5         37.3         Sr         Sr           Color 12 - Pink         96         103         37.6         40.4         Sr         Sr           Color 13 - White 3200K         104         111         40.8         43.5         Sr           Color 14 - White 5600K         112         119         43.9         46.7         Sr           Color 15 - White 7200K         120         127         47.1         49.8         Sr           Stop         128         50.2         50.2         Sr         Sr         Sr           Rainbow colors crossfade slow > fast         129         223         50.6         87.5           Random colors crossfade slow > fast         224 <th></th> <th></th> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Snap</td>									Snap
8         Color wheel effect         Color 07 - Cyan         56         63         22.0         24.7           Color 08 - Blue         64         71         25.1         27.8         5r           Color 09 - Lavender         72         79         28.2         31.0         5r           Color 10 - Mauve         80         87         31.4         34.1         3r.1         3r.1         3r.1         3r.1         3r.1         3r.1         3r.1         Color 10 - Mauve         80         87         31.4         3r.1         Sr         Sr           Color 11 - Magenta         88         95         34.5         37.3         Color 12 - Pink         96         103         37.6         40.4         Sr         Sr         Color 13 - White 3200K         104         111         40.8         43.5         Sr         Sr         Sr         Color 14 - White 5600K         112         119         43.9         46.7         Sr         <									Snap
8         Color wheel effect         Color 08 - Blue         64         71         25.1         27.8         Sr           Color 09 - Lavender         72         79         28.2         31.0         Sr         Sr           Color 10 - Mauve         80         87         31.4         34.1         Sr         Sr           Color 11 - Magenta         88         95         34.5         37.3         Sr         Sr           Color 12 - Pink         96         103         37.6         40.4         Sr         Sr           Color 13 - White 3200K         104         111         40.8         43.5         Sr         Sr           Color 13 - White 3200K         102         127         47.1         49.8         Sr         Sr           Color 15 - White 7200K         120         127         47.1         49.8         Sr         Sr           Stop         128         128         50.2         50.2         Sr         Sr         Sr           Ramdom colors crossfade slow > fast         129         223         50.6         87.5         R           10000         16         18         6.3         7.1         990         990         970         22									Snap
8         Color wheel effect         Color 09 - Lavender         72         79         28.2         31.0         0         Sr           Color 10 - Mauve         80         87         31.4         34.1         34.1         Sr         Sr           Color 11 - Magenta         88         95         34.5         37.3         Color 12 - Pink         96         103         37.6         40.4           Color 13 - White 3200K         104         111         40.8         43.5         Sr         Sr         Sr         Sr           Color 15 - White 3200K         104         111         40.8         46.7         Sr				64					Snap
P         Color 10 - Mauve         80         87         31.4         34.1         Sr           Color 11 - Magenta         88         95         34.5         37.3         Sr           Color 12 - Pink         96         103         37.6         40.4         Sr           Color 13 - White 3200K         104         111         40.8         43.5         Sr           Color 14 - White 5600K         112         119         43.9         46.7         Sr           Color 15 - White 7200K         120         127         47.1         49.8         Sr           Stop         128         128         50.2         50.2         Sr         R           Rainbow colors crossfade slow > fast         129         223         50.6         87.5         Fc           Random colors crossfade slow > fast         129         223         50.6         87.5         Fc           10000         16         18         6.3         7.1         990         Fc           9900         22         24         8.6         9.4         9700         25         27         9.8         10.6           9600         28         30         11.0         11.8         93.1	8		Color 09 - Lavender	72	79	28.2	31.0		Snap
Color 12 - Pink         96         103         37.6         40.4           Color 13 - White 3200K         104         111         40.8         43.5           Color 14 - White 3200K         112         119         43.9         46.7           Color 15 - White 7200K         120         127         47.1         49.8           Stop         128         128         50.2         50.2           Rainbow colors crossfade slow > fast         129         223         50.6         87.5           Random colors crossfade slow > fast         224         255         87.8         100           RAW         0         15         0         5.9           10000         16         18         6.3         7.1           9900         19         21         7.5         8.2           9800         22         24         8.6         9.4           9700         25         27         9.8         10.6           9600         28         30         11.0         11.8           9600         28         30         11.0         11.8           9600         34         36         13.3         14.1           9300 <t< th=""><th></th><td rowspan="5">епест</td><td>Color 10 - Mauve</td><td>80</td><td>87</td><td>31.4</td><td>34.1</td><td>Snap</td></t<>		епест	Color 10 - Mauve	80	87	31.4	34.1		Snap
Color 13 - White 3200K         104         111         40.8         43.5           Color 14 - White 5600K         112         119         43.9         46.7           Color 15 - White 7200K         120         127         47.1         49.8           Stop         128         128         50.2         50.2           Rainbow colors crossfade slow > fast         129         223         50.6         87.5           Random colors crossfade slow > fast         224         255         87.8         100           Fc         RAW         0         15         0         5.9           10000         16         18         6.3         7.1           9900         19         21         7.5         8.2           9800         22         24         8.6         9.4           9700         25         27         9.8         10.6           9600         28         30         11.0         11.8           9500         31         33         12.2         12.9           9400         34         36         13.3         14.1           9300         37         39         14.5         15.3           9200			Color 11 - Magenta	88	95	34.5	37.3		Snap
Color 14 - White 5600K         112         119         43.9         46.7           Color 15 - White 7200K         120         127         47.1         49.8           Stop         128         128         50.2         50.2           Rainbow colors crossfade slow > fast         129         223         50.6         87.5           Random colors crossfade slow > fast         129         223         50.6         87.5           Random colors crossfade slow > fast         224         255         87.8         100           RAW         0         15         0         5.9         10000         16         18         6.3         7.1           9900         19         21         7.5         8.2         9800         22         24         8.6         9.4           9700         25         27         9.8         10.6         9600         28         30         11.0         11.8           9500         31         33         12.2         12.9         92.0         9400         34         36         13.3         14.1           9300         37         39         14.5         15.3         9200         40         42         15.7         16.5 <th></th> <td>Color 12 - Pink</td> <td>96</td> <td>103</td> <td>37.6</td> <td>40.4</td> <td>Snap</td>			Color 12 - Pink	96	103	37.6	40.4		Snap
Color 15 - White 7200K         120         127         47.1         49.8         Sr           Stop         128         128         50.2         50.2         Sr         Sr           Rainbow colors crossfade slow > fast         129         223         50.6         87.5         Fc           Random colors crossfade slow > fast         224         255         87.8         100         Fc           RAW         0         15         0         5.9         10000         16         18         6.3         7.1           9900         19         21         7.5         8.2         9800         22         24         8.6         9.4           9700         25         27         9.8         10.6         9600         28         30         11.0         11.8           9500         31         33         12.2         12.9         9400         34         36         13.3         14.1           9300         37         39         14.5         15.3         9200         40         42         15.7         16.5           9100         43         45         16.9         17.6         9000         46         48         18.0         18			Color 13 - White 3200K	104	111	40.8	43.5		Snap
Stop         128         128         50.2         50.2           Rainbow colors crossfade slow > fast         129         223         50.6         87.5           Random colors crossfade slow > fast         224         255         87.8         100           RAW         0         15         0         5.9         50.6         87.5           10000         16         18         6.3         7.1         9900         19         21         7.5         8.2         9800         22         24         8.6         9.4         9700         25         27         9.8         10.6         9600         28         30         11.0         11.8         9500         31         33         12.2         12.9         9400         34         36         13.3         14.1         9300         37         39         14.5         15.3         9200         40         42         15.7         16.5         9100         43         45         16.9         17.6         9000         46         48         18.0         18.8									Snap
Rainbow colors crossfade slow > fast         129         223         50.6         87.5         Fc           Random colors crossfade slow > fast         224         255         87.8         100         Fc           RAW         0         15         0         5.9         10000         16         18         6.3         7.1           9900         19         21         7.5         8.2         9800         222         24         8.6         9.4           9700         25         27         9.8         10.6         9600         28         30         11.0         11.8           9500         31         33         12.2         12.9         9300         37         39         14.5         15.3           9200         40         42         15.7         16.5         9100         43         45         16.9         17.6           9000         46         48         18.0         18.8         18.8         18.8									Snap
Random colors crossfade slow > fast         224         255         87.8         100         Fc           RAW         0         15         0         5.9         10000         16         18         6.3         7.1           9900         19         21         7.5         8.2         9800         22         24         8.6         9.4           9700         25         27         9.8         10.6         9600         28         30         11.0         11.8           9700         25         27         9.8         10.6         9600         28         30         11.0         11.8           9500         31         33         12.2         12.9         92.9         14.5         15.3           9200         37         39         14.5         15.3         92.0         40         42         15.7         16.5           9100         43         45         16.9         17.6         9000         46         48         18.0         18.8									Snap
RAW         0         15         0         5.9           10000         16         18         6.3         7.1           9900         19         21         7.5         8.2           9800         22         24         8.6         9.4           9700         25         27         9.8         10.6           9600         28         30         11.0         11.8           9500         31         33         12.2         12.9           9400         34         36         13.3         14.1           9300         37         39         14.5         15.3           9200         40         42         15.7         16.5           9100         43         45         16.9         17.6           9000         46         48         18.0         18.8									Fade
P         10000         16         18         6.3         7.1           9900         19         21         7.5         8.2           9800         22         24         8.6         9.4           9700         25         27         9.8         10.6           9600         28         30         11.0         11.8           9500         31         33         12.2         12.9           9400         34         36         13.3         14.1           9300         37         39         14.5         15.3           9200         40         42         15.7         16.5           9100         43         45         16.9         17.6           9000         46         48         18.0         18.8									Fade
9900         19         21         7.5         8.2           9800         22         24         8.6         9.4           9700         25         27         9.8         10.6           9600         28         30         11.0         11.8           9500         31         33         12.2         12.9           9400         34         36         13.3         14.1           9300         37         39         14.5         15.3           9200         40         42         15.7         16.5           9100         43         45         16.9         17.6           9000         46         48         18.0         18.8						-			
9         9800         22         24         8.6         9.4           9700         25         27         9.8         10.6           9600         28         30         11.0         11.8           9500         31         33         12.2         12.9           9400         34         36         13.3         14.1           9300         37         39         14.5         15.3           9200         40         42         15.7         16.5           9100         43         45         16.9         17.6           9000         46         48         18.0         18.8								-	
9         Color Temperature (Kelvin)         9700         25         27         9.8         10.6           9         9600         28         30         11.0         11.8           9500         31         33         12.2         12.9           9400         34         36         13.3         14.1           9300         37         39         14.5         15.3           9200         40         42         15.7         16.5           9100         43         45         16.9         17.6           9000         46         48         18.0         18.8								_	
9         Color Temperature (Kelvin)         9600         28         30         11.0         11.8         9500         31         33         12.2         12.9         9400         34         36         13.3         14.1         9300         37         39         14.5         15.3         9200         40         42         15.7         16.5         9100         43         45         16.9         17.6         9000         46         48         18.0         18.8									
P         Color Temperature (Kelvin)         9500         31         33         12.2         12.9 </th <th></th> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
9         Temperature (Kelvin)         9400         34         36         13.3         14.1           9300         37         39         14.5         15.3           9200         40         42         15.7         16.5           9100         43         45         16.9         17.6           9000         46         48         18.0         18.8		Calar						-	
(Kelvin)         9300         37         39         14.5         15.3           9200         40         42         15.7         16.5           9100         43         45         16.9         17.6           9000         46         48         18.0         18.8	0	Temperature						-	Spap
9200404215.716.59100434516.917.69000464818.018.8	7								Snap
9100434516.917.69000464818.018.8									
9000 46 48 18.0 18.8									
								1	
			8900	40	51	19.2	20.0	1	
8800 52 54 20.4 21.2								1	
8700 55 57 21.6 22.4								1	

	1	1	T	1	
	8600	58	60	22.7	23.5
	8500	61	63	23.9	24.7
	8400	64	66	25.1	25.9
	8300	67	69	26.3	27.1
	8200	70	72	27.5	28.2
	8100	73	75	28.6	29.4
	8000	76	78	29.8	30.6
	7900	79	81	31.0	31.8
	7800	82	84	32.2	32.9
	7700	85	87	33.3	34.1
	7600	88	90	34.5	35.3
	7500	91	93	35.7	36.5
	7400	94	96	36.9	37.6
	7300	97	99	38.0	38.8
	7200	100	102	39.2	40.0
	7100	103	105	40.4	41.2
	7000	106	108	41.6	42.4
	6900	109	111	42.7	43.5
	6800	112	114	43.9	44.7
	6700	112	117	45.1	45.9
	6600	118	120	46.3	47.1
	6500	121	120	47.5	48.2
	6400	121	125	47.5	49.4
	6300	124	120	40.0	50.6
	6200		132		
		130		51.0	51.8
	6100	133	135	52.2	52.9
	6000	136	138	53.3	54.1
	5900	139	141	54.5	55.3
	5800	142	144	55.7	56.5
	5700	145	147	56.9	57.6
	5600	148	150	58.0	58.8
	5500	151	153	59.2	60.0
	5400	154	156	60.4	61.2
	5300	157	159	61.6	62.4
	5200	160	162	62.7	63.5
	5100	163	165	63.9	64.7
	5000	166	168	65.1	65.9
	4900	169	171	66.3	67.1
	4800	172	174	67.5	68.2
	4700	175	177	68.6	69.4
	4600	178	180	69.8	70.6
	4500	181	183	71.0	71.8
	4400	184	186	72.2	72.9
	4300	187	189	73.3	74.1
	4200	190	192	74.5	75.3
	4100	193	195	75.7	76.5
	4000	196	198	76.9	77.6
1	2000	199	201	78.0	78.8
	3900	177			
	3800	202	201	79.2	80.0
	3800	202	204	79.2	80.0
	3800 3700	202 205 208	204 207 210	79.2 80.4	80.0 81.2
	3800 3700 3600	202 205 208 211	204 207 210 213	79.2 80.4 81.6 82.7	80.0 81.2 82.4 83.5
	3800 3700 3600 3500 3400	202 205 208 211 214	204 207 210 213 216	79.2 80.4 81.6 82.7 83.9	80.0 81.2 82.4 83.5 84.7
	3800 3700 3600 3500 3400 3300	202 205 208 211 214 217	204 207 210 213 216 219	79.2 80.4 81.6 82.7 83.9 85.1	80.0 81.2 82.4 83.5 84.7 85.9
	3800         3700         3600         3500         3400         3300         3200	202 205 208 211 214 217 220	204 207 210 213 216 219 222	79.2 80.4 81.6 82.7 83.9 85.1 86.3	80.0 81.2 82.4 83.5 84.7 85.9 87.1
	3800 3700 3600 3500 3400 3300	202 205 208 211 214 217	204 207 210 213 216 219	79.2 80.4 81.6 82.7 83.9 85.1	80.0 81.2 82.4 83.5 84.7 85.9

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		2800	232	234	91.0	91.8		
		2700	235	237	92.2	92.9		
		2600	238	240	93.3	94.1		
		2500	241	255	94.5	100		
10 11	Red Red fine	Red intensity 0–100%	0	65535	0	100	32767	Fade
12 13	Green Green fine	Green intensity 0–100%	0	65535	0	100	32767	Fade
14 15	Blue Blue fine	Blue intensity 0–100%	0	65535	0	100	32767	Fade
16 17	White White fine	White intensity 0–100%	0	65535	0	100	32767	Fade
17	Wille lille	Static pattern	0	51	0	20.0		
		Chase animation	52	131	20.4	51.4	-	
18	Pattern	Fade animation	132	211	51.8	82.7	0	Snap
		Random	212	255	83.1	100		
19	Pattern speed	Slow-fast	0	255	0	100	0	Fade
20	Pattern fade	Slow crossfade-snap	0	255	0	100	0	Fade
21	Zoom	Wide-narrow	0	255	0	100	0	Fade
		No function	0	9	0.0	3.5		
		Dimmer curve: Extra-soft (3s hold)	10	15	3.9	5.9		
		Dimmer curve: Linear (3s hold)	16	21	6.3	8.2		
		Display mode: Auto (3s hold)	22	27	8.6	10.6		
		Display mode: On (3s hold)	28	33	11.0	12.9	-	
		Display mode: Off (3s hold)	34	39	13.3	15.3		
		Display orientation: Normal (3s hold)	40	45	15.7	17.6		
		Display orientation: Inverted (3s hold)	40	51	18.0	20.0		
		No DMX: Blackout (3s hold)	52	57	20.4	20.0		
		No DMX: Hold (3s hold)	58	63	20.4	24.7		
		No DMX: Stand-alone (3s hold)	64	69	25.1	27.1		
		Fan mode: Regulated (3s hold)	70	75	27.5	27.1		
		Fan mode: High (3s hold)	76	81	27.3	31.8		
		Fan mode: Medium (3s hold)	82	87	32.2	34.1		
		Fan mode: Low (3s hold)	88	93	34.5	36.5		
		Position feedback: Off (3s hold)	94	99	36.9	38.8		
		Position feedback: On (3s hold)	100	105	39.2	41.2		
	Control /	No function	100	117	41.6	45.9		
22	Settings	Tilt inversion: Off (3s hold)	118	123	46.3	48.2	0	Snap
	oenings	Tilt inversion: On (3s hold)	124	129	48.6	50.6		
		Pan inversion: Off (3s hold)	130	135	51.0	52.9	-	
		Pan inversion: On (3s hold)	136	141	53.3	55.3		
		Zoom inversion: Off (3s hold)	142	147	55.7	57.6		
		Zoom inversion: On (3s hold)	148	153	58.0	60.0	-	
		Defog: Off	154	159	60.4	62.4		
		Defog: On	160	165	62.7	64.7		
		Defog: Quick	166	171	65.1	67.1		
		Load Settings Preset1	172	177	67.5	69.4		
		Load Settings Preset2	172	183	69.8	71.8	1	
		Load Settings Preset3	184	189	72.2	74.1	1	
		PWM: 600 Hz (5s hold)	190	195	74.5	76.5	1	
		PWM: 2200 Hz (5s hold)	196	201	76.9	78.8	1	
		PWM: 3000 Hz (5s hold)	202	201	79.2	81.2	1	
		PWM: 4800 Hz (5s hold)	202	213	81.6	83.5	1	
		PWM: 9600 Hz (5s hold)	208	213	83.9	85.9	1	
		PWM: 25 kHz (5s hold)	214	217	86.3	88.2	-	
		1 WWW. ZJ KAZ (JS HUIU)	220	223	00.3	00.Z		

No function	226	231	88.6	90.6	
Return to default settings	232	237	91.0	92.9	
Reset Pan/Tilt (3s hold)	238	243	93.3	95.3	
Reset Head (3s hold)	244	249	95.7	97.6	
Reset All (3s hold)	250	255	98.0	100	

# DMX Mode 3: Extended

### **37 DMX Channels**

		Command	DA ran	٨X	Perc	ent	Default DMX	Fade
1	Pan	Command		Ĭ			DINK	Tuuc
2	Pan fine	Pan left-right	0	65535	0	100	32767	Fade
3	Tillt							
4	Tilt fine	Tilt up-down	0	65535	0	100	32767	Fade
5	Dimmer							
6	Dimmer fine	Intensity 0–100%	0	65535	0	100	32767	Fade
		Shutter closed	0	4	0	1.6		
		Single flash when change on dimmer						
		channel	5	9	2.0	3.5		
		Sync ramp up slow-fast	10	39	3.9	15.3		
		Sync ramp down slow-fast	40	69	15.7	27.1		
7	Shutter	Sync ramp up-down slow-fast	70	99	27.5	38.8	0	Snap
		Sync double flash (slow-fast)	100	129	39.2	50.6	-	1-
		Random strobe pixel (slow-fast)	130	159	51.0	62.4		
		Random strobe all (slow-fast)	160	199	62.7	78.0		
		Sync strobe (1 Hz–10 Hz)	200	250	78.4	98.0		
		Shutter open	251	255	98.4	100		
		Off (RGBW)	0	7	0	2.7		Snap
		Color 01 - Red	8	15	3.1	5.9		Snap
		Color 02 - Amber	16	23	6.3	9.0		Snap
		Color 03 - Warm Yellow	24	31	9.4	12.2		Snap
		Color 04 - Yellow	32	39	12.5	15.3		Snap
	Color wheel effect	Color 05 - Green	40	47	15.7	18.4	0	Snap
		Color 06 - Turquoise	48	55	18.8	21.6		Snap
		Color 07 - Cyan	56	63	22.0	24.7		Snap
		Color 08 - Blue	64	71	25.1	27.8		Snap
8		Color 09 - Lavender	72	79	28.2	31.0		Snap
		Color 10 - Mauve	80	87	31.4	34.1		Snap
		Color 11 - Magenta	88	95	34.5	37.3		Snap
		Color 12 - Pink	96	103	37.6	40.4		Snap
		Color 13 - White 3200K	104	111	40.8	43.5		Snap
		Color 14 - White 5600K	112	119	43.9	46.7		Snap
		Color 15 - White 7200K	120	127	47.1	49.8		Snap
		Stop	128	128	50.2	50.2		Snap
		Rainbow colors crossfade slow > fast	129	223	50.6	87.5		Fade
		Random colors crossfade slow > fast	224	255	87.8	100		Fade
		RAW 10000	0 16	15 18	0 6.3	5.9 7.1		
		9900	18	21	6.3 7.5	8.2		
		9800	22	24	8.6	9.4		
		9700	25	24	9.8	10.6		
		9600	28	30	11.0	11.8		
		9500	31	33	12.2	12.9		
		9400	34	36	13.3	14.1		
	Color	9300	37	39	14.5	15.3		<u> </u>
9	Temperature	9200	40	42	15.7	16.5		Snap
	(Kelvin)	9100	43	45	16.9	17.6		
		9000	46	48	18.0	18.8		
		8900	49	51	19.2	20.0		
		8800	52	54	20.4	21.2		
		8700	55	57	21.6	22.4		
		8600	58	60	22.7	23.5		
		8500	61	63	23.9	24.7		
		8400	64	66	25.1	25.9		



10			0	65535	0	100	32767	Fade
	Red	2500	241	255	94.5	100		
		2600	238	240	93.3	94.1		
		2700	235	237	92.2	92.9		
		2800	232	234	91.0	91.8		
		2900	229	231	89.8	90.6		
		3000	226	228	88.6	89.4		
		3100	223	225	87.5	88.2		
		3200	220	222	86.3	87.1		
		3300	214	210	85.1	85.9		
		3400	211	213	83.9	84.7		
		3500	208	210	82.7	83.5		
		3600	205 208	207 210	80.4 81.6	81.2 82.4		
		3800 3700	202	204	79.2	80.0		
		3900	199	201	78.0	78.8		
		4000	196	198	76.9	77.6		
		4100	193	195	75.7	76.5		
		4200	190	192	74.5	75.3		
		4300	187	189	73.3	74.1		
		4400	184	186	72.2	72.9		
		4500	181	183	71.0	71.8		
		4600	178	180	69.8	70.6		
		4700	175	177	68.6	69.4		
		4800	172	174	67.5	68.2		
		4900	169	171	66.3	67.1		
		5000	166	168	65.1	65.9		
		5100	163	165	63.9	64.7		
		5200	160	162	62.7	63.5		
		5300	154	156	60.4 61.6	61.2		
		5400	151	153	<u> </u>	60.0		
		5600 5500	148 151	150	58.0 59.2	58.8 60.0		
		5700	145	147 150	56.9	57.6		
		5800	142	144	55.7	56.5		
		5900	139	141	54.5	55.3		
		6000	136	138	53.3	54.1		
		6100	133	135	52.2	52.9		
		6200	130	132	51.0	51.8		
		6300	127	129	49.8	50.6		
		6400	124	126	48.6	49.4		
		6500	121	123	47.5	48.2		
		6600	118	120	46.3	47.1		
		6700	112	114	45.1	45.9		
		6800	112	114	43.9	43.3		
		7000 6900	106 109	108 111	41.6 42.7	42.4 43.5		
		7100	103	105	40.4	41.2		
		7200	100	102	39.2	40.0		
		7300	97	99	38.0	38.8		
		7400	94	96	36.9	37.6		
		7500	91	93	35.7	36.5		
		7600	88	90	34.5	35.3		
		7700	85	87	33.3	34.1		
		7800	82	84	32.2	32.9		
		7900	70	81	31.0	31.8		
		8000	76	73	20.0	30.6		
		8100	70	72	27.5	20.2		
		8300 8200	<u>67</u> 70	69 72	26.3 27.5	27.1 28.2		

13         Green fine Biue fine         Green fine Biue intensity 0-100%         0         65335         0         100         32767         F           16         Minite Mine         White intensity 0-100%         0         65335         0         100         32767         F           18         Layer 1 Dimmer fine         Layer 1 Dimmer fine         Layer 1 Dimmer fine         Layer 1 (background) intensity 0-100%         0         65535         0         100         32767         F           20         Layer 1 Dimmer fine         Layer 1 (background) shufter closed         0         4         0         1.6           Sync ramp up slow-fast         10         39         3.9         15.3         3.7         2.7         3.8           Sync ramp up slow-fast         100         129         39.2         5.0         0         2.4           20         Layer 2 Dimmer fine         Sync ramp up down slow-fast         100         129         39.2         5.0         0         5           21         Layer 2 Dimmer fine         Sync ramp up dow-fast         100         125         5         8.4         100           23         Layer 2 Dimmer fine         Sync ramp up dow-fast         10         39         3.9	10	Creen							
14         Blue         Blue intensity 0-100%         0         65335         0         100         32767         F           15         Blue fine         White intensity 0-100%         0         65335         0         100         32767         F           18         Layer 1 Dimmering         Layer 1 (background) intensity 0-100%         0         65535         0         100         32767         F           19         Layer 1 Dimmering         Layer 1 (background) stuffer closed         0         4         0         1.6           30         Carger 1 (background) stuffer closed         0         4         0         1.6         39.7         7.7         6           30         Carger 1 Shutter         Sync ramp up-down slow-fast         40         69         15.7         27.1         38.8         0         5         5         9         2.0         3.6         3.7         5         5         7         100         129         39.2         50.6         6.2.4         88.0         0         5         5         7         100         32767         F         5         9         2.0         3.6         3.7         5         5         7         10         3.2.5         5 <th>12</th> <th>Green Green fine</th> <th>Green intensity 0–100%</th> <th>0</th> <th>65535</th> <th>0</th> <th>100</th> <th>32767</th> <th>Fade</th>	12	Green Green fine	Green intensity 0–100%	0	65535	0	100	32767	Fade
15         Blue fine         Blue									
16         White IT         White intensity 0-100%         0         65335         0         100         32767         F           19         Layer 1 Dimmer fine         Layer 1 Dimmer fine         Layer 1 (background) intensity 0-100%         0         65335         0         100         32767         F           20         Layer 1 Dimmer fine         Layer 1 (background) shufter closed         0         4         0         1.6           Sync ramp up slow-fast         40         69         15.7         27.1         38.8         0         0         65335         0         100         32767         F           20         Layer 1 Shufter         Sync ramp up slow-fast         10         10         12         32.7         53.8         0         100         32.767         F           21         Layer 1 Shufter         Sync ramp up-down slow-fast         10         12         32.767         F         6         6         6         7         7.10         8         7			Blue intensity 0–100%	0	65535	0	100	32767	Fade
17         Write intensity 0-100%         0         6333         0         100         22/6         r           18         Layer 1 Dimmering fine         Layer 1 (background) intensity 0-100%         0         65335         0         100         32767         f           20         Layer 1 Dimmering fine         Layer 1 (background) shufter closed         0         4         0         1.6         5         9         2.0         3.5           20         Layer 1 Shufter         Sync ramp up slow-fast         10         39         3.9         15.3           Sync ramp up slow-fast         100         129         39.2         50.6         66.6           Sync ramp up slow-fast         100         129         39.2         50.6         66.6           Random strobe pixel (slow-fast)         160         199         62.7         78.6         66.6           Sync strobe [1 Hz-10 Hz]         200         250         78.4         98.0         0         32767         f           21         Layer 2 Othmering         Layer 2 (top layer)         0         65535         0         100         32767         f           23         Layer 2 Potterming         Intensity 0-100%         0         45535					15505		100	007/7	
18         Loyer 1 Dimmer fine         Loyer 1 (background) intensity 0-100%         0         65535         0         100         32767         F           20         Layer 1 Jimmer fine         Layer 1 (background) shufter closed         0         4         0         1.6         32767         F           20         Layer 1 Shufter         Single flash when change on dimmer channel         5         9         2.0         3.5         3.5           20         Layer 1 Shufter         Sinc ramp up slow-fast         100         39         15.3         39.2         15.3           20         Layer 1 Shufter         Sinc ramp up slow-fast         100         129         39.2         5.6.6         8.8         0         5           21         Layer 2 Dimmer         Since ramp up-down slow-fast         100         129         39.2         5.6.6         8.8         98.0         32767         F           21         Layer 2 Dimmer         Isouer 2 (top loyer)         100         129         39.2         5.0.6         8.8         98.0         32767         F           23         Layer 2 Patien         Single flash when change on dimmer channel         5         9         2.0         3.5.1         5.9         5.0         6.			White intensity 0–100%	0	65535	0	100	32/6/	Fade
19         Layer 1 (brackground) shuffer closed         0         6333         0         100         32/6/         1           20         Layer 1 (background) shuffer closed         0         4         0         1.6         3.5         3.5         3.5         3.5         3.5         3.5           20         Layer 1 (background) shuffer closed         0         4         0         1.6         3.5	18	Layer 1 Dimmer							
Ime         Layer 1 (background) shufter closed         0         4         0         1.6           20         Layer 1 (background) shufter closed         0         4         0         1.6         3.5           20         Layer 1 Shufter         Sync ramp up slow-fast         10         39         3.9         15.3           Sync ramp up slow-fast         10         39         3.9         15.3         27.5         38.8           Sync ramp up down slow-fast         100         129         39.2         50.6         62.4           Random strobe pikel (slow-fast)         130         159         51.0         62.4         62.7           Sync strobe (1 H2-10 Hz)         200         250         78.4         98.0         32767           I tayer 2 (top layer)         0         65535         0         100         32767         F           I tayer 2 pattern         Shutter closed         0         4         0         1.6         5           Sync ramp up slow-fast         10         39         3.9         15.3         5         5         9         2.0         3.5           Sync ramp up slow-fast         10         39         3.9         15.3         5         5	10	Layer 1 Dimmer		0	65535	0	100	32767	Fade
20         Layer 1 Shutter (channel)         Single flosh when change on dimmer (channel)         10         39         3.9         15.3           Sync ramp up slow-fast         10         39         3.9         15.3           Sync ramp up slow-fast         40         69         15.7         27.1           Sync ramp up odown slow-fast         70         99         25.5         38.8           Sync double flash (slow-fast)         100         129         39.2         50.6           Random strobe pixel (slow-fast)         130         159         51.0         62.4           Random strobe oll (slow-fast)         130         159         51.0         62.4           Random strobe oll (slow-fast)         0         65535         0         100         32767           Itayer 2         binmer fine         Layer 2 (top layer)         0         65535         0         100         32767           Sync ramp up slow-fast         10         39         3.9         15.3         5         5         9         2.0         3.5           Sync ramp up-down slow-fast         70         99         2.7.5         38.8         5         5         9         2.0         3.5           Sync ramp up-down slow-fast	17	fine	,						
20         Layer 1 Shutter         Sync ramp up slow-fast         10         39         39         15.3           Sync ramp up slow-fast         10         39         39         15.3           Sync ramp up-down slow-fast         70         99         27.5         38.8           Sync ramp up-down slow-fast         100         129         39.2         50.6           Random strobe pikel (slow-fast)         130         157         51.0         62.4           Random strobe pikel (slow-fast)         130         159         51.0         62.4           Random strobe pikel (slow-fast)         130         157         81.0         62.4           Super 2         Super 2         100         122         30.8         98.0           Super 2         Layer 2         Layer 2 (top layer)         0         45535         0         100           Juayer 2         Suptar comp up-down slow-fast         10         39         3.9         15.3           Sync ramp up-down slow-fast         10         39         3.9         15.3           Sync ramp up-down slow-fast         100         129         3.2         50.6           Sync ramp up-down slow-fast         100         129         3.2         50.6<			Layer 1 (background) shutter closed	0	4	0	1.6		
20         Layer 1 Shutter         Sync ramp up slow-fast         10         39         3.9         15.3           20         Layer 1 Shutter         Sync ramp up-down slow-fast         40         69         15.7         27.1           30         Layer 1 Shutter         Sync ramp up-down slow-fast         70         99         27.5         38.8         0         5           20         Layer 1 Shutter         Sync couble fields (slow-fast)         130         159         51.0         62.4           Random strobe pixel (slow-fast)         130         159         51.0         62.4           Random strobe olid (slow-fast)         160         199         62.7         78.0           Structer open         251         255         98.4         100         32767         F           21         Layer 2 Dimmer         Layer 2 (top layer)         0         65535         0         100         32767         F           23         Layer 2 Pottern         Sync ramp up-down slow-fast         10         39         3.9         15.3           Sync ramp up-down slow-fast         100         129         3.2         50.6         R           Sync ramp up-down slow-fast         100         29         7.2				5	9	2.0	3.5		
20         Layer 1 Shutter         Sync ramp up-down slow-fast         40         69         15.7         27.1           20         Layer 1 Shutter         Sync ramp up-down slow-fast         70         99         27.5         38.8         0         8           21         Layer 2 Dimmer         Random strobe pixel (slow-fast)         130         159         51.0         62.4           21         Layer 2 Dimmer         Sync strobe (1 Hz-10 Hz)         200         250         78.4         98.0           21         Layer 2 Dimmer         Layer 2 (top layer)         0         65535         0         100         32767         F           23         Layer 2 Pattern         Shutter closed         0         4         0         1.6         Single flash when change on dimmer change         5         9         2.00         3.5           Sync ramp up-down slow-fast         100         39         3.9         15.3         Sync ramp up-down slow-fast         100         129         32.2         50.6           Sync ramp up-down slow-fast         100         129         3.2         50.6         Random strobe pixel (slow-fast)         100         129         3.2         50.6         S         S         Color         S				_					
20         Layer 1 Shutter         Sync ramp up-down slow-fast         70         99         27.5         38.8         0         S           20         Layer 1 Shutter         Sync double fissh [slow-fast]         100         129         39.2         50.6           39.2         Sync strobe [1 Hz-10 Hz]         200         250         78.4         98.0           21         Layer 2 Dimmer         Layer 2 (top layer)         0         65535         0         100         32767         F           23         Layer 2 Dimmer fine         Shutter closed         0         4         0         1.6           Sync ramp up-slow-fast         10         39         3.9         15.3         Sync ramp up-slow-fast         100         32767         F           23         Layer 2 Pattern         Sync ramp up-slow-fast         100         39         3.9         15.3         Sync ramp up-down slow-fast         100         129         39.2         50.6           Random strobe pixel (slow-fast)         100         129         39.2         50.6         Random strobe pixel (slow-fast)         100         129         39.2         50.6           Random strobe pixel (slow-fast)         130         159         51.0         62.4									
24         Sync double fiash (slow-fast)         100         129         39.2         50.6           Random strobe pixel (slow-fast)         130         159         51.0         62.4           Random strobe pixel (slow-fast)         160         199         62.7         78.0           21         Layer 2 Dimmer         Layer 2 (top layer)         0         65535         0         100         32767         F           22         Layer 2 Dimmer         Idayer 2 (top layer)         0         65535         0         100         32767         F           23         Layer 2 Pathern         Shufter closed         0         4         0         1.6           Sync ramp up slow-fast         10         39         3.9         15.3         Sync ramp up-dawn slow-fast         70         99         2.75         38.8         0         S           Shufter         Sync ramp up-dawn slow-fast         70         99         2.75         38.8         0         S           Sync ramp up-dawn slow-fast         70         99         2.7         78.0         S         S         S         S         6.4         78.0         S         6.4         78.0         S         S         6.6         6.2 <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>									
Random strobe pikel (slow-fast)         130         159         51.0         62.4           Random strobe cill (slow-fast)         160         199         62.7         78.0           21         Layer 2 Dimmer         byos strobe (1 Hz-10 Hz)         200         250         78.4         100           21         Layer 2 Dimmer         intensity 0-100%         0         65535         0         100         32767         F           22         Layer 2         Toper 2         Shutter closed         0         4         0         1.6         5           23         Shutter closed         0         4         0         1.6         5         9         2.0         3.5           35/m cramp up slow-fast         10         39         3.9         15.3         5         9         2.0         3.5           Sync ramp up-down slow-fast         100         129         39.2         50.6         5         5         9         2.0         3.5           Sync ramp down slow-fast         100         129         39.2         50.6         5         5         9.4         100         129         39.2         50.6         5         5         5         7.8.0         5         <	20	Layer 1 Shutter						0	Snap
Random strobe all (slow-fast)         160         199         62.7         78.0           21         Layer 2 Dimmer         Sync strobe (1 Hz-10 Hz)         200         255         98.4         100           22         Layer 2 Dimmer         Layer 2 (top layer)         0         65535         0         100         32767         F           23         Layer 2 Pattern         Shutter closed         0         4         0         1.6         Single flash when change on dimmer channel         5         9         2.0         3.5         Single flash when change on dimmer channel         5         9         2.0         3.5         Single flash when change on dimmer channel         5         9         2.0         3.5         Single flash when change on dimmer channel         5         9         2.0         3.5         Single flash when change on dimmer channel         5         9         2.0         3.5         Single flash when change on dimmer channel         5         9         2.0         3.5         Single flash when change on dimmer channel         5         9         2.0         3.5         Single flash when change on dimmer channel         5         7         2.0         3.5         Single flash when change on dimmer channel         5         Single flash when change that single flash when change on dimmer change that si									
Sync strobe (1 Hz–10 Hz) Shufter open         200         250         78.4         98.0           21         Loyer 2 Dimmer Dimmer fine         Layer 2 (top layer) intensity 0–100%         0         65535         0         100         32767         F           22         Layer 2 Dimmer Dimmer fine         Shufter closed         0         4         0         1.6           3         Shufter closed         0         4         0         1.6         32767         F           23         Layer 2 Pattern Shufter         Shufter closed         0         4         0         1.6         32767         F           3         Sync ramp up slow-fast         10         39         3.5         32.6         5.6         F         9         2.0         3.5         5.7         7.1         5.7         5.7         7.1         5.7         5.7         7.1         5.7         7.1         5.7         7.1         5.7         5.7         7.1         5.7         7.7         5.7         7.1         5.7         7.1         5.7         7.1         5.7         7.1         5.7         7.1         5.7         7.7         5.7         7.7         5.7         7.7         7.7         5.7         7.7					-				
Induction         Shutter open         251         255         98.4         100           21         Layer 2 Dimmer Dimmer fine         Layer 2 (top layer) intensity 0~100%         0         65535         0         100         32767         F           23         Layer 2 Pattern Shutter         Shutter closed         0         4         0         1.6         32767         F           23         Layer 2 Pattern Shutter         Shutter closed         0         4         0         1.6         32767         F           23         Layer 2 Pattern Shutter         Single flash when change on dimmer channel         5         9         2.0         3.5         S         0         S         5         9         2.0         3.5         5         0         S         5         7         2.0         3.5         5         0         S         0         S         0         S         5         7         2.0         3.5         5         0         S         0         S         0         S         0         S         0         S         0         S         0         S         0         S         0         S         0         S         0         S         0									
21         Layer 2 Dimmer layer 2 Dimmer fine         Layer 2 (top layer) intensity 0-100%         0         65535         0         100         32767         F           23         Shutter fine         Shutter closed         0         4         0         1.6         32767         F           23         Layer 2 Pattern Shutter         Shutter closed         0         4         0         1.6         35         9         2.0         3.5           23         Layer 2 Pattern Shutter         Sync ramp up slow-fast         100         39         3.9         15.3         3.5           Sync ramp up-down slow-fast         100         129         32.5         3.8         0         8           Sync ramp up-down slow-fast         100         129         32.0         7.8         8           Random strobe pixel (slow-fast)         130         159         51.0         62.7         78.0           Sync strobe (1 Hz-10 Hz)         200         250         78.4         98.0         90         2.7         53.3         9.0         2.7         53.3         5.9         5         5         5         5         5         5         5         5         5         5         5         5         5									
22         Layer 2 Dimmer fine         Layer 2 intensity 0-100%         0         65535         0         100         32767         F           23         Layer 2 Pattern Shutter         Shutter closed         0         4         0         1.6         3	21	laver 2 Dimmer		201	200	70.4	100		
22         Dimmer fine         Internation 0-100%         0         4         0         1.6           23         Shutter closed         0         4         0         1.6         Single flash when change on dimmer channel         5         9         2.0         3.5           23         Layer 2 Pathern Shutter         Sync ramp up slow-fast         10         39         3.9         15.3           Sync ramp up-down slow-fast         40         69         15.7         27.1         38.8           Sync ramp up-down slow-fast         70         99         2.2         50.6           Random strobe pixel (slow-fast)         130         159         51.0         62.4           Random strobe pixel (slow-fast)         130         159         51.0         62.4           Random strobe all (slow-fast)         160         199         62.7         78.0           Sync strobe (1 Hz-10 Hz)         200         255         98.4         100         100           Color 02 - Amber         16         23         6.3         9.0         2.7         2.5         15.3         5.7           Color 03 - Warm Yellow         24         31         9.4         12.5         15.3         5.5         18.8         <				0	65535	0	100	32767	Fade
23         Shutter closed Single flash when change on dimmer channel         0         4         0         1.6           23         Layer 2 Pattern Shutter         Single flash when change on dimmer channel         5         9         2.0         3.5           24         Layer 2 Pattern Shutter         Sync ramp up slow-fast         40         69         15.7         27.1           24         Layer 2 Pattern Shutter         Sync ramp up-down slow-fast Sync double flash (slow-fast)         100         129         39.2         50.6           25         Sync strobe pixel (slow-fast)         130         159         51.0         62.4           Random strobe pixel (slow-fast)         160         199         62.7         78.0         59.0           Sync strobe (1 Hz-10 Hz)         200         250         78.4         98.0         59.0         62.4           Shutter open         251         255         98.4         100         2.7         78.0         59.0 </th <th>22</th> <th></th> <th>intensity 0–100%</th> <th>Ŭ</th> <th>00000</th> <th>0</th> <th>100</th> <th>02/0/</th> <th>1000</th>	22		intensity 0–100%	Ŭ	00000	0	100	02/0/	1000
23         Layer 2 Pattern Shutter         Single flash when change on dimmer channel         5         9         2.0         3.5           23         Layer 2 Pattern Shutter         Sync ramp up slow-fast         10         39         3.9         15.3           Sync ramp up down slow-fast         10         69         15.7         27.1         38.8           Sync ramp up-down slow-fast         70         99         27.5         38.8         0         5           Sync double flash (slow-fast)         100         129         39.2         50.6         6           Random strobe pixel (slow-fast)         130         159         51.0         62.4           Random strobe oill (slow-fast)         100         129         39.2         50.6           Sync strobe (1 Hz-10 Hz)         200         250         78.4         98.0           Shutter open         251         255         98.4         100           Layer 2 (top layer) pattern off (RGBW)         0         7         0         2.7           Color 03 - Warm Yellow         24         31         9.4         12.5         15.3           Color 04 - Fulgowise         48         55         18.8         21.6         5.3           Color			Shutter closed	0	4	0	1.6		
23         Layer 2 Pattern Shutter         Channel         5         Y         2.0         3.3           23         Layer 2 Pattern Shutter         Sync ramp down slow-fast         10         39         3.9         15.3           Sync ramp down slow-fast         40         69         15.7         27.1         38.8           Sync ramp down slow-fast         100         129         39.2         50.6           Random strobe pixel (slow-fast)         100         129         39.2         50.6           Random strobe pixel (slow-fast)         130         159         51.0         62.4           Random strobe pixel (slow-fast)         160         199         62.7         78.0           Sync strobe (1 Hz-10 Hz)         200         250         78.4         98.0           Shutter open         251         255         98.4         100           Color 01 - Red         8         15         3.1         5.9           Color 02 - Amber         16         23         6.3         9.0           Color 03 - Green         40         47         15.7         18.4           Color 04 - Yellow         32         39         12.5         15.3           Color 05 - Green <td< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></td<>									
23         Layer 2 Pattern Shutter         Sync ramp down slow-fast         40         69         15.7         27.1           30         Sync ramp up-down slow-fast         70         99         27.5         38.8         0         8           30         Item 10         Item 10         129         39.2         50.6         8         8         130         159         51.0         62.4           Random strobe pixel (slow-fast)         130         159         51.0         62.4         78.0         98.0         5         98.4         100         100         129         32.5         98.4         100         100         129         32.5         98.4         100         100         120         200         250         78.4         98.0         98.0         5         13.3         5.9         15.7         27.1         20.0         20.0         27.0         7.0         2.7         7.0         2.7         2.0         Color 0.1 Red         6.8         15.3         3.1         5.9         2.5         2.0         24.7         2.0         20.0         24.0         11.7         18.4         2.0         2.0         24.7         2.0         2.0         24.7         2.0         2.0				5	9	2.0	3.5		
23         Layer 2 Pattern Shutter         Sync ramp up-down slow-fast         70         99         27.5         38.8         0         S           Shutter         Sync adouble flash (slow-fast)         100         129         39.2         50.6           Random strobe pixel (slow-fast)         130         159         51.0         62.4           Random strobe all (slow-fast)         160         199         62.7         78.0           Sync strobe (1 Hz-10 Hz)         200         250         78.4         98.0           Shutter open         251         255         98.4         100           Color 01 - Red         8         15         3.1         5.9           Color 02 - Amber         16         23         6.3         9.0         5           Color 03 - Warm Yellow         24         31         9.4         12.2         5         5.3           Color 04 - Yellow         32         32.5         15.3         5         5         5           Color 05 - Green         40         47         15.7         18.4         5         5         5         5         5         5         5         5         5         5         5         5         5         5<			Sync ramp up slow-fast	10	39	3.9	15.3		
23         Shutter         Sync failing up-down slow-fast)         100         129         38.8         0         8           A         Sync double flash (slow-fast)         100         129         39.2         50.6         8         62.4         8         62.4         8         62.4         8         98.0         5         5         98.4         100         129         39.2         50.6         8         150         62.4         8         150         62.4         8         150         5         98.4         100         129         39.2         50.6         8         150         5         160         5         160         129         2250         78.4         98.0         5         5         160         150         15.3         15.3         5         160         150         16         23         6.3         9.0         2.0         24.7         2.5         15.3         15.3         2.0         24.7         2.15         15.3         2.0         24.7         2.5         15.3         2.0         24.7         2.5         15.3         2.0         24.7         2.2         2.0         24.7         2.2         2.0         24.7         2.2         2.0			Sync ramp down slow-fast	40	69	15.7	27.1		
24         Sync double tash (slow-fast)         100         129         39.2         50.6           Random strobe pixel (slow-fast)         130         159         51.0         62.4           Random strobe pixel (slow-fast)         160         199         62.7         78.0           Sync strobe (1 Hz-10 Hz)         200         250         78.4         98.0           Shutter open         251         255         98.4         100           Shutter open         251         255         98.4         100           Color 01 - Red         8         15         3.1         5.9           Color 03 - Warm Yellow         24         31         9.4         12.2           Color 04 - Yellow         32         39         12.5         15.3           Color 07 - Cyan         56         63         22.0         24.7           Color 08 - Blue         64         71         25.1         27.8           Color 10 - Mauve         80         87         31.4         34.1           Color 10 - Mauve         80         87         31.4         34.1           Color 12 - Pink         96         103         37.6         40.4           Color 13 - White 3200K	23		Sync ramp up-down slow-fast	70	99	27.5	38.8	0	Snap
24       Random strobe all (slow-fast)       160       199       62.7       78.0         Sync strobe (1 Hz-10 Hz)       200       250       78.4       98.0         Shutter open       251       255       98.4       100         Layer 2 (top layer) pattern off (RGBW)       0       7       0       2.7         Color 01 - Red       8       15       3.1       5.9         Color 02 - Amber       16       23       6.3       9.0         Color 03 - Warm Yellow       24       31       9.4       12.2         Color 04 - Yellow       32       39       12.5       15.3         Color 05 - Green       40       47       15.7       18.4         Color 07 - Cyan       56       63       22.0       24.7         Color 08 - Blue       64       71       25.1       27.8         Color 10 - Mauve       80       87       31.4       34.1         Color 11 - Magenta       88       95       34.5       37.3         Color 12 - Pink       96       103       37.6       40.4         Color 13 - White 3200K       114       111       40.8       43.5         Color 14 - White 5600K       112		Snutter	Sync double flash (slow–fast)	100	129	39.2	50.6		
24         Sync strobe (1 Hz-10 Hz)         200         250         78.4         98.0           251         255         98.4         100         100         2.7         0         2.7         0         2.7         0         2.7         0         2.7         0         2.7         0         2.7         0         2.7         0         2.7         0         2.7         0         2.7         0         2.7         0         2.7         0         2.7         0         2.7         0         2.7         0         2.7         0         2.7         0         0         7         0         2.7         0         2.7         0         2.7         0         2.7         0         2.7         0			Random strobe pixel (slow–fast)	130	159	51.0	62.4		
Shutter open         251         255         98.4         100           Layer 2 (top layer) pattern off (RGBW)         0         7         0         2.7         5           Color 01 - Red         8         15         3.1         5.9         5         6.3         9.0         5           Color 02 - Amber         16         23         6.3         9.0         5<			Random strobe all (slow-fast)	160	199	62.7	78.0		
24         Layer 2 (top layer) pattern off (RGBW)         0         7         0         2.7         5           Color 01 - Red         8         15         3.1         5.9         5         5           Color 02 - Amber         16         23         6.3         9.0         5			Sync strobe (1 Hz–10 Hz)	200	250	78.4	98.0		
24         Color 01 - Red         8         15         3.1         5.9           Color 02 - Amber         16         23         6.3         9.0           Color 03 - Warm Yellow         24         31         9.4         12.2           Color 04 - Yellow         32         39         12.5         15.3           Color 05 - Green         40         47         15.7         18.4           Color 06 - Turquoise         48         55         18.8         21.6           Color 07 - Cyan         56         63         22.0         24.7           Color 09 - Lavender         72         79         28.2         31.0           Color 10 - Mauve         80         87         31.4         34.1           Color 11 - Magenta         88         95         34.5         37.3           Color 12 - Pink         96         103         37.6         40.4           Color 13 - White 3200K         104         111         40.8         43.5           Color 14 - White 5600K         112         119         43.9         46.7           Color 15 - White 7200K         120         127         47.1         49.8           Stop         128         128						98.4			
24         Color 02 - Amber         16         23         6.3         9.0           Color 03 - Warm Yellow         24         31         9.4         12.2           Color 04 - Yellow         32         39         12.5         15.3           Color 05 - Green         40         47         15.7         18.4           Color 07 - Cyan         56         63         22.0         24.7           Color 08 - Blue         64         71         25.1         27.8           Color 09 - Lavender         72         79         28.2         31.0           Color 10 - Mauve         80         87         31.4         34.1           Color 11 - Magenta         88         95         34.5         37.3           Color 12 - Pink         96         103         37.6         40.4           Color 13 - White 3200K         104         111         40.8         43.5           Color 14 - White 5600K         112         119         43.9         46.7           Color 15 - White 7200K         120         127         47.1         49.8           Stop         128         128         50.2         50.2           Rainbow colors crossfade slow > fast         129						-			Snap
24         Color 03 - Warm Yellow         24         31         9.4         12.2           Color 04 - Yellow         32         39         12.5         15.3           Color 05 - Green         40         47         15.7         18.4           Color 06 - Turquoise         48         55         18.8         21.6           Color 07 - Cyan         56         63         22.0         24.7           Color 08 - Blue         64         71         25.1         27.8           Color 09 - Lavender         72         79         28.2         31.0           Color 10 - Mauve         80         87         31.4         34.1           Color 12 - Pink         96         103         37.6         40.4           Color 13 - White 3200K         104         111         40.8         43.5           Color 13 - White 3200K         104         111         40.8         43.5           Color 15 - White 7200K         120         127         47.1         49.8           Stop         128         128         50.2         50.2           Rainbow colors crossfade slow > fast         129         223         50.6         87.5           Random colors crossfade slow > fast </th <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>Snap</th>									Snap
24         Color 04 - Yellow         32         39         12.5         15.3           Color 05 - Green         40         47         15.7         18.4         55         18.8         21.6         55         15.3         55         15.3         55         15.3         55         15.3         15.3         55         15.3         55         15.3         55         15.3         55         15.3         55         15.3         55         15.3         55         15.3         55         15.3         55         15.3         55         15.3         55         15.3         55         15.3         55         15.3         55         15.3         55         15.3         55         15.3         55         15.3         55         55         15.3         55         15.3         55									Snap
24         Color 05 - Green         40         47         15.7         18.4         5           24         Color 06 - Turquoise         48         55         18.8         21.6         5									Snap
24         Color 06 - Turquoise         48         55         18.8         21.6         5           24         Color 07 - Cyan         56         63         22.0         24.7         5         5         18.8         21.6         5         5         18.8         21.6         5         5         18.8         21.6         5         5         5         18.8         21.6         5         5         5         5         5         5         5         3         5									Snap
24         Color 07 - Cyan         56         63         22.0         24.7           24         Color 08 - Blue         64         71         25.1         27.8         55           Color 09 - Lavender         72         79         28.2         31.0         55         55           Color 10 - Mauve         80         87         31.4         34.1         55         55           Color 11 - Magenta         88         95         34.5         37.3         55         55           Color 12 - Pink         96         103         37.6         40.4         55         55           Color 13 - White 3200K         104         111         40.8         43.5         55         55           Color 14 - White 5600K         112         119         43.9         46.7         55									Snap Snap
Layer 2 Pattern color wheel effect         Color 08 - Blue         64         71         25.1         27.8         55           24         Color 09 - Lavender         72         79         28.2         31.0         0         55           color wheel effect         Color 10 - Mauve         80         87         31.4         34.1         55           Color 11 - Magenta         88         95         34.5         37.3         55         55           Color 12 - Pink         96         103         37.6         40.4         55         55           Color 13 - White 3200K         104         111         40.8         43.5         55         55           Color 15 - White 7200K         120         127         47.1         49.8         55         55           Stop         128         128         50.2         50.2         55         57           Rainbow colors crossfade slow > fast         129         223         50.6         87.5         5           25         Raindom colors crossfade slow > fast         224         255         87.8         100         7           26         Layer 2 (top layer) pattern         0         65535         0         100         32767 </th <th></th> <th></th> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Snap</td>									Snap
24         Color wheel effect         Color 09 - Lavender         72         79         28.2         31.0         0         5           Color 10 - Mauve         80         87         31.4         34.1         34.1         5         5         5         5         37.3         5         5         5         37.3         5		Laver 2 Pattern							Snap
effect       Color 10 - Mauve       80       87       31.4       34.1         Color 11 - Magenta       88       95       34.5       37.3         Color 12 - Pink       96       103       37.6       40.4         Color 13 - White 3200K       104       111       40.8       43.5         Color 14 - White 5600K       112       119       43.9       46.7         Color 15 - White 7200K       120       127       47.1       49.8         Stop       128       128       50.2       50.2         Rainbow colors crossfade slow > fast       129       223       50.6       87.5         Random colors crossfade slow > fast       224       255       87.8       100         F       Layer 2 (top layer) pattern       0       65535       0       100       32767	24							0	Snap
25         Layer 2 Pattern Red         Color 11 - Magenta         88         95         34.5         37.3         5         5           26         Layer 2 Rationa         96         103         37.6         40.4         5 <t< th=""><th></th><th>effect</th><th></th><th>80</th><th>87</th><th>31.4</th><th></th><th></th><th>Snap</th></t<>		effect		80	87	31.4			Snap
Color 13 - White 3200K       104       111       40.8       43.5         Color 14 - White 5600K       112       119       43.9       46.7         Color 15 - White 7200K       120       127       47.1       49.8         Stop       128       128       50.2       50.2         Rainbow colors crossfade slow > fast       129       223       50.6       87.5         Random colors crossfade slow > fast       224       255       87.8       100         25       Layer 2 Pattern Red       Layer 2 (top layer) pattern       0       65535       0       100       32767				88	95	34.5	37.3		Snap
Color 14 - White 5600K         112         119         43.9         46.7           Color 15 - White 7200K         120         127         47.1         49.8         55           Stop         128         128         50.2         50.2         55         55           Rainbow colors crossfade slow > fast         129         223         50.6         87.5         F           Random colors crossfade slow > fast         224         255         87.8         100         F           Red         Layer 2 (top layer) pattern         0         65535         0         100         32767         F									Snap
Color 15 - White 7200K         120         127         47.1         49.8         55           Stop         128         128         50.2									Snap
Stop         128         128         50.2         5									Snap
Rainbow colors crossfade slow > fast         129         223         50.6         87.5         F           Random colors crossfade slow > fast         224         255         87.8         100         F           25         Layer 2 Pattern Red         Layer 2 (top layer) pattern         0         65535         0         100         32767         F									Snap
Layer 2 Pattern         Red         Layer 2 (top layer) pattern         0         65535         0         100         32767         F									Snap
25     Layer 2 Pattern Red     Layer 2 (top layer) pattern     0     65535     0     100     32767     F									Fade
23         Red         Layer 2 (top layer) pattern         0         65535         0         100         32767         F		Laver 2 Pattern	Nanaom colois crossidae siow > last	224	233	0/.ð	100		Fade
Univer 2 Pattern red intensity 0, 100%	25		Laver 2 (top laver) pattern	_		_			
				0	65535	0	100	32767	Fade
<sup>26</sup> Red fine	26								
Laver 2 Pattern Laver 2 (top laver) pattern	27		Layer 2 (top layer) pattern	0	45525	0	100	30717	Fade
<b>Green</b> green intensity 0–100%	21	Green	green intensity 0–100%	0	60000	U	100	32/0/	Fuue

## DMX control channel layout tables

	Lawar 2 Pattorn							
28	Layer 2 Pattern Green fine							
	Layer 2 Pattern							
29	Blue	Layer 2 (top layer) pattern	0	15505	0	100	207/7	<b>F</b> acala
30	Layer 2 Pattern	blue intensity 0–100%	0	65535	0	100	32767	Fade
30	Blue fine							
31	Layer 2 Pattern							
	White	Layer 2 (top layer) pattern	0	65535	0	100	32767	Fade
32	Layer 2 Pattern White fine	white intensity 0–100%						
	White line	Layer 2 (top layer) static pattern	0	51	0	20.0		
		Chase animation	52	131	20.4	51.4		
33	Layer 2 Pattern	Fade animation	132	211	51.8	82.7	0	Snap
		Random	212	255	83.1	100		
34	Layer 2 Pattern		1				0	Faida
34	speed	Slow-fast	0	255	0	100	0	Fade
35	Layer 2 Pattern	Slow crossfade-snap	0	255	0	100	0	Fade
	fade	'						
36	Zoom	Wide-narrow	0	255 9	0	100	0	Fade
		No function			0.0	3.5	-	
		Dimmer curve: Extra-soft (3s hold) Dimmer curve: Linear (3s hold)	10 16	15 21	3.9 6.3	5.9 8.2	1	
		· · · · · · · · · · · · · · · · · · ·	22	27	8.6	10.6	-	
		Display mode: Auto (3s hold) Display mode: On (3s hold)	22	33	11.0	10.6	1	
		Display mode: Off (3s hold)	34	39	13.3	15.3	1	
		Display orientation: Normal (3s hold)	40	45	15.7	17.6		
		Display orientation: Inverted (3s hold)	46	51	18.0	20.0		
		No DMX: Blackout (3s hold)	52	57	20.4	22.4		
		No DMX: Hold (3s hold)	58	63	22.7	24.7		
		No DMX: Stand-alone (3s hold)	64	69	25.1	27.1		
		Fan mode: Regulated (3s hold)	70	75	27.5	29.4		
		Fan mode: High (3s hold)	76	81	29.8	31.8		
		Fan mode: Medium (3s hold)	82	87	32.2	34.1		
		Fan mode: Low (3s hold)	88	93	34.5	36.5		
		Position feedback: Off (3s hold)	94	99	36.9	38.8		
		Position feedback: On (3s hold)	100	105	39.2	41.2		
		No function	106	117	41.6	45.9		
	Control /	Tilt inversion: Off (3s hold)	118	123	46.3	48.2		
37	Settings	Tilt inversion: On (3s hold)	124	129	48.6	50.6	0	Snap
	<b>.</b>	Pan inversion: Off (3s hold)	130	135	51.0	52.9		
		Pan inversion: On (3s hold)	136	141	53.3	55.3	4	
		Zoom inversion: Off (3s hold)	142	147	55.7	57.6	-	
		Zoom inversion: On (3s hold)	148	153	58.0	60.0	-	
		Defog: Off	154	159	60.4	62.4	-	
		Defog: On Defog: Quick	160	165	62.7	64.7	1	
		Load Settings Preset1	166 172	171 177	65.1 67.5	67.1 69.4	-	
		Load Settings Preset2	172	183	69.8	71.8	1	
		Load Settings Preset3	178	189	72.2	74.1	1	
		PWM: 600 Hz (5s hold)	190	195	74.5	74.1	1	
		PWM: 2200 Hz (5s hold)	196	201	76.9	78.8	1	
		PWM: 3000 Hz (5s hold)	202	207	79.2	81.2	1	
		PWM: 4800 Hz (5s hold)	208	213	81.6	83.5	1	
		PWM: 9600 Hz (5s hold)	214	219	83.9	85.9	1	
	F	PWM: 25 kHz (5s hold)	220	225	86.3	88.2	1	
		· · ·						1
		No function	226	231	88.6	90.6		
		No function Return to default settings	226 232	231 237	88.6 91.0	90.6 92.9		



Reset Head (3s ho	old) 244	249	95.7	97.6
Reset All (3s hold)	250	255	98.0	100

### DMX Mode 4: Pix

### **50 DMX Channels**

Channel         Command         ronge         Per         DMX         Rode           1         Pen         Pan	50	DMX Channe	ls						
1         Pen Pan         Pan left-right         0         65535         0         100         32767         Fode           3         Itil 4         Itil friee         Itil up-down         0         65535         0         100         32767         Fode           6         Dimmer 5         Dimmer 0         Intensity 0-100%         0         65535         0         100         32767         Fode           8         Simulation of the sity 0-100%         0         65535         0         100         32767         Fode           9         Shutter         Sinulation of the sity 0-100%         0         4         0         1.6           9         Shutter         Sinulation of the sity 0-100%         0         4         0         1.6           9         2.0         3.5         Sinulation of the sity 0-100%         100         120         3.5         15.3           9         2.0         3.5         Sinulation of the sity 0-100%         100         129         2.0         3.5           9         2.0         2.5         8.4         100         2.7         78.0           9         0         Off (FGW)         0         7         0         2.7<		Channal				Percent			Fuels
2         Pan fine IIII         Pan fine Pan fine IIII         Pan fine IIIII         Pan fine IIIII         Pan fine IIIII         Pan fine IIIIIII         Pan fine IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	1		Commana	rar	ige	Per	cent	DMX	raae
3         Titl         Ti			– Pan left–right	0	65535	0	100	32767	Fade
4         101         100         000         6333         0         1000         32/6/         rode           5         Dimmer fine         Intensity 0-100%         0         65335         0         1000         32/6/         Fode           6         Dimmer fine         Intensity 0-100%         0         4         0         1.6         3           7         Shufter fine         Shutter closed         0         4         0         1.6         3         3           8         Shufter comp up down slow-fast         100         39         1.5.3         3         3           9         Shufter comp up down slow-fast         100         129         2.20         3.8.8         3         3         3           9         Sync ramp up down slow-fast         100         129         2.20         7.8.4         98.0           9         Off (RGW)         0         7         0         2.7.7         3.8.8         9           9         Color (Gr Q - Amber fine)         160         17.2         3.0         9.0         2.7.7         8.8         9.0           10         Gr (Gr Q - Amber fine)         64         7.1         2.5.1         2.7.8									
6         Dimmer         Intensity 0-100%         0         65533         0         100         32767         Fode           6         Dimmer fine         Shutter closed         0         4         0         1.6         Single flosh when change on dimmer channel         5         9         2.0         3.5           7         Shutter         Single flosh when change on dimmer change on			Tilt up-down	0	65535	0	100	32767	Fade
6         Dimmer fine         Intensity U-100%         0         4         0         10.0         32/6/         Field           8         Shutter closed         0         4         0         1.6         Single flash when change on dimmer channel         5         9         2.0         3.5           Shutter closed         10         39         3.9         15.3         Single flash when change on dimmer channel         5         9         2.0         3.5           Sync ramp up down slow-fast         40         69         15.7         27.1         38.8         Single flash when change on dimmer chandom slow-fast         70         99         27.5         38.8         Single flash when change on dimmer chandom slow-fast         130         159         51.0         6.2         6.2         78.4         78.0           Sync ramp up down slow-fast         100         129         39.2         50.6         78.4         78.0         78.4         78.0         78.4         78.0           Sync ramp up slow-fast         100         129         27.7         78.4         78.0         78.0         78.0         78.0         78.0         78.0         78.0         78.0         78.0         78.0         78.0         78.0         78.0         <									
8         Color wheel effect         Shutter closed Single flash when change on dimmer channel         0         4         0         1.6 0         9         2.0         3.5 3.5           7         Shutter         Single flash when change on dimmer channel         10         39         3.9         15.3         3.5           5         Sync ramp up slow-fast         10         46         69         15.7         27.1           Sync double flash (glow-fast)         100         129         39.2         50.6         27.5         38.8         0           8         Color double flash (glow-fast)         100         129         39.2         50.6         27.7         78.0           9         Color 01 - Red         8         15         31         5.9         20.6         31.5         5.9         30.0           Color 01 - Red         8         15         31.5         5.7         7.4         12.2         15.3         5.0			Intensity 0–100%	0	65535	0	100	32767	Fade
8         Color 01- Color 02- effect         Single flash when change on dimmer channel         5         9         2.0         3.5           5         Sync ramp up slow-fast         10         39         3.9         15.3           Sync ramp up slow-fast         40         69         15.7         27.1         38.8           Sync ramp up-down slow-fast         70         99         22.7         38.8         39.6           Sync double flash (slow-fast)         100         129         39.2         50.6         8.0           Sync strobe (1 Hz-10 Hz)         200         220         78.4         98.0         90.0           Sync strobe (1 Hz-10 Hz)         200         220         78.4         98.0         31.5         31.1         5.9           Color 01- Red         8         15         3.1         5.9         20.0         220         24.3         90.0           Color 02- Amber         16         23         6.3         9.0         2.5         15.3         31.6         39.0           Color 03- Warm Yellow         24         31         9.4         12.2         50.0         50.0         50.0         50.0         50.0         50.0         50.0         50.0         50.0			Shutter closed	0	4	0	1.6		
P         Color mape			Single flash when change on dimmer			0.0	<u>а г</u>		
Shutter         Sync ramp down slow-fast         40         69         15.7         27.1           Sync ramp up-down slow-fast         70         99         27.5         38.8         9.0           Sync ramp up-down slow-fast         100         129         39.2         50.6         6.24           Random strobe pixel (slow-fast)         130         159         51.0         62.4         9.0           Sync tramp (h-10 Hz)         00         7         0         2.7         8.0         9.0           Shutter open         251         255         98.4         100         0         7.7         9.0         2.7         5.0           Shutter open         251         255         98.4         100         0         7.0         2.7         5.0         5.0         9.0         5.00         5.0				5	9	2.0	3.5		
8         Sync ramp up-down slow-fast         70         99         27.5         38.8         0         Snap           9         Sync double flash (slow-fast)         100         127         39.2         50.6           Random strobe oll (slow-fast)         160         199         62.7         78.0           Sync throbe (1 Hz-10 Hz)         200         250         78.4         98.0           Shufter open         251         255         98.4         100           Shufter open         251         255         98.4         100           Color 01 - Red         8         15         3.1         5.9         5nap           Color 02 - Amber         164         23         6.3         9.0         5nap           Color 04 - Yellow         32         39         12.5         15.3         5nap           Color 05 - Green         40         47         15.7         18.4         2.6         5nap           Color 06 - Iraquoise         48         55         18.8         2.16         5nap           Color 07 - Cyan         56         63         12.0         7.7         9.8         3.1.3           Color 10 - Mauve         80         87         31.4 <th></th> <th></th> <td>Sync ramp up slow-fast</td> <td>10</td> <td>39</td> <td>3.9</td> <td>15.3</td> <td></td> <td></td>			Sync ramp up slow-fast	10	39	3.9	15.3		
8         Color wheel effect         Sync double flash (slow-fast) Random strobe pixel (slow-fast) Sync strobe (1 Hz-10 Hz)         100         129         39.2         50.6           8         Color Wheel effect         Off (RGBW)         0         7         0         2.7         78.0           8         Color Off (RGBW)         0         7         0         2.7         78.0           Color O1 - Red         8         15         3.1         5.9         5.0         78.4         98.0           Color O2 - Amber         16         23         6.3         9.0         7         0         2.7           Color O2 - Amber         16         23         6.3         9.0         5.3         5.3         5.3           Color O5 - Green         40         47         15.7         18.4         5.3 <th></th> <th></th> <td>Sync ramp down slow-fast</td> <td>40</td> <td>69</td> <td>15.7</td> <td>27.1</td> <td></td> <td></td>			Sync ramp down slow-fast	40	69	15.7	27.1		
8         Sync double flash (dow-fast)         100         129         39.2         50.6           Random strobe pixel (slow-fast)         130         159         51.0         62.4           Random strobe pixel (slow-fast)         130         159         51.0         62.4           Sync strobe (1 Hz-10 Hz)         200         250         78.4         98.0           Shutter open         251         255         98.4         100           Color 01 - Red         8         15         3.1         5.9           Color 02 - Amber         16         23         6.3         9.0           Color 03 - Warm Yellow         24         31         9.4         12.2           Color 04 - Yellow         32         39         12.5         15.3           Color 05 - Green         40         47         15.7         18.4           Color 06 - Turquoise         48         55         18.8         21.6           Color 07 - Cycn         56         63         22.0         24.7           Color 10 - Mauve         80         87         31.4         34.1           Color 11 - Magenta         88         95         34.5         37.3           Color 13 - White 2200K	7	Shutter	Sync ramp up-down slow-fast	70	99	27.5	38.8	0	Snap
8         Color wheel effect         Random strobe pixel (slow-fast)         130         159         51.0         62.4 Random strobe all (slow-fast)         140         199         62.27         78.0           Sync strobe (I Hz-10 Hz)         200         250         78.4         78.0         78.0           Shutter open         251         255         98.4         100         0         7         0         2.7           Color 01 - Red         8         15         3.1         5.7         0.5         Snap           Color 02 - Amber         16         23         6.3         9.0         Snap           Color 03 - Varm Yellow         24         31         9.4         12.2         Snap           Color 04 - Yellow         32         39         12.5         15.3         Snap           Color 05 - Green         40         47         15.7         18.4         Snap           Color 06 - Lavender         72         79         28.8         21.6         Snap           Color 10 - Mauve         80         87         34.5         37.3         Snap           Color 13 - While 3200K         104         111         40.4         Snap           Color 13 - While 3200K			Sync double flash (slow-fast)	100	129	39.2	50.6		
8         Sync strobe (1 Hz-10 Hz)         200         250         78.4         98.0           Shutter open         251         255         98.4         100           Color (RGBW)         0         7         0         2.7         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         3         0         5         5         5         5         3         0         5         5         5         3         0         5         5         3         0         5         5         3         2         9         12.5         15.3         5         3         3         0         5         3         3         1         2         12.5         15.3         3         3         0         5         3         3         1         3         3         1         3         3         1         3         3         3         1         3         3         3         3         3         3         3         3         3         3         3         3         3         3									
Sync strobe (1 Hz-10 Hz)         200         250         78.4         98.0           Shutter open         251         255         98.4         100           Color (f RCBW)         0         7         0         2.7         Snap           Color 01 - Red         8         15         3.1         5.9         Snap           Color 02 - Amber         16         23         6.3         9.0         Snap           Color 04 - Yellow         32         39         12.5         15.3         Snap           Color 05 - Green         40         47         15.7         18.4         Snap           Color 06 - Turquoise         64         71         25.1         27.8         Snap           Color 07 - Cyan         56         63         22.0         24.7         Snap           Color 07 - Lowender         72         79         28.2         31.0         Snap           Color 11 - Magento         88         95         34.5         37.3         Snap           Color 13 - White 3200K         104         111         40.8         43.5         Snap           Color 14 - White 5600K         112         119         43.9         46.7         Snap			Random strobe all (slow-fast)	160	199	62.7	78.0	_	
Shutter open         251         255         98.4         100           Image: Shutter open         0         7         0         2.7         Snap           Color 01 - Red         8         15         3.1         5.9         Snap           Color 02 - Amber         16         23         6.3         9.0         Snap           Color 03 - Warm Yellow         24         31         9.4         12.2         IS.3           Color 04 - Yellow         32         39         12.5         15.3         Snap           Color 05 - Green         40         47         15.7         18.4         Snap           Color 06 - Turquoise         48         55         18.8         21.6         Snap           Color 07 - Cyan         56         6.3         22.0         24.7         Snap           Color 08 - Blue         64         71         25.1         27.8           Color 11 - Magenta         88         95         34.5         37.3           Color 12 - Pink         96         103         37.6         40.7           Color 13 - White 3200K         104         111         40.8         43.5           Color 14 - White 5600K         112 <td< td=""><th></th><th></th><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>									
8         Color wheel effect         Off (RGBW) Color 01 - Red         0         7         0         2.7         Snap Snap           8         15         3.1         5.9         Snap         Snap         Snap           Color 01 - Red         8         15         3.1         5.9         Snap           Color 03 - Warm Yellow         24         31         9.4         12.2         15.3           Color 04 - Yellow         32         39         12.5         15.3         Snap           Color 04 - Yellow         32         39         12.5         15.3         Snap           Color 05 - Green         40         47         15.7         18.4         Snap           Color 07 - Cyan         56         63         22.0         24.7         Snap           Color 09 - Lavender         72         79         28.2         31.0         Snap           Color 10 - Mauve         80         87         34.4         34.1         Snap           Color 12 - Pink         96         103         37.6         40.4         Snap           Color 15 - White 3200K         112         119         43.9         46.7         Snap           Rainbow colors crossfade slow > f								1	
B         Color 01 - Red Color 02 - Amber         8         15         3.1         5.9 Color 20 - Amber         Snap Color 20 - Amber           Color 03 - Warm Yellow         24         31         9.4         12.2         15.3           Color 04 - Yellow         32         39         12.5         15.3         Snap Color 05 - Green         40         47         15.7         18.4           Color 05 - Green         40         47         15.7         18.4         Snap Color 07 - Cyan         56         63         22.0         24.7           Color 06 - Turquoise         48         55         18.8         21.6         Snap Color 07 - Cyan         56         63         22.0         24.7           Color 08 - Blue         64         71         25.1         27.8         Snap Color 10 - Mauve         80         87         31.4         34.1           Color 12 - Pink         96         103         37.6         40.4         25         37.3           Color 15 - White 3200K         112         119         43.9         46.7         3nap           Stop         128         50.2         50.2         50.2         50.2         50.2           Random colors crossfade slow > fast         129         2									Snap
8         Color 02 - Amber Color 03 - Warm Yellow         24         31         9.4         12.2           Color 03 - Warm Yellow         32         39         12.5         15.3         Snap           Color 04 - Yellow         32         39         12.5         15.3         Snap           Color 05 - Green         40         47         15.7         18.4         Snap           Color 06 - Turquoise         48         55         18.8         21.6         Snap           Color 07 - Cyan         56         63         22.0         24.7         Snap           Color 08 - Blue         64         71         25.1         27.8         Snap           Color 10 - Mauve         80         87         34.4         34.1         Snap           Color 12 - Pink         96         103         37.6         40.4         Snap           Color 13 - White 3200K         104         111         40.8         43.5         Snap           Color 14 - White 500K         120         127         47.1         49.8         Snap           Stop         128         128         50.2         50.2         Snap           Random colors crossfade slow > fast         129         22.5 <th></th> <th></th> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
8         Color wheel effect         Color 06 - Green         40         47         15.7         18.4         Snap           0         Color 06 - Green         40         47         15.7         18.4         Snap           Color wheel effect         Color 06 - Green         48         55         18.8         21.6         Snap           Color 07 - Cyan         56         63         22.0         24.7         Snap           Color 08 - Blue         64         71         25.1         27.8         Snap           Color 07 - Cyan         86         63         32.0         24.7         Snap           Color 10 - Mayeen         80         87         31.4         34.1         Snap           Color 12 - Pink         96         103         37.6         40.4         Snap           Color 13 - White 3200K         104         111         40.8         43.5         Snap           Color 15 - White 7200K         120         127         47.1         49.8         Snap           Stop         Rainbow colors crossfade slow > fast         129         223         50.6         87.5           Rabo         RAW         0         15         0         5.9         100000									
8         Color wheel effect         Color 05 - Green         40         47         15.7         18.4         Snap           0         Color 06 - Turquoise         48         55         18.8         21.6         Snap         Snap           Color 07 - Cyan         56         63         22.0         24.7         Snap         Snap           Color 08 - Blue         64         71         25.1         27.8         Snap           Color 09 - Lavender         72         79         28.2         31.0         Snap           Color 10 - Mauve         80         87         31.4         34.1         Snap           Color 12 - Pink         96         103         37.6         40.4         Snap           Color 13 - White 3200K         104         111         40.8         45.7         Snap           Color 15 - White 7200K         120         127         47.1         49.8         Snap           Stop         128         128         50.2         50.2         Snap         Snap           Stop         1000         16         18         6.3         7.1         99.0         Snap           9900         22         24         8.6         9.4			Color 03 - Warm Yellow	24	31	9.4	12.2		Snap
8         Color wheel effect         Color 02 - Turquoise Color 07 - Cyan         48         55         18.8         21.6           Color 08 - Blue         64         71         25.1         27.8         31.0         3nap           Color 09 - Lavender         72         79         28.2         31.0         3nap           Color 10 - Mauve         80         87         31.4         34.1         3nap           Color 11 - Magenta         88         95         34.5         37.3         3nap           Color 12 - Pink         96         103         37.6         40.4           Color 13 - White 3200K         104         111         40.8         43.5           Color 14 - White 3200K         104         111         40.8         43.5           Stop         120         127         47.1         49.8           Stop         120         127         47.1         49.8           Rainbow colors crossfade slow > fast         129         223         50.6         87.5           Random colors crossfade slow > fast         129         20.5         87.8         100           9900         19         21         7.5         8.2         980           9700 <th></th> <th></th> <td></td> <td>32</td> <td></td> <td></td> <td></td> <td></td> <td>Snap</td>				32					Snap
8         Color wheel effect         Color 07 - Cyan         56         63         22.0         24.7           Color 08 - Blue         64         71         25.1         27.8         Snap           Color 09 - Lavender         72         79         28.2         31.0         Snap           Color 10 - Mauve         80         87         31.4         34.1         Snap           Color 11 - Magenta         88         95         34.5         37.3         Snap           Color 11 - White 3200K         104         111         40.8         43.5         Snap           Color 15 - White 7200K         120         127         47.1         49.8         Snap           Stop         Color 15 - White 7200K         120         127         47.1         49.8           Stop         Color 15 - White 7200K         120         127         47.1         49.8           Stop         Random colors crossfade slow > fast         129         223         50.6         87.5           Random colors crossfade slow > fast         129         223         80.6         9.4         900           9800         22         24         8.6         9.4         9700         110         11.8				40					Snap
8         Color wheel effect         Color 08 - Blue Color 09 - Lavender         64         71         25.1         27.8 27.9         Snap 28.2         Snap Snap 31.4         Snap Snap Snap 20.0           Color 10 - Mauve         80         87         31.4         34.1         Snap Snap Color 11 - Magenta         Snap Snap Color 12 - Pink         96         103         37.6         40.4           Color 13 - White 3200K         104         111         40.8         43.5         Snap Snap Color 15 - White 5600K         112         119         43.9         46.7           Color 15 - White 7200K         120         127         47.1         49.8         Snap Snap           Stop         128         128         50.2         50.2         Snap           Rainbow colors crossfade slow > fast         129         223         50.6         87.5           Random colors crossfade slow > fast         129         223         50.6         87.5           10000         16         18         6.3         7.1           9900         22         24         8.6         9.4           9700         25         27         9.8         10.6           9600         28         30         11.0         11.8 <t< td=""><th></th><td rowspan="6"></td><td></td><td></td><td></td><td></td><td></td><td rowspan="2"></td><td>Snap</td></t<>									Snap
8         Color wheel effect         Color 09 - Lavender         72         79         28.2         31.0         Snap           Color 10 - Mauve         80         87         31.4         34.1         34.1         34.1         31.4         34.1         31.4         34.1         31.4         34.1         31.4         34.1         31.4         34.1         31.4         34.1         31.4         34.1         31.4         34.1         31.4         34.1         31.4         34.1         31.4         34.1         31.4         34.1         31.4         34.1         31.4         34.1         31.4         34.1         31.4         34.1         31.4         34.1         36.1         31.1         31.1         31.1         31.1         31.1         31.1         31.1         31.1         31.1         31.1         31.1         31.1         34.1         36.1									
Product         Color 10 - Mauve         80         87         31.4         34.1           Color 11 - Magenta         88         95         34.5         37.3           Color 12 - Pink         96         103         37.6         40.4           Color 13 - White 3200K         104         111         40.8         43.5           Color 14 - White 5600K         112         119         43.9         46.7           Color 15 - White 7200K         120         127         47.1         49.8           Stop         128         128         50.2         50.2           Rainbow colors crossfade slow > fast         129         223         50.6         87.5           Random colors crossfade slow > fast         129         223         50.6         87.5           Random colors crossfade slow > fast         224         255         87.8         100           Fade         10000         16         18         6.3         7.1           9900         22         24         8.6         9.4           9700         225         27         9.8         10.6           9600         28         30         11.0         11.8           9500         31									
P         Color 11 - Magenta         88         95         34.5         37.3           Color 12 - Pink         96         103         37.6         40.4           Color 13 - White 3200K         104         111         40.8         43.5           Color 14 - White 3200K         112         119         43.9         46.7           Color 15 - White 7200K         120         127         47.1         49.8           Stop         128         128         50.2         50.2           Rainbow colors crossfade slow > fast         129         223         50.6         87.5           Random colors crossfade slow > fast         224         255         87.8         100           Fade         RAW         0         15         0         5.9           10000         16         18         6.3         7.1           9900         22         24         8.6         9.4           9700         25         27         9.8         10.6           9600         28         30         11.0         11.8           9500         31         33         12.2         12.9           9400         34         36         13.3         14.1	8							0	
P         Color 12 - Pink         96         103         37.6         40.4           Color 13 - White 3200K         104         111         40.8         43.5           Color 14 - White 5600K         112         119         43.9         46.7           Color 15 - White 7200K         120         127         47.1         49.8           Stop         128         128         50.2         50.2           Rainbow colors crossfade slow > fast         129         223         50.6         87.5           Random colors crossfade slow > fast         129         223         50.6         87.5           Random colors crossfade slow > fast         224         255         87.8         100           Fade         10000         16         18         6.3         7.1           9900         212         7.5         8.2         900         225         27         9.8         10.6           9600         28         30         11.0         11.8         15.3         15.3           9200         31         33         12.2         12.9         15.5         15.3           9200         40         42         15.7         16.5         15.5         17.6									
P         Color 13 - White 3200K         104         111         40.8         43.5           Color 14 - White 5600K         112         119         43.9         46.7           Color 15 - White 7200K         120         127         47.1         49.8           Stop         128         128         128         50.2         50.2           Rainbow colors crossfade slow > fast         129         223         50.6         87.5           Raindom colors crossfade slow > fast         224         255         87.8         100           Fade         7.1         990         19         21         7.5         8.2           9800         222         24         8.6         9.4         9700         128         13.3         12.2         12.9           9800         22         24         8.6         9.4         9700         25         27         9.8         10.6           9600         28         30         11.0         11.8         93.3         14.1         93.0         93.1         33         12.2         12.9         94.0           9700         40         42         15.7         16.5         15.3         920.0         14.5         15.3 </td <th></th> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
P         Color 14 - White 5600K         112         119         43.9         46.7           Color 15 - White 7200K         120         127         47.1         49.8         Snap           Stop         128         128         50.2         50.2         Snap         Snap           Rainbow colors crossfade slow > fast         129         223         50.6         87.5         Radom colors crossfade slow > fast         224         255         87.8         100           Random colors crossfade slow > fast         224         255         87.8         100         Fade           9900         16         18         6.3         7.1         9900         19         21         7.5         8.2           9800         222         24         8.6         9.4         9700         255         27         9.8         10.6           9500         31         33         11.2         12.2         12.9         9400         131         33         12.2         12.9           9400         34         36         13.3         14.1         9300         37         39         14.5         15.3           9200         40         42         15.7         16.5 <t< td=""><th></th><th></th><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>									
Color 15 - White 7200K         120         127         47.1         49.8           Stop         128         128         50.2         50.2           Rainbow colors crossfade slow > fast         129         223         50.6         87.5           Random colors crossfade slow > fast         129         223         50.6         87.5           Random colors crossfade slow > fast         224         255         87.8         100           Fade         0         15         0         5.9         5.9           10000         16         18         6.3         7.1           990         22         24         8.6         9.4           9700         22         24         8.6         9.4           9700         25         27         9.8         10.6           9600         28         30         11.0         11.8           9500         31         33         12.2         12.9           9400         34         36         13.3         14.1           9300         37         39         14.5         15.3           9200         40         42         15.7         16.5           9100									
Stop         128         128         50.2         50.2         Snap           Rainbow colors crossfade slow > fast         129         223         50.6         87.5         Fade           Random colors crossfade slow > fast         224         255         87.8         100         Fade           RAW         0         15         0         5.9         5.06         87.5           10000         16         18         6.3         7.1         9.00         5.9         10000         16         18         6.3         7.1           9900         19         21         7.5         8.2         9800         22         24         8.6         9.4           9700         25         27         9.8         10.6         9600         28         30         11.0         11.8           9500         31         33         12.2         12.9         9400         34         36         13.3         14.1           9300         37         39         14.5         15.3         9200         40         42         15.7         16.5           9100         43         45         16.9         17.6         900         800         19.2									
Rainbow colors crossfade slow > fast         129         223         50.6         87.5           Random colors crossfade slow > fast         224         255         87.8         100         Fade           RAW         0         15         0         5.9         5.9         5.0         5.9         5.0         5.9         5.0         5.9         5.0         5.9         5.0         5.9         5.0         5.9         5.0         5.9         5.0         5.9         5.0         5.9         5.0         5.9         5.0         5.9         5.0         5.9         5.0         5.9         5.0         5.9         5.0         5.0         5.9         5.0         5.9         5.0         5.9         5.0         5.9         5.0									
Random colors crossfade slow > fast         224         255         87.8         100         Fade           RAW         0         15         0         5.9           10000         16         18         6.3         7.1           9900         19         21         7.5         8.2           9800         22         24         8.6         9.4           9700         25         27         9.8         10.6           9600         28         30         11.0         11.8           9500         31         33         12.2         12.9           9400         34         36         13.3         14.1           9300         37         39         14.5         15.3           9200         40         42         15.7         16.5           9100         43         45         16.9         17.6           9000         46         48         18.0         18.8           8900         49         51         19.2         20.0           8800         52         54         20.4         21.2           8700         55         57         21.6         22.4									
9         RAW         0         15         0         5.9           10000         16         18         6.3         7.1           9900         19         21         7.5         8.2           9800         22         24         8.6         9.4           9700         25         27         9.8         10.6           9600         28         30         11.0         11.8           9500         31         33         12.2         12.9           9400         34         36         13.3         14.1           9300         37         39         14.5         15.3           9200         40         42         15.7         16.5           9100         43         45         16.9         17.6           9000         46         48         18.0         18.8           8900         49         51         19.2         20.0           8800         52         54         20.4         21.2           8700         55         57         21.6         22.4           8600         58         60         22.7         23.5           8500									
P         10000         16         18         6.3         7.1           9900         19         21         7.5         8.2           9800         22         24         8.6         9.4           9700         25         27         9.8         10.6           9600         28         30         11.0         11.8           9500         31         33         12.2         12.9           9400         34         36         13.3         14.1           9300         37         39         14.5         15.3           9200         40         42         15.7         16.5           9100         43         45         16.9         17.6           9000         46         48         18.0         18.8           8900         49         51         19.2         20.0           8800         52         54         20.4         21.2           8700         55         57         21.6         22.4           8600         58         60         22.7         23.5           8500         61         63         23.9         24.7									
9         9800         22         24         8.6         9.4           9700         25         27         9.8         10.6           9600         28         30         11.0         11.8           9500         31         33         12.2         12.9           9400         34         36         13.3         14.1           9300         37         39         14.5         15.3           9200         40         42         15.7         16.5           9100         43         45         16.9         17.6           9000         46         48         18.0         18.8           8900         52         54         20.4         21.2           8700         55         57         21.6         22.4           8600         58         60         22.7         23.5           8500         61         63         23.9         24.7			10000	16		6.3			
9         9700         25         27         9.8         10.6           9600         28         30         11.0         11.8           9500         31         33         12.2         12.9           9400         34         36         13.3         14.1           9300         37         39         14.5         15.3           9200         40         42         15.7         16.5           9100         43         45         16.9         17.6           9000         446         48         18.0         18.8           8900         49         51         19.2         20.0           8800         52         54         20.4         21.2           8700         55         57         21.6         22.4           8600         58         60         22.7         23.5           8500         61         63         23.9         24.7						7.5			
9         P600         28         30         11.0         11.8           9500         31         33         12.2         12.9           9400         34         36         13.3         14.1           9300         37         39         14.5         15.3           9200         40         42         15.7         16.5           9100         43         45         16.9         17.6           9000         46         48         18.0         18.8           8900         49         51         19.2         20.0           8800         52         54         20.4         21.2           8700         55         57         21.6         22.4           8600         58         60         22.7         23.5           8500         61         63         23.9         24.7									
9         Color Temperature (Kelvin)         9500         31         33         12.2         12.9 </td <th></th> <th></th> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
9         Color Temperature (Kelvin)         9400         34         36         13.3         14.1           9300         37         39         14.5         15.3           9200         40         42         15.7         16.5           9100         43         45         16.9         17.6           9000         46         48         18.0         18.8           8900         49         51         19.2         20.0           8800         52         54         20.4         21.2           8700         55         57         21.6         22.4           8600         58         60         22.7         23.5           8500         61         63         23.9         24.7									
9         9300         37         39         14.5         15.3           9200         40         42         15.7         16.5           9200         43         45         16.9         17.6           9000         46         48         18.0         18.8           9000         46         48         19.2         20.0           8800         52         54         20.4         21.2           8700         55         57         21.6         22.4           8600         58         60         22.7         23.5           8500         61         63         23.9         24.7									
9       Temperature (Kelvin)       9300       37       39       14.5       15.3         9200       40       42       15.7       16.5         9100       43       45       16.9       17.6         9000       46       48       18.0       18.8         8900       49       51       19.2       20.0         8800       52       54       20.4       21.2         8700       55       57       21.6       22.4         8600       58       60       22.7       23.5         8500       61       63       23.9       24.7		Color							
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Badua         6/         8/2         2.6.3         2/1           8100         73         75         28.6         29.4           8000         74         78         28.8         30.6           7900         79         81         31.0         31.8           7800         82         84         30.4         32.2           700         85         87         33.3         34.1           7600         88         90.3         35.7         35.5           7400         91         93         35.7         35.5           7400         94         96         36.9         37.6           7200         100         100         102         32.7         35.5           7400         94         96         36.9         37.6           7300         103         105         40.4         41.2           7000         103         105         40.4         41.2           6000         111         111         43.7         45.7           6000         118         120         47.8         50.6           6000         133         135         52.2         52.9				. –	10		07.1		
BIOC         73         75         28.6         29.4           8000         76         78         29.8         30.6           7900         79         81         31.0         31.8           7000         85         87         33.3         34.1           7000         85         87         33.3         34.1           7000         84         90         34.5         35.3           7300         94         96         36.9         37.6           7300         97         99         30.0         38.8           7300         97         99         30.0         38.8           7300         100         102         39.2         40.0           7000         106         108         41.4         42.4           6000         118         120         44.3         44.7           6000         121         123         47.5         48.2           600         121         122         47.5         48.2           600         130         132         51.0         51.8           5000         130         132         51.0         51.8           5000			8300	67	69	26.3	27.1		
8000         76         78         79.8         30.6           7000         82         84         32.2         32.9           7000         83         87         33.3         34.1           7000         88         90         34.5         35.3           7000         84         89.90         34.5         36.5           7000         94         94         34.9         36.5           7000         100         102         39.2         40.0           7000         103         105         40.4         41.2           7000         106         106         41.6         42.4           6000         112         114         43.9         44.7           6000         112         114         43.9         44.7           6000         124         123         47.5         48.2           6000         124         123         47.5         48.5           6000         130         135         52.2         52.9           6000         136         138         53.3         54.1           5000         142         144         55.7         56.5 <td< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></td<>									
7900         79         81         31.0         31.8           7000         82         84         302         32.9           7000         85         87         33.3         34.1           7000         91         93         35.7         36.5           7400         94         76         36.9         37.6           7300         94         76         36.9         37.6           7300         97         97         30.8         38.8           7200         100         102         39.2         40.0           7000         106         108         41.6         42.4           6000         109         111         42.7         43.5           6000         118         120         44.3         44.7           6000         121         123         47.5         48.2           6000         133         135         52.2         52.9           6000         133         135         52.2         52.9           6000         136         138         53.3         54.1           5000         136         138         53.3         54.1           5000 </th <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>									
Rec         84         82.2         32.2         32.9           7700         85         67         33.3         34.1           7400         88         90         34.5         35.3           7500         91         93         35.7         36.5           7600         94         76         36.9         37.6           7300         97         99         38.0         38.8           7000         103         105         40.4         41.2           7000         106         106         41.6         42.4           6700         115         117         45.1         45.9           6600         118         120         46.3         47.1           6300         121         123         47.5         48.2           6400         124         126         48.4         49.4           6300         127         129         49.8         50.6           6000         136         133         135         52.2         55.7           6000         136         135         52.2         55.7           6000         136         135         55.2         50.0									
7700         85         87         33.3         34.1           7600         68         90         34.5         35.3           7500         91         92         35.7         36.5           7400         94         96         36.9         37.6           7300         97         97         98.0         38.8           7200         100         102         39.2         40.0           7000         106         108         41.6         42.4           6000         109         111         47.1         45.9           6600         112         114         43.9         44.7           6700         115         117         45.1         45.2           6400         118         120         44.3         47.1           4500         124         123         47.5         48.2           6400         134         138         53.3         54.1           5900         142         144         55.7         56.5           5700         142         144         55.7         56.5           5700         142         145         145.6         63.4									
7600         98         90         34.5         35.3           7500         91         93         35.7         36.5           7400         94         96         36.9         37.6           7200         100         102         37.2         40.0           7100         103         105         40.4         41.2           6700         102         37.2         40.0           7000         106         41.4         42.4           6700         111         42.7         43.5           6800         112         123         47.5         48.2           6400         124         123         47.5         48.2           6400         124         123         47.5         48.2           6400         133         135         52.2         52.9           6000         133         135         52.2         52.9           6000         133         135         52.2         52.9           6000         133         135         52.2         52.9           6000         154         156         60.4         61.2           5300         157         177									
7500         91         93         35.7         35.6           7400         94         96         36.9         37.6           7300         97         99         38.0         38.8           7200         100         102         37.2         40.0           7000         106         108         41.6         42.4           6000         111         42.7         43.5         44.7           6700         115         111         43.9         44.7           6700         115         112         114         43.9         44.7           6700         115         117         45.1         45.5         45.2           6400         124         126         48.6         49.4           6300         121         114         45.5         55.3           5900         139         141         54.5         55.3           5900         145         147         56.9         57.6           5000         148         153         59.2         40.0           5000         145         147         56.9         57.6           5000         148         156         63.5									
7400         94         96         36.9         37.6           7200         100         102         39.2         40.0           7100         103         105         40.4         41.2           7000         106         111         42.7         43.5           6800         112         114         43.7         43.5           6800         112         114         43.7         44.7           6700         115         117         45.1         45.2           6600         118         112         46.3         47.1           6500         121         123         47.5         48.2           6400         124         126         48.6         47.4           6300         127         129         49.8         50.6           6200         130         132         51.2         52.9           6000         136         138         53.3         54.1           5900         139         145         54.5         570.5           5000         145         147         56.6         570.6           5400         154         153         50.2         64.7									
7300         97         99         38.0         38.8           7200         100         102         39.2         40.0           7100         103         105         40.4         41.2           7000         106         108         41.6         42.4           6900         109         111         42.7         43.5           6800         112         114         43.9         44.7           6700         115         117         45.1         45.9           6400         124         126         48.6         49.4           6300         127         123         47.5         48.2           6400         130         132         51.0         51.8           6100         133         135         52.2         52.9           6000         144         155         55.3         53.0           5900         145         147         55.9         57.6           5600         148         150         58.0         58.8           5600         148         150         58.0         58.2           5000         154         147         56.5         51.0									
7200         100         102         39.2         40.0           7100         103         105         40.4         41.2           7000         106         108         41.6         42.4           6900         109         111         42.7         43.5           6600         115         117         45.1         44.5           6700         115         117         45.1         44.5           6300         124         123         47.5         48.2           6400         124         124         48.6         49.4           6300         127         129         49.8         50.6           6200         130         132         51.0         51.8           6100         133         133         52.2         52.2           6000         144         150         55.5         5700           7000         145         147         54.9         57.6           5700         148         150         58.0         58.8           5500         151         153         59.2         54.7           5000         163         165         33.9         64.7									
7100         103         105         40.4         41.2           7000         106         108         41.6         42.7           6900         109         111         42.7         43.5           6800         112         114         43.9         44.7           6700         115         117         45.1         45.9           6600         121         123         47.5         48.2           6400         124         125         48.6         49.4           6300         121         123         47.5         48.2           6400         124         125         48.6         49.4           6300         132         151.0         51.8           6100         133         132         52.2         52.9           6000         148         150         58.0         58.8           5700         1445         147         56.9         57.6           5600         163         165         63.9         64.7           5000         164         164         64.7         50.0           5000         164         168         65.1         65.7           6400			7300	97	99	38.0	38.8		
7000         106         108         41.6         42.4           6900         109         111         42.7         43.5           6800         112         114         43.9         44.7           6700         115         117         45.1         45.9           6600         118         120         46.3         47.1           6500         121         123         47.5         48.2           6400         124         126         48.6         49.4           6300         127         129         49.8         50.6           6200         130         132         51.0         51.8           6100         133         135         52.2         52.9           6000         144         144         55.7         56.5           5700         139         141         54.5         55.5           5000         145         147         56.9         57.6           5000         151         153         59.0         58.8           5000         160         162         62.7         63.5           5100         163         155         60.4         61.2			7200	100	102	39.2	40.0		
6700         109         111         42.7         43.5           6800         112         114         43.9         44.7           6700         113         117         45.1         45.7           6600         121         123         47.5         48.2           6400         124         126         48.6         49.4           6300         127         129         49.8         50.6           6200         130         132         51.0         51.8           6100         133         135         52.2         52.7           6000         136         138         133.3         54.1           5900         139         141         54.5         55.3           5000         145         147         55.9         57.6           5000         145         147         55.9         57.6           5000         151         153         59.2         60.0           5400         164         165         65.1         65.9           4900         169         171         66.3         67.1           4000         172         174         67.5         68.2			7100	103	105	40.4	41.2		
6800         112         114         43.9         44.7           6700         115         117         45.1         45.9           6600         118         120         46.3         47.1           6500         121         123         47.5         48.2           6400         124         126         48.6         49.4           6300         127         129         49.8         50.6           6200         130         132         51.0         51.8           6100         133         135         52.2         52.7           6000         144         154.5         55.3           5800         142         144         55.7         56.5           5700         145         147         56.9         57.6           5600         148         150         58.8         58.8           5500         163         165         63.9         64.7           5000         163         166         63.9         64.7           5000         164         168         65.1         65.1           5100         163         166         63.9         64.7           5000			7000	106	108	41.6	42.4		
6700         115         117         45.1         45.7           6400         118         120         46.3         47.1           6500         121         123         47.5         48.2           6400         124         126         48.4         49.4           6300         127         129         49.8         50.6           6200         130         132         51.0         51.8           6100         136         138         53.3         54.1           5900         139         141         54.5         55.3           5800         145         147         56.9         57.6           5000         151         153         59.2         60.0           5400         154         156         60.4         61.2           5300         160         162         62.7         63.5           5000         160         162         62.7         63.5           5000         164         168         65.1         65.9           4000         172         174         67.5         68.2           4700         175         177         68.6         69.4			6900	109	111	42.7	43.5		
6700         115         117         45.1         45.7           6600         118         120         46.3         47.1           6500         121         123         47.5         48.2           6400         124         124         48.6         49.4           6300         127         129         49.8         50.6           6200         130         132         51.0         51.8           6100         133         135         52.2         52.9           6000         136         138         53.3         54.1           5900         145         147         56.9         57.6           5600         145         147         56.9         57.6           5600         151         153         59.2         60.0           5400         164         164         60.4         61.2           5300         160         162         62.7         63.5           5000         164         168         65.1         65.9           4900         169         171         66.3         67.1           4800         172         174         67.5         68.2			6800	112	114	43.9	44.7		
6600         118         120         46.3         47.1           6500         121         123         47.5         48.2           6400         124         126         48.6         49.4           6300         130         132         51.0         51.8           6100         133         135         52.2         52.9           6000         136         138         53.3         54.1           5900         139         141         54.5         55.5           5700         145         147         56.9         57.6           5600         148         150         58.0         58.8           5000         151         153         59.2         60.0           5400         151         153         59.2         60.0           5400         163         165         63.9         64.7           5300         164         168         65.1         65.7           5000         164         168         65.1         65.7           5000         164         186         71.7         76.5           4000         172         174         67.5         68.2			6700	115	117		45.9		
6500         121         123         47.5         48.2           6400         124         126         48.6         49.4           6300         127         127         49.8         50.6           6200         130         132         51.0         51.8           6100         133         132         51.0         51.8           6000         136         138         53.3         54.1           5900         141         54.5         55.3         56.5           5700         145         147         56.9         57.6           5800         151         153         59.2         60.0           5400         154         155         60.4         61.2           5300         151         153         59.2         60.0           5400         164         166         63.1         65.7           5000         163         165         63.2         44.7           5000         164         166         64.3         64.4           600         171         66.3         64.4         64.4           600         172         174         67.5         68.2									
6400         124         126         48.6         49.4           6300         127         129         49.8         50.6           6200         130         132         51.0         51.8           6100         133         135         52.2         52.9           6000         136         138         53.3         54.1           5900         139         141         54.5         55.3           5800         142         144         55.7         56.5           5700         142         144         55.7         56.5           5700         148         150         58.0         58.8           5500         151         153         59.2         60.0           5400         154         156         60.4         61.2           5300         166         182         65.1         65.9           6000         172         174         67.5         68.2           4700         175         177         68.6         69.4           4600         172         174         67.5         73.3           4000         184         183         71.0         71.8									
6300         127         129         49.8         50.6           6200         130         132         51.8         52.2         52.9           6000         136         138         55.2         52.9         55.3           5000         136         141         54.5         55.3           5000         142         144         55.7         56.5           5700         145         147         56.9         57.4           5600         148         150         58.0         58.8           5500         151         153         59.2         60.0           5400         154         156         60.4         61.2           5300         151         153         59.2         63.6           5000         164         168         65.1         65.9           4000         169         171         66.6         69.4           4000         175         177         68.6         69.4           4000         178         180         69.8         70.6           4000         184         186         72.2         72.9           4300         190         192         74.5									
6200             130             132             51.0             51.8             6100             133             133									
6100         133         135         52.2         52.9           6000         136         138         53.3         54.1           5900         139         141         54.5         55.3           5800         142         144         55.7         56.5           5700         145         147         56.9         57.6           5600         138         150         58.0         58.8           5500         151         153         59.2         60.0           5400         154         156         60.4         61.2           5300         157         159         61.6         62.4           5200         160         162         62.7         63.5           5100         163         165         63.9         64.7           5000         189         171         66.3         67.1           4700         172         174         67.5         68.2           4700         178         180         69.8         70.6           4400         184         186         72.2         72.9           4300         192         74.5         75.3           4100									
6000         136         138         53.3         54.1           5900         139         141         54.5         55.3           5700         145         147         56.5           5700         145         147         56.9         57.6           5600         148         150         58.0         58.8           5500         151         153         59.2         60.0           5400         154         156         60.4         61.2           5300         157         159         61.6         62.4           5200         160         162         62.7         63.5           5100         163         165         63.9         64.7           5000         166         168         65.1         65.2           4700         175         177         68.6         69.4           4600         181         183         71.0         71.8           4400         184         186         72.2         72.9           4300         199         192         74.5         75.3           4100         193         195         75.7         76.5           3000									
5900         139         141         54.5         55.3           5800         142         144         55.7         56.5           5700         145         147         56.9         57.6           5600         148         150         58.0         58.8           5500         151         153         59.2         60.0           5400         154         156         60.4         61.2           5300         167         159         61.6         62.4           5200         160         162         63.9         64.7           5000         164         168         65.1         65.7           4000         164         168         65.1         65.7           4700         172         174         66.7         68.2           4700         175         177         68.6         69.4           4500         181         183         71.0         71.8           4400         184         186         72.2         72.9           4300         196         198         75.7         76.5           4000         193         195         75.7         76.5									
5800         142         144         55.7         56.5           5700         145         147         56.9         57.6           5600         148         150         58.0         58.8           5500         151         153         59.2         60.0           5400         154         156         68.0         46.12           5300         157         159         61.6         62.4           5200         160         162         62.7         63.5           5100         163         165         63.9         64.7           5000         166         168         65.1         65.9           4900         172         174         67.5         68.2           4700         175         177         68.6         69.4           4600         181         183         71.0         71.8           4400         184         186         72.2         72.9           4300         199         201         78.0         78.8           3800         202         204         74.5         75.3           4100         193         195         75.7         76.5									
5700         145         147         56.9         57.6           5600         148         150         58.0         58.8           5500         151         153         59.2         60.0           5400         154         156         60.4         61.2           5300         157         159         61.6         62.4           5200         160         162         63.5         5100           5100         163         165         63.9         64.7           5000         166         168         65.1         65.9           4700         175         177         68.6         69.4           4600         172         174         67.5         68.2           4700         175         177         68.6         69.4           4600         181         183         71.0         71.8           4400         184         186         72.2         72.9           4300         187         189         73.3         74.1           4200         199         201         78.0         75.3           4000         194         198         76.9         77.6									
5600         148         150         58.0         58.8           5500         151         153         59.2         60.0           5400         154         156         60.4         61.2           5300         167         159         61.6         62.4           5200         160         162         62.7         63.5           5100         163         165         63.9         64.7           5000         166         168         65.1         65.9           4900         169         171         66.3         67.1           4800         172         174         67.5         68.2           4700         175         177         68.6         69.4           4600         181         183         71.0         71.8           4400         184         186         75.7         76.5           4000         194         186         76.9         77.6           3900         199         201         78.0         78.8           3800         202         207         80.4         81.2           3600         201         210         81.6         82.4									
5500         151         153         59.2         60.0           5400         154         156         60.4         61.2           5200         160         162         62.7         63.5           5100         163         165         63.9         64.7           5000         166         164         65.1         65.9           4900         169         171         66.3         67.1           4800         172         174         67.5         68.2           4700         175         177         68.6         69.4           4600         178         180         69.8         70.6           4500         181         183         71.0         71.8           4400         184         186         72.2         72.9           4300         187         189         73.3         74.1           4200         190         192         74.5         75.3           4100         193         195         75.7         76.5           4000         196         198         7.6.9         77.6           3800         202         204         79.2         80.0									
5400         154         156         60.4         61.2           5300         157         159         61.6         62.4           5200         160         162         62.7         63.5           5100         163         165         63.9         64.7           5000         166         168         65.1         65.9           4700         169         171         66.3         67.5           4800         172         174         67.5         68.2           4700         175         177         68.6         69.4           4600         184         186         72.2         72.9           4300         187         189         73.3         74.1           4200         190         192         74.5         75.3           4100         193         195         75.7         76.5           4000         184         186         79.9         77.6           3900         199         201         78.0         78.8           3800         202         204         79.2         80.0           3700         205         207         80.4         81.2									
5300         157         159         61.6         62.4           5200         160         162         62.7         63.5           5100         163         165         63.9         64.7           5000         164         168         65.1         65.9           4900         169         171         66.3         67.1           4800         172         174         67.5         68.2           4700         175         177         88.6         69.4           4600         178         180         69.8         70.6           4500         181         183         71.0         71.8           4400         184         186         72.2         72.9           4300         190         192         74.5         75.3           4100         193         195         75.7         76.5           4000         196         198         76.9         77.6           3900         201         81.6         82.4         35.0           3000         201         81.6         82.4         35.0           3000         214         213         82.7         83.5									
5200         160         162         62.7         63.5           5100         163         165         63.9         64.7           5000         166         168         65.1         65.9           4900         166         171         66.3         67.1           4800         172         174         67.5         68.2           4700         175         177         68.6         69.4           4600         178         180         69.8         70.6           4500         181         183         71.0         71.8           4400         184         186         72.2         72.9           4300         193         195         75.7         76.5           4100         193         195         75.7         76.5           4000         196         198         76.9         77.6           3900         202         204         79.2         80.0           3700         205         207         80.4         81.2           3600         214         219         85.1         85.9           3200         214         216         83.9         84.7									
5100         163         165         63.9         64.7           5000         166         168         65.1         65.9           4900         169         171         66.3         67.1           4800         172         174         67.5         68.2           4700         175         177         68.6         69.4           4600         178         180         69.8         70.6           4500         181         183         71.0         71.8           4400         184         186         72.2         72.9           4300         187         189         73.3         74.1           4200         190         192         74.5         75.3           4100         193         195         75.7         76.5           3900         199         201         78.0         78.8           3800         202         204         79.2         80.0           3700         205         207         80.4         81.2           3600         210         21.4         216         83.9         84.7           3200         220         222         86.3         87.1									
5000         166         168         65.1         65.9           4900         169         171         66.3         67.1           4800         172         174         67.5         68.2           4700         175         177         68.6         69.4           4600         178         180         69.8         70.6           4500         181         183         71.0         71.8           4400         184         186         72.2         72.9           4300         187         189         73.3         74.1           4200         190         192         74.5         75.3           4100         193         195         75.7         76.5           4000         196         198         76.9         77.6           3900         202         204         79.2         80.0           3700         205         207         80.4         81.2           3600         211         213         82.7         83.5           3400         214         216         83.9         84.7           3300         214         216         83.9         89.4									
4900         169         171         66.3         67.1           4800         172         174         67.5         68.2           4700         175         177         68.6         69.4           4600         178         180         69.8         70.6           4500         181         183         71.0         71.8           4400         184         186         72.2         72.9           4300         187         189         73.3         74.1           4200         190         192         74.5         75.3           4100         193         195         75.7         76.5           4000         194         198         76.9         77.6           3900         199         201         78.0         78.8           3800         202         204         79.2         80.0           3700         205         207         80.4         81.2           3600         208         210         81.6         82.4           3500         211         213         82.7         83.5           3400         214         216         83.9         84.7									
4800         172         174         67.5         68.2           4700         175         177         68.6         69.4           4600         178         180         69.8         70.6           4500         181         183         71.0         71.8           4400         184         186         72.2         72.9           4300         187         189         73.3         74.1           4200         190         192         74.5         75.3           4100         193         195         75.7         76.5           4000         194         198         76.9         77.6           3900         199         201         78.0         78.8           3800         202         204         79.2         80.0           3700         205         207         80.4         81.2           3600         211         213         82.7         83.5           3400         214         216         83.9         84.7           3300         217         219         85.1         85.9           3200         223         225         87.5         88.2									
4700         175         177         68.6         69.4           4600         178         180         69.8         70.6           4500         181         183         71.0         71.8           4400         184         186         72.2         72.9           4300         187         189         73.3         74.1           4200         190         192         74.5         75.3           4100         193         195         75.7         76.5           4000         196         198         76.9         77.6           3700         202         204         79.2         80.0           3700         205         207         80.4         81.2           3600         201         21.0         81.6         82.4           3500         211         213         82.7         83.5           3400         214         216         83.9         84.7           3300         217         219         85.1         85.9           3200         220         222         86.3         87.1           3100         223         225         87.5         88.2									
4600         178         180         69.8         70.6           4500         181         183         71.0         71.8           4400         184         186         72.2         72.9           4300         187         189         73.3         74.1           4200         190         192         74.5         75.3           4100         193         195         75.7         76.5           4000         196         198         76.9         77.6           3900         199         201         78.0         78.8           3800         202         204         79.2         80.0           3700         205         207         80.4         81.2           3600         208         210         81.6         82.4           3500         211         213         82.7         83.5           3400         214         216         83.9         84.7           3300         217         219         85.1         85.9           3200         223         225         87.5         88.2           3000         224         228         88.6         89.4									
4500         181         183         71.0         71.8           4400         184         186         72.2         72.9           4300         187         189         73.3         74.1           4200         190         192         74.5         75.3           4100         193         195         75.7         76.5           4000         194         198         76.9         77.6           3000         197         201         78.0         78.8           3800         202         204         79.2         80.0           3700         205         207         80.4         81.2           3600         211         213         82.7         83.5           3400         214         216         83.9         84.7           3300         217         219         85.1         85.9           3000         220         222         86.3         87.1           3100         223         225         87.5         88.2           3000         226         228         88.6         89.4           2900         229         231         89.8         90.6									
4400         184         186         72.2         72.9           4300         187         189         73.3         74.1           4200         190         192         74.5         75.3           4100         193         195         75.7         76.5           4000         196         198         76.9         77.6           3900         199         201         78.0         78.8           3800         202         204         79.2         80.0           3700         205         207         80.4         81.2           3600         208         210         81.6         82.4           3500         211         213         82.7         83.5           3400         214         216         83.9         84.7           3300         217         219         85.1         85.9           3200         220         222         86.3         87.1           3100         223         225         87.5         88.2           3000         224         228         88.6         89.4           2900         229         231         89.8         90.6									
4300         187         189         73.3         74.1           4200         190         192         74.5         75.3           4100         193         195         75.7         76.5           4000         196         198         76.9         77.6           3900         199         201         78.0         78.8           3800         202         204         79.2         80.0           3700         205         207         80.4         81.2           3600         208         210         81.6         82.4           3500         211         213         82.7         83.5           3400         214         216         83.9         84.7           3300         217         219         85.1         85.9           3200         220         222         86.3         87.1           3100         223         225         87.5         88.2           3000         226         228         88.6         89.4           2900         229         231         89.8         90.6           2800         232         234         91.0         91.8									
4200         190         192         74.5         75.3           4100         193         195         75.7         76.5           4000         194         198         76.9         77.6           3900         199         201         78.0         78.8           3800         202         204         79.2         80.0           3700         205         207         80.4         81.2           3600         208         210         81.6         82.4           3500         211         213         82.7         83.5           3400         214         216         83.9         84.7           3300         217         219         85.1         85.9           3200         220         222         86.3         87.1           3100         223         225         87.5         88.2           3000         226         228         88.6         89.4           2900         229         231         89.8         90.6           2800         232         234         91.0         91.8           2700         235         237         92.2         92.9									
4100         193         195         75.7         76.5           4000         196         198         76.9         77.6           3900         199         201         78.0         78.8           3800         202         204         79.2         80.0           3700         205         207         80.4         81.2           3600         208         210         81.6         82.4           3500         211         213         82.7         83.5           3400         214         216         83.9         84.7           3300         217         219         85.1         85.9           3200         220         222         86.3         87.1           3100         223         225         87.5         88.2           3000         226         228         88.6         89.4           2900         229         231         89.8         89.6           2800         232         234         91.0         91.8           2700         235         237         92.2         92.9           2600         238         240         93.3         94.1									
4000         196         198         76.9         77.6           3900         199         201         78.0         78.8           3800         202         204         79.2         80.0           3700         205         207         80.4         81.2           3600         208         210         81.6         82.4           3500         211         213         82.7         83.5           3400         214         216         83.9         84.7           3300         217         219         85.1         85.9           3200         220         222         86.3         87.1           3100         223         225         87.5         88.2           3000         226         228         88.6         89.4           2900         229         231         89.8         90.6           2800         232         234         91.0         91.8           2700         235         237         92.2         92.9           2600         238         240         93.3         94.1           2500         241         255         94.5         100									
3900         199         201         78.0         78.8           3800         202         204         79.2         80.0           3700         205         207         80.4         81.2           3600         208         210         81.6         82.4           3500         211         213         82.7         83.5           3400         214         216         83.9         84.7           3300         217         219         85.1         85.9           3200         220         222         86.3         87.1           3100         223         225         87.5         88.2           3000         226         228         88.6         89.4           2900         229         231         89.8         90.6           2800         232         234         91.0         91.8           2700         235         237         92.2         92.9           2600         238         240         93.3         94.1           2500         241         255         94.5         100									
3800         202         204         79.2         80.0           3700         205         207         80.4         81.2           3600         208         210         81.6         82.4           3500         211         213         82.7         83.5           3400         214         216         83.9         84.7           3300         217         219         85.1         85.9           3200         220         222         86.3         87.1           3100         223         225         87.5         88.2           3000         226         228         88.6         89.4           2900         229         231         89.8         90.6           2800         232         234         91.0         91.8           2700         235         237         92.2         92.9           2600         238         240         93.3         94.1           2500         241         255         94.5         100									
3700         205         207         80.4         81.2           3600         208         210         81.6         82.4           3500         211         213         82.7         83.5           3400         214         216         83.9         84.7           3300         217         219         85.1         85.9           3200         220         222         86.3         87.1           3100         223         225         87.5         88.2           3000         226         228         88.6         89.4           2900         229         231         89.8         90.6           2800         232         234         91.0         91.8           2700         235         237         92.2         92.9           2600         238         240         93.3         94.1           2500         241         255         94.5         100									
3600       208       210       81.6       82.4         3500       211       213       82.7       83.5         3400       214       216       83.9       84.7         3300       217       219       85.1       85.9         3200       220       222       86.3       87.1         3100       223       225       87.5       88.2         3000       226       228       88.6       89.4         2900       229       231       89.8       90.6         2800       232       234       91.0       91.8         2700       235       237       92.2       92.9         2600       238       240       93.3       94.1         2500       241       255       94.5       100									
3500       211       213       82.7       83.5         3400       214       216       83.9       84.7         3300       217       219       85.1       85.9         3200       220       222       86.3       87.1         3100       223       225       87.5       88.2         3000       226       228       88.6       89.4         2900       229       231       89.8       90.6         2800       232       234       91.0       91.8         2700       235       237       92.2       92.9         2600       238       240       93.3       94.1         2500       241       255       94.5       100         10       Red       Red intensity 0-100%       0       65535       0       100       32767       Forde									
3400       214       216       83.9       84.7         3300       217       219       85.1       85.9         3200       220       222       86.3       87.1         3100       223       225       87.5       88.2         3000       226       228       88.6       89.4         2900       229       231       89.8       90.6         2800       232       234       91.0       91.8         2700       235       237       92.2       92.9         2600       238       240       93.3       94.1         2500       241       255       94.5       100									
3300       217       219       85.1       85.9         3200       220       222       86.3       87.1         3100       223       225       87.5       88.2         3000       226       228       88.6       89.4         2900       229       231       89.8       90.6         2800       235       237       92.2       92.9         2600       238       240       93.3       94.1         2500       241       255       94.5       100         10       Red       Red intensity 0-100%       0       65535       0       100       32767       Forder									
3200       220       222       86.3       87.1         3100       223       225       87.5       88.2         3000       226       228       88.6       89.4         2900       229       231       89.8       90.6         2800       235       237       92.2       92.9         2600       238       240       93.3       94.1         2500       241       255       94.5       100         10       Red       Red intensity 0–100%       0       65535       0       100       32767       Forde									
3100         223         225         87.5         88.2           3000         226         228         88.6         89.4           2900         229         231         89.8         90.6           2800         232         234         91.0         91.8           2700         235         237         92.2         92.9           2600         238         240         93.3         94.1           2500         241         255         94.5         100           10         Red         Red intensity 0-100%         0         65535         0         100         32767         Forder									
3000         226         228         88.6         89.4           2900         229         231         89.8         90.6           2800         232         234         91.0         91.8           2700         235         237         92.2         92.9           2600         238         240         93.3         94.1           2500         241         255         94.5         100           10         Red         Red intensity 0–100%         0         65535         0         100         32767         Forder									
2900         229         231         89.8         90.6           2800         232         234         91.0         91.8           2700         235         237         92.2         92.9           2600         238         240         93.3         94.1           2500         241         255         94.5         100           10         Red         Red intensity 0–100%         0         65535         0         100         32767         Forder									
2800         232         234         91.0         91.8           2700         235         237         92.2         92.9           2600         238         240         93.3         94.1           2500         241         255         94.5         100           10         Red         Red intensity 0–100%         0         65535         0         100         32767         Forder									
2700         235         237         92.2         92.9           2600         238         240         93.3         94.1           2500         241         255         94.5         100           10         Red         Red intensity 0–100%         0         65535         0         100         32767         Forder									
2600         238         240         93.3         94.1           2500         241         255         94.5         100           10         Red         Red intensity 0–100%         0         65535         0         100         32767         Forder									
2500         241         255         94.5         100           10         Red         Red intensity 0–100%         0         65535         0         100         32767         Eader									
<b>10 Red</b> Red intensity 0-100% 0 65535 0 100 32767 Eade									
			2500	241	255	94.5	100		
11   Red fine   100 min. ( 0 100 / 0 0 / 0 0 / 0 0 / 0 0 / 0 0 / 0 0 / 0 0 / 0 0 / 0 0 / 0 0 / 0 0 / 0			Red intensity 0–100%	0	65535	0	100	32767	Fade
	11	Red fine		,		~		,	

## DMX control channel layout tables

12	Green							
13	Green fine	Green intensity 0–100%	0	65535	0	100	32767	Fade
14	Blue							
15	Blue fine	Blue intensity 0–100%	0	65535	0	100	32767	Fade
16	White		0	15505	0	100	207/7	<b>F</b> avala
17	White fine	White intensity 0–100%	0	65535	0	100	32767	Fade
		Static pattern	0	51	0	20.0		
10	Dattern	Chase animation	52	131	20.4	51.4	0	Sin our
18	Pattern	Fade animation	132	211	51.8	82.7	0	Snap
		Random	212	255	83.1	100		
19	Pattern speed	Slow-fast	0	255	0	100	0	Fade
20	Pattern fade	Slow crossfade-snap	0	255	0	100	0	Fade
21	Zoom	Wide-narrow	0	255	0	100	0	Fade
		No function	0	9	0.0	3.5		
		Dimmer curve: Extra-soft (3s hold)	10	15	3.9	5.9		
		Dimmer curve: Linear (3s hold)	16	21	6.3	8.2		
		Display mode: Auto (3s hold)	22	27	8.6	10.6		
		Display mode: On (3s hold)	28	33	11.0	12.9		
		Display mode: Off (3s hold)	34	39	13.3	15.3		
		Display orientation: Normal (3s hold)	40	45	15.7	17.6		
		Display orientation: Inverted (3s hold)	46	51	18.0	20.0		
		No DMX: Blackout (3s hold)	52	57	20.4	22.4		
		No DMX: Hold (3s hold)	58	63	22.7	24.7		
		No DMX: Stand-alone (3s hold)	64	69	25.1	27.1		
		Fan mode: Regulated (3s hold)	70	75	27.5	29.4		
		Fan mode: High (3s hold)	76	81	29.8	31.8	0	
		Fan mode: Medium (3s hold)	82	87	32.2	34.1		
		Fan mode: Low (3s hold)	88	93	34.5	36.5		
		Position feedback: Off (3s hold)	94	99	36.9	38.8		
		Position feedback: On (3s hold)	100	105	39.2	41.2		
		No function	106	117	41.6	45.9		
		Tilt inversion: Off (3s hold)	118	123	46.3	48.2		
		Tilt inversion: On (3s hold)	124	129	48.6	50.6		
22	Control /	Pan inversion: Off (3s hold)	130	135	51.0	52.9		Snap
	Settings	Pan inversion: On (3s hold)	136	141	53.3	55.3		-
		Zoom inversion: Off (3s hold)	142	147	55.7	57.6		
		Zoom inversion: On (3s hold)	148	153	58.0	60.0		
		Defog: Off	154	159	60.4	62.4		
		Defog: On	160	165	62.7	64.7		
		Defog: Quick	166	171	65.1	67.1		
		Load Settings Preset1	172	177	67.5	69.4		
		Load Settings Preset2	178	183	69.8	71.8		
		Load Settings Preset3	184	189	72.2	74.1		
		PWM: 600 Hz (5s hold)	190	195	74.5	76.5		
		PWM: 2200 Hz (5s hold)	196	201	76.9	78.8		
		PWM: 3000 Hz (5s hold)	202	207	79.2	81.2		
		PWM: 4800 Hz (5s hold)	208	213	81.6	83.5		
		PWM: 9600 Hz (5s hold)	214	219	83.9	85.9		
		PWM: 25 kHz (5s hold)	220	225	86.3	88.2		
		No function	226	231	88.6	90.6		
		Return to default settings	232	237	91.0	92.9	1	
		Reset Pan/Tilt (3s hold)	238	243	93.3	95.3	1	
	ł	Reset Head (3s hold)	244	249	95.7	97.6	1	
		Reset All (3s hold)	250	255	98.0	100		
23	Pixel 1 Red	Intensity 0-100%	0	255	0.0	100	0	Fade
23 24	Pixel 1 Green	Intensity 0-100%	0	255	0	100	0	Fade
25	Pixel 1 Blue	Intensity 0-100%	0	255	0	100	0	Fade
20	I IVEL I DIOG		U	200	0	100	0	Tuue



26	Pixel 1 White	Intensity 0-100%	0	255	0	100	0	Fade
27	Pixel 2 Red	Intensity 0-100%	0	255	0	100	0	Fade
28	Pixel 2 Green	Intensity 0-100%	0	255	0	100	0	Fade
29	Pixel 2 Blue	Intensity 0-100%	0	255	0	100	0	Fade
30	Pixel 2 White	Intensity 0-100%	0	255	0	100	0	Fade
31	Pixel 3 Red	Intensity 0-100%	0	255	0	100	0	Fade
32	Pixel 3 Green	Intensity 0-100%	0	255	0	100	0	Fade
33	Pixel 3 Blue	Intensity 0-100%	0	255	0	100	0	Fade
34	Pixel 3 White	Intensity 0-100%	0	255	0	100	0	Fade
35	Pixel 4 Red	Intensity 0-100%	0	255	0	100	0	Fade
36	Pixel 4 Green	Intensity 0-100%	0	255	0	100	0	Fade
37	Pixel 4 Blue	Intensity 0-100%	0	255	0	100	0	Fade
38	Pixel 4 White	Intensity 0-100%	0	255	0	100	0	Fade
39	Pixel 5 Red	Intensity 0-100%	0	255	0	100	0	Fade
40	Pixel 5 Green	Intensity 0-100%	0	255	0	100	0	Fade
41	Pixel 5 Blue	Intensity 0-100%	0	255	0	100	0	Fade
42	Pixel 5 White	Intensity 0-100%	0	255	0	100	0	Fade
43	Pixel 6 Red	Intensity 0-100%	0	255	0	100	0	Fade
44	Pixel 6 Green	Intensity 0-100%	0	255	0	100	0	Fade
45	Pixel 6 Blue	Intensity 0-100%	0	255	0	100	0	Fade
46	Pixel 6 White	Intensity 0-100%	0	255	0	100	0	Fade
47	Pixel 7 Red	Intensity 0-100%	0	255	0	100	0	Fade
48	Pixel 7 Green	Intensity 0-100%	0	255	0	100	0	Fade
49	Pixel 7 Blue	Intensity 0-100%	0	255	0	100	0	Fade
50	Pixel 7 White	Intensity 0-100%	0	255	0	100	0	Fade

## 13. Service



**Warning!** There are no user-serviceable parts inside the fixture. Opening the fixture can compromise its IP65 rating and cause damage that is not covered by the product warranty. Any service operation that requires removal of a cover must be performed by a professional service technician with the tools, skills, and personal protective equipment to maintain high-powered lighting equipment safely and efficiently.

## Cleaning

EXO Wash 30 fixtures require occasional cleaning to prevent the buildup of dust, dirt, and residue from atmospheric effects. Failure to keep the fixture clean will significantly reduce light output and may cause heat buildup and damage that is not covered by the product warranty. Regular cleaning will ensure maximum performance and reliable operation.

The cleaning schedule depends on the operating environment. Check fixtures regularly for signs of dirt buildup.

You can clean the fixture using a soft cloth slightly dampened with a household or automotive glass cleaning product. Do not apply pressure to the clear front or display on the back of the fixture, as you may scratch these surfaces.

Use the tilt lock mechanism to hold the head in a vertical position for easier cleaning.

## **GLP Service and Support**

Contact information for the nearest GLP Service and Support is available online at www.glp.de/en/service, by email at info@glp.de, or by telephone at the following numbers:

- GLP Germany: +49 (7248) 927 19-55
- GLP N. America: +1 818 767-8899
- GLP UK: +44 1392 690140
- GLP Asia: +852 (3151) 7730
- GLP Nordic: +46 737 57 11 40

# FUSION

## 14. Technical specifications

### **Optics**

Light source: 7x 40W Osram RGBW LEDs Lifetime: 20 000 hrs. approx. to > 70% luminous output Luminous flux: 40995 lux @ 3 m, 14758 lux @ 5 m Beam angle (half peak): 4° to 54°

### Control

Control systems: DMX, RDM, Manual setting DMX channel footprint: 13 / 22 / 37 / 50 depending on mode Setting and addressing: Onboard control panel with LCD display, RDM DMX compliance: USITT DMX512 RDM compliance: ANSI/ESTA E1.20 Pan range: 630°, 16 bit resolution Tilt range: 267°, 16 bit resolution

### Installation

Options: Stand on horizontal surface, suspended using truss mount brackets Operating position: Any Minimum distance to combustible materials: 0.5 m (20 in.) Minimum distance to illuminated surfaces: 0.5 m (20 in.) Installation environment: Temporary or permanent indoor installation, temporary outdoor installation Secondary attachment: Slot for safety cable attachment

### **Electrical**

AC mains power: 100-240 V nominal, 50/60 Hz Power supply unit: Auto-ranging electronic switch mode Maximum power consumption, all LEDs at 100% output: 300 W

#### Maximum permitted number of fixtures daisy-chained to power

4 x EXO Wash 30 total @ 100-120 V, 60 Hz 8 x EXO Wash 30 total @ 200-240 V, 50 Hz

### Connections

AC mains power in and thru (out): Neutrik powerCON TRUE1 with sealing cap Control data in and thru (out): Neutrik 5-pin XLR with sealing cap

### Construction

Ingress protection rating: IP65 Fixture housing: Aluminum, plastic Color: Black

### Thermal

Cooling: Fan, Convection Minimum ambient temperature: -10° C (14° F) Maximum ambient temperature: 40° C (104° F)

### Included items

Power cable with Neutrik powerCON TRUE1 mains input plug

## **Dimensions and weight**

Length: 279mm / 11.0 ins. Width: 380 mm / 15.0 ins. Height: 521 mm / 20.5 ins. Weight: 19.7 kg (43.4 lbs.) Dimensions

# 15. Dimensions

All dimensions are in millimeters

