

EclProfile CT+

PROLIGHTS High quality six colours full spectrum ellipsoidal LED



USER MANUAL

REV.03-11/20 English version

Thank you for choosing PROLIGHTS

Please note that every PROLIGHTS product has been designed in Italy to meet quality and performance requirements for professionals and designed and manufactured for the use and application as shown in this document.

Any other use, if not expressly indicated, could compromise the good condition/operation of the product and/or be a source of danger.

This product is meant for professional use. Therefore, commercial use of this equipment is subject to the respectively applicable national accident prevention rules and regulations.

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Product user manual can be downloaded from the website www.prolights.it, or can be inquired to the official PROLIGHTS distributors of your territory (https://www.prolights.it/sales_network.html).

Scanning the below **QR Code**, you will access the download area of the product page, where you can find a broad set of always updated technical documentation: specifications, user manual, technical drawings, photometrics, personalities, fixture firmware updates.



Visit the download area of the product page



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SAFETY INFORMATION



WARNING!

Please read carefully the instruction reported in this section before installing, powering, operating or servicing the product and observe the indications also for its future handling.



This unit is not for household use, only professional applications.



Connection to mains supply

- The Connection to the mains supply must be carried out by a qualified electrical installer
- Use only AC supplies 100-240V 50-60 Hz, the fixture must be electrically connected to ground (earth).
- Select the cable cross section in according with the maximum current draw of the product and the possible number of products connected at the same power line.
- The AC mains power distribution circuit must be equipped with magnetic+residual current circuit breaker protection.
- Do not connect it to a dimmer system; doing so may damage the product.



Protection and Warning against electrical shock

- Do not remove any cover from the product, always disconnect the product from AC power before servicing.
- Ensure that the fixture is electrically connected to ground (earth). And use only a source of AC power that complies with local building and electrical codes and has both overload and ground-fault (earth-fault) protection.
- Before using the fixture, check that all power distribution equipment and cables are in perfect condition and rated for the current requirements of all connected devices.
- Isolate the fixture from power immediately if the power plug or any seal, cover, cable, or other components are damaged, defective, deformed or showing signs of overheating.
- Do not reapply power until repairs have been completed.
- Refer any service operation not described in this manual to PROLIGHTS Service team or an authorized PROLIGHTS service center.



Installation

- Make sure that all visible parts of the product are in good visible condition before its use or installation.
- Make sure the point of anchorage is stable before positioning the projector.
- When suspending the fixture above ground level, secure it against failure of primary attachments by attaching a safety cable that is approved as a safety attachment for the weight of the fixture to the attachment point on the main frame of the product. In case the safety cable, enter in action, it needs to be replaced with a new one.
- Install the product only in well ventilated places.
- For non temporary installations, ensure that the fixture is securely fastened to a loadbearing surface with suitable corrosionresistant hardware.
- For a temporary installation with clamps, ensure that the quarter-turn fastener and/or screws are turned fully, and secured with a suitable safety cable.



Minimum distance of illuminated objects

• The projector needs to be positioned so that the objects hit by the beam of light are at least 0.5 meters (1.64 ft) from the lens of the projector.

Ta45°C

Max operating ambient temperature (Ta)

• Do not operate the fixture if the ambient temperature (Ta) exceeds 45 °C (113 °F).

Ta-20°C

Minimum operating ambient temperature (Ta)

Do not operate the fixture if the ambient temperature (Ta) is below -20 °C (-4 °F).



Protection from burns and fire

- The exterior of the fixture becomes hot during use. Avoid contact by persons and materials.
- Ensure that there is free and unobstructed airflow around the fixture.
- Keep flammable materials well away from the fixture
- Do not expose the front glass to sunlight or any other strong light source from any angle. Lenses can focus the sun's rays inside the fixture, creating a potential fire hazard.
- Do not attempt to bypass thermostatic switches or fuses.



Indoor use

- This product is designed for indoor and dry environments.
- Do not use in wet location and do not expose the fixture to rain or moisture.
- Never use the fixture in places subject to vibrations or bumps.
- Make certain that no inflammable liquids, water or metal objects enter the fixture.
- Excessive dust, smoke fluid, and particle build up degrades performance, causes overheating and will damage the fixture.
- Damages caused by inadequate cleaning or maintenance are not covered by the product warranty.

T_C50°C

Temperature of the external surface

 The surface of the fixture can reach up to 50 °C (122 °F) during operation. Avoid contact with people and materials.



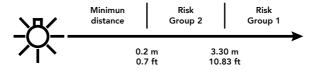
Maintenance

- Warning! Disconnect the fixture from AC mains power and allow to cool for at least 10 minutes before handling.
- Only technicians who are authorized by PROLIGHTS or Authorised service partners are permitted to open the fixture.
- Users may carry out external cleaning, following the warnings and instructions provided, but any service operation not described in this manual must be referred to a qualified service technician.
- Important! Excessive dust, smoke fluid, and particle build up degrades performance, causes overheating and will damage the fixture. Damages caused by inadequate cleaning or maintenance is not covered by the product warranty.



Photobiological safety

This device emits potentially dangerous optical radiation and is identified in the category of Risk Group 2 according to EN 62471.





Do not stare at the operating light source

- Do not look directly at the LED source during operation. It can be harmful to the eyes and skin.
- During Installation, operation and maintenance, be prepared for the fixture to light and move suddenly when connected to power.
- The device should be positioned so that prolonged staring into the luminaire at a distance closer than 3.30 m is not expected.



Disposal

- This product is supplied in compliance with European Directive 2012/19/EU Waste Electrical and Electronic Equipment
- (WEEE). To preserve the environment please dispose/ recycle this product at the end of its life according to the local regulation.



The product contains a lithium ion battery

- Don't throw the unit into the garbage at the end of its lifetime.
- Make sure to dispose according to your local ordinances and/or regulations, to avoid polluting the environment!
- The packaging is recyclable and can be disposed.



The products to which this manual refers comply with:

- 2014/35/EU Safety of electrical equipment supplied at low voltage (LVD).
- 2014/30/EU Electromagnetic Compatibility (EMC).
- 2011/65/EU Restriction of the use of certain hazardous substances (RoHS).

1 - PACKAGING

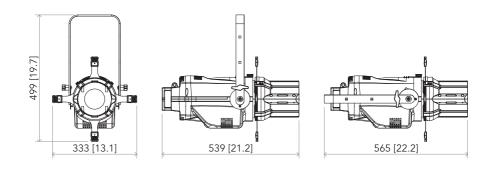
PACKAGE CONTENT

- 1x ECLCTPLUS;
- 1x 1,5 meters power cable (SCHUKO plug NEUTRIK POWERCON TRUE1 IP65);
- 1x Calibration Report;
- User manual.

OPTIONAL ACCESSORIES

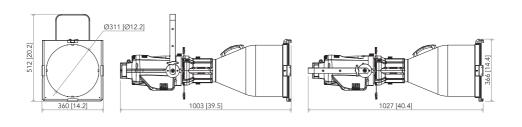
- FCLECLPR: flight case for 8 pcs of ECLFS and ECLCTPLUS profiler;
- FCLECLPRLZ: Flightcase to contain 8 ECLPRLZ zoom lenses;
- ECLPRSMOOTHF1: ECL Profiles Soft Focus Diffusion kit to be installed inside the fixtures:
- ECLPRL05BK: optic for ECLFS and ECLCTPLUS profiler, 5°, black;
- ECLPRL10BK: optic for ECLFS and ECLCTPLUS profiler, 10°, black;
- ECLPRL14BK: optic for ECLFS and ECLCTPLUS profiler, 14°, black;
- ECLPRL19BK: optic for ECLFS and ECLCTPLUS profiler, 19°, black;
- ECLPRL26BK: optic for ECLFS and ECLCTPLUS profiler, 26°, black;
- ECLPRL36BK: optic for ECLFS and ECLCTPLUS profiler, 36°, black;
- ECLPRL50BK: optic for ECLFS and ECLCTPLUS profiler, 50°, black;
- ECLPRL70BK: optic for ECLFS and ECLCTPLUS profiler, 70°, black;
- ECLPRLZ1530BK: zoom optic for ECLFS, 15°-30°, black;
- ECLPRLZ2550BK: zoom optic for ECLFS, 25°-50°, black;
- ECLPRTPG: gel filter frame for ECLFS and ECLCTPLUS profiler;
- ECLPRGH: gobo holder for ECLFS and ECLCTPLUS;
- ECLPRPOYO: pole operated aluminium yoke bracket for ECLCTPLUS and ECLFS;
- ECLPRIRIS: steel iris diaphram for ECLFS and ECLCTPLUS profiler;
- ECLPRSEF1: sSoft edge filter and holder kit for ECLFS and ECLCTPLUS profiler;
- RSR: steel security cable for hanging bodies, inox steel shackle;
- C6040: heavy-load aluminum clamp, 500kg loa, 48-51mm tubes, M10 bolt inc.;
- ECLLZLLKA: screw lock knob adapter, to adapt and mount ECLLZ lenses on ECLCTPLUS and ECLFS;
- UPBOX2P5: firmware uploader kit, USB IN, 5-pin XLR DMX OUT.

2 - TECHNICAL DRAWING



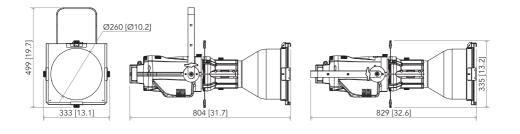
Weight: 7.9 kg - 17.4 lbs

ECLCTPLUS without optic



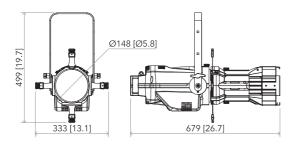
Weight: 10.8 kg - 23.80 lbs

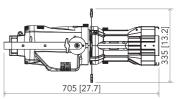
ECLCTPLUS with ECLPRL05



Weight: 9.8 kg - 21.60 lbs

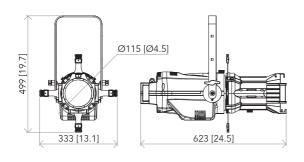
ECLCTPLUS with ECLPRL10

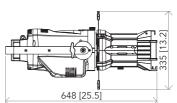




Weight: 11.2 kg - 24.69 lbs

ECLCTPLUS with ECLPRL14

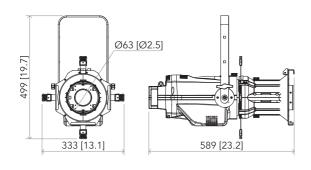


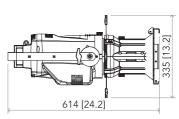


Weight: ECLPRL19: 10.2 kg - 22.49 lbs

ECLPRL26: 10.3 - 22.70 lbs ECLPRL36: 10 - 22.05 lbs ECLPRL50: 9.6 - 21.16 lbs

ECLCTPLUS with ECLPRL19-26-36-50





Weight: 9.7 kg - 21.38 lbs

ECLCTPLUS with ECLPRL70

3 - INSTALLATION

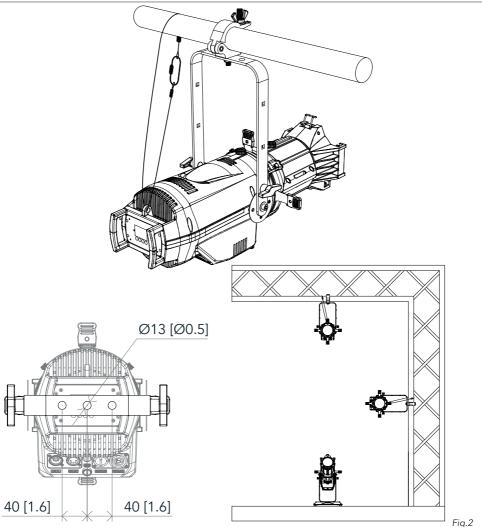
MOUNTING

Check that the supporting structure can safely bear the weight of all installed fixtures, clamps, cables, auxiliary equipment, etc. and complies with locally applicable regulations.

When suspending the fixture above ground level, secure it against failure of primary attachments by attaching a safety wire that is approved as a safety attachment for the weight of the fixture to an anchor point on the product main frame.

Do not use removable parts or weak anchors for secondary attachment.

Warning! When clamping the fixture to a truss or other structure at any angle, use clamps of half-coupler type. Do not use any type of clamp that does not completely encircle the structure when fastened.



4 - CONNECTION TO THE MAINS SUPPLY

WARNING: For protection from electric shock, the fixture must be earthed!

The product is equipped with auto-switching power supply that automatically adjusts to any 50-60Hz AC power source from 100-240 Volts.

If you need to install a power plug on the power cable to allow connection to power outlets, install a grounding-type (earthed) plug, following the plug manufacturer's instructions. If you have any doubts about proper installation, consult a qualified electrician.

The max power consumption is 264W.

Core (EU)	Core (US)	Connection	Plug terminal marking
Brown	Black	Live	L
Blue	White	Neutral	N
Yellow+green	Green	Earth	

5 - START UP

CONNECT AND DISCONNECT POWER FROM THE PRODUCT

To apply and disconnect power to the product:

- Check that the product is installed and secured as indicated in the Safety Informations, and that personal safety will not be put at risk when the fixture lights up.
- Connect the power connector into the Mains input socket (100-240 VAC-50/60 Hz).
- The product is then ready for its operations and can be controlled through the available input signals on board.
- To disconnect power from the product, disconnect the Mains from the socket.

6 - PRODUCT OVERVIEW

- 1. OPTIC (optional accessory);
- 2. KNOB for focus;
- 3. BLADES for FRAMING SYSTEM;
- 4. KNOB for bracket;
- 5. KNOB for locking the middle part;
- 6. BRACKET;
- 7. SAFETY EYE to attach safety cable;
- 8. HANDLE;
- 9. USER INTERFACE with display and buttons for access to the control panel functions.
- 10.DMX IN (5-p XLR): 1 = GND, 2 = sign-, 3 = sign+, 4 N/C, 5 N/C;
- 11.DMX OUT (5-p XLR): 1 = GND, 2 = sign-, 3 = sign+, 4 N/C, 5 N/C;
- 12.MAIN FUSE HOLDER: replace a burnt-out fuse by one of the same type only (T5A, 250 V);
- 13.POWER IN: for connection to the Mains 100-240V~/50-60Hz;
- 14.POWER OUT: power output for connection of multiple units in series.

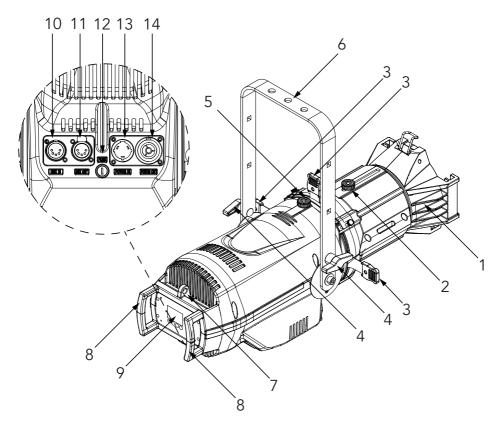


Fig.3

7 - DMX CONNECTION

CONNECTION OF THE CONTROL SIGNAL: DMX LINE

The product has XLR sockets for DMX input and output.

The default pin-out on both socket is as the following diagram:

DMX - INPUT XLR plug



Pin1: GND - Shield Pin2: - Signal Pin3: + Signal

Pin4: N/C Pin5: N/C

DMX - OUTPUT XLR socket



Fig.4

INSTRUCTIONS FOR A RELIABLE DMX CONNECTION

Use shielded twisted-pair cable designed for RS-485 devices: standard microphone cable cannot transmit control data reliably over long runs. 24 AWG cable is suitable for runs up to 300 meters (1000 ft). Heavier gauge cable and/or an amplifier is recommended for longer runs.

To split the data link into branches, use splitter-amplifiers in the connection line.

Do not overload the link. Up to 32 devices may be connected on a serial link.

CONNECTION DAISY CHAIN

Connect the DMX data output from the DMX source to the product DMX input (male connector XLR)

Run the data link from the product XLR output (female connector XLR) socket to the DMX input of the next fixture.

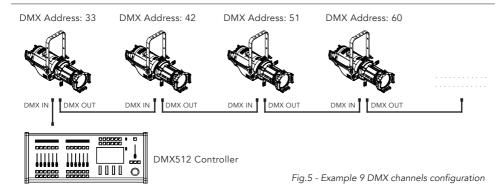
Terminate the data link by connecting a 120 Ohm signal termination. If a splitter is used, terminate each branch of the link.

Install a DMX termination plug on the last fixture on the link.

CONNECTION OF THE DMX LINE

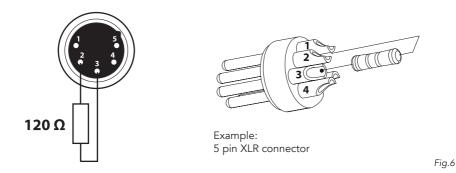
DMX connection employs standard XLR connectors. Use shielded pair-twisted cables with 120Ω impedance and low capacity.

The following diagram shows the connection mode:



CONSTRUCTION OF THE DMX TERMINATION

The termination is prepared by soldering a 120Ω 1/4 W resistor between pins 2 and 3 of the male XLR connector, as shown in figure.



DMX ADDRESSING

In order to start controlling the product via DMX, the first step is to select a DMX address, also known as the start channel, this is the first channel used to receive instructions from a DMX controller. If you wish to control the product individually, it is necessary to assign a different starting address channel to each fixture.

The number of channels occupied from the product depends on the DMX mode selected, so always verify the DMX Mode in the MENU before start addressing.

If you assign two fixtures the same address, they will be executing the same behaviour. Selecting the same address to multiple fixtures can be useful for diagnostic purposes and symmetrical control.

DMX addressing is limited to make it impossible to set the DMX address so high that you are left without enough control channels for the product.

To set the fixture's DMX address:

- 1. Press MENU to open the main menu.
- 2. Reach the addressing menu, then select the DMX ADDRESS settings.
- 3. Select the address from 1 to 512 using the navigation arrows/buttons and confirm by pressing ENTER.
- 4. Press Menu to exit and return to the Home screen.

8 - CONTROL PANEL

The product has a display and buttons for access to the control panel functions.













Fig.7

DISPLAY AND BUTTONS LAYOUT

• The product has a display and buttons for access to the control panel functions.



HIGHLIGHT: Press and hold for three seconds to temporary turn ON the product at Full ON for user focusing operations.



MENU: Used to access the menu tree or to return a previous menu window.



UP: Browse upwards through the menu list and increases the numeric value displayed.



DOWN: Browse downwards through the menu list and decreases the numeric value displayed.



ENTER: Used to confirm the current menu or confirm the current function value or option within a menu.

9 - MENU STRUCTURE

The following chart describes the MENU tree of the product, the terms shown in **BOLD** indicates the default settings.

MENU CONNECT	DMX Address					
	DMX Mode	UNO	Tungsten	Off Slow Medium Fast		
			White Point	Colour Temperature	2700 K 2800 K 3800 K 3400 K 3400 K 3400 K 3400 K 4400 K 4400 K 4400 K 4500 K 5000 K	
				Tint	-25 % - 0 % - 25 %	
			Preset COLOUR	Presets see COLOUR Wheel		
			Manual COLOUR	Red Amber Mint Green Blue Royal Blue	000 ÷ 255 000 ÷ 255 000 ÷ 255 000 ÷ 255 000 ÷ 255 000 ÷ 255	
		DUO	Tungsten	Off Slow Medium Fast		
			White Point	COLOUR Temperature	2700 K 2800 K 3000 K 3200 K 3400 K 3600 K 4000 K 4200 K 4400 K 4400 K 4500 K 5000 K 5000 K 5400 K 5400 K 5400 K 5400 K	

		requericy	2500 Hz 5000 Hz 6400 Hz 25 kHz			
		rrequericy				
		LED Frequency	Brightness High Quality 600 Hz 1282 Hz			the output. Select PWM frequency.
		LED Mode	Medium Fast			Dimmer curve adding medium fade. Dimmer curve adding little fade. Priority on brightness or quality of
		Speed Tungsten Emulation	Slow Medium Fast			Dimmer curve adding long fade. Dimmer curve adding medium fade. Dimmer curve adding little fade. Emulation of halogen lamp. Dimmer curve adding long fade.
2	ADVANCED	Dimmer Curve	Linear S-Curve Square Law Inverse Square Law Auto			Select different curve behaviour of dimmer. Linear dimmer behaviour.
			RAW 16 bit			
			RAW Direct	HS		
			Extended	CMY HS RGB CMY		
			Standard	CMY HS RGB		
			Basic	RGB	Blue 000 ÷ 255 Royal Blue 000 ÷ 255	
					Amber 000 ÷ 255 Mint 000 ÷ 255 Green 000 ÷ 255	
				Manual COLOUR	COLOUR Wheel Red 000 ÷ 255	_
				Preset	Tint -25 % - 0 % - 25 % Presets see	

		Key Lock	Locked Unlocked				Allows you lock the buttons on the control panel by a password. Press following combinations (password) in order to access to the user menu : UP, DOWN, UP, DOWN.
		Transfer Config	Abort Without DMX Addr With DMX Address				To transfer the same menu settings of one fixtures to all the other in the daisy chain, including or not the dmx address.
4	DMX LOST	Blackout					Fixture go in blackout if it lose dmx signal.
		Hold					Fixture hold last dmx frame if it lose dmx signal.
		Master	Static	Dimmer	000 ÷ 255		Select the dimmer value of the selected white point.
				White Point	Colour Temperature	2800 K 3000 K 3200 K 3400 K 3400 K 3600 K 4000 K 4200 K 4400 K 4600 K 4600 K 5000 K 5400 K 5400 K 5600 K 6500 K 6500 K 6900 K	Select a predefined White CCT output from the list. After enabled this mode, the unit will be automatically assigned as Master.
					Tint	-25 % 0 % 25 %	Select the tint value of the selected white point.
				Preset Colour	Presets see Colour Wheel		Select of the following predefined color combination and its Dimmer value. After enabled this mode, the unit will be automatically assigned as Master.
				Manual Colour	Red Amber Mint Green Blue Royal Blue	0 ÷ 255 0 ÷ 255 0 ÷ 255 0 ÷ 255 0 ÷ 255 0 ÷ 255	User generated color preset by assigning values to each primary color attribute. After enabled this mode, the unit will be automatically assigned as Master.
			Effect 1	Dimmer Duration Attack Decay	0÷255 0.0s÷30.0s ÷60.0s 0% ÷ 100% 0% ÷ 100%		Edit and choose effect 1.
			Effect 2	Dimmer Duration Attack Decay	0÷255 0.0s÷30.0s ÷60.0s 0%÷100% 0%÷100%		Edit and choose effect 2
			Effect 3	Dimmer Duration Attack Decay	0÷255 0.0 s÷30.0s ÷60.0s 0 %÷100 % 0 %÷100 %		Edit and choose effect 3
		Slave		Decay	U /0+100 //		Set the units to be slave.
5	INFORMA- TION	Operating Hours Lamp Hours					View informations about product.

		Power Cycles Power Consumtion LED Temperature Fan Speed RDM Id Version			
6	FACTORY SETTINGS	Abort Set Default Values			To reset the unit to factory default settings.

NOTE: If the projector is in Slave mode if the DMX signal is lost, the projector will remain on according to the last received DMX value. If the projector was in STATIC or AUTO mode, if the DMX signal is lost, the projector will return to the previously set STATIC or AUTO.

10 - RDM FUNCTIONS

The product can communicate using RDM (Remote Device Management) protocol over a DMX512 Networks.

RDM is a bi-directional communications protocol for use in DMX512 control systems, it is the open standard for DMX512 device configuration and status monitoring.

The RDM protocol allows data packets to be inserted into a DMX512 data stream without affecting existing non-RDM equipment. It allows a console or dedicated RDM controller to send commands to and receive messages from specific fixtures.

The PIDs in the following tables are supported in the product.

Parameter	PID	GET	SET
SUPPORTED_PARAMETERS	0x0050	X	
DEVICE_INFO	0x0060	Х	х
DEVICE_MODEL_DESCRIPTION	0x0080	X	
MANUFACTURER_LABEL	0x0081	Х	
DEVICE_LABEL	0x0082	X	X
FACTORY_DEFAULTS	0x0090	X	x
SOFTWARE_VERSION_LABEL	0x00c0	X	
BOOT_SOFTWARE_VERSION_ID	0x00c1	Х	
BOOT_SOFTWARE_VERSION_LABEL	0x00c2	X	
DMX_PERSONALITY	0x00e0	X	x
DMX_PERSONALITY_DESCRIPTION	0x00e1	X	
DMX_START_ADDRESS	0x00f0	X	x
SENSOR_DEFINITION	0x0200	X	
SENSOR_VALUE	0x0201	X	
DEVICE_HOURS	0x0400	X	
LAMP_HOURS	0x0401	X	
LAMP_STRIKES	0x0402	X	
DEVICE_POWER_CYCLES	0x0405	Х	
IDENTIFY_DEVICE	0x1000	Х	x
RESET_DEVICE	0x1001		x

11 - ERROR MESSAGES

Group	Message	Туре	Comment
Config	"Not Calibrated"	Error	
Temperature sensor	"Temp. Sensor failed"	Warning	checksum error ROM code
	"T: Can't read ROM code"	Error	
	"T: Can't get input"	Error	
	"T: Can't read status"	Error	
Temperature management	"Overtemperature"	Error	
	"LED Temperature"	Error	cannot read LED tempera- ture
Transfer config	"DMX active"	Error	cannot transfer with active DMX
Flash memory	"Initializing Flash"	Information	
	"Invalid flash entry"	Warning	
	"Can't unlock flash (WR)"	Error	
	"Can't unlock flash (ER)"	Error	
	"Can't lock flash"	Error	
	"Can't load Pg1"	Error	
	"Can't load Pg2"	Error	
	"Can't load flash"	Error	

12 - DMX CHARTS

Channel	UNO	DUO	Basic	Standard	Extended	RAW Direct	RAW 16bit
1	DIMMER COARSE	DIMMER COARSE	DDIMMER COARSE	DIMMER COARSE	DIMMER COARSE	DIMMER COARSE	DIMMER COARSE
2		DIMMER FINE	COLOUR MIX 1	DIMMER FINE	DIMMER FINE	DIMMER FINE	DIMMER FINE
3			COLOUR MIX 2	STROBE	STROBE	STROBE	STROBE
4			COLOUR MIX 3	ССТ	ССТ	RED COARSE	RED COARSE
5				COLOUR MIX 1	TINT	GREEN COARSE	RED FINE
6				COLOUR MIX 2	COLOUR MIX 1	BLUE COARSE	GREEN COARSE
7				COLOUR MIX 3	COLOUR MIX 2	PC AMBER COARSE	GREEN FINE
8				COLOUR WHEEL	COLOUR MIX 3	MINT COARSE	BLUE COARSE
9				CONTROL	COLOUR WHEEL	ROYAL BLUE COARSE	BLUE FINE
10					COLOUR WHEEL SATURATION	CONTROL	PC AMBER COARSE
11					сто		PC AMBER FINE
12					CONTROL		MINT COARSE
13							MINT FINE
14							ROYAL BLUE COARSE
15							ROYAL BLUE FINE
16							CONTROL

UNO	DUO	Basic	Standard	Extended	RAW Direct	RAW 16bit	Function	DMX Value	Default
1	1	1	1	1	1	1	DIMMER COARSE 0÷100%	000 ÷ 255	000
	2		2	2	2	2	DIMMER FINE	000 . 255	000
							0÷100% STROBE Close 0,9 Hz to 20 Hz Strobing Duty Cycle Open Time: 100 ms to 25 ms Duty Cycle Closed Time: 1000 ms to 25 ms Open 0,8 Hz to 6,6 Hz Pulse-In Strobing Duty Cycle Puls-In Time: 250 ms to 50 ms Duty Cycle Closed Time: 1000 ms to 100 ms	000 ÷ 255 0 ÷ 1 2 ÷ 62 63 ÷ 64 64 ÷ 125	000
			3	3	3	3	Open 0,8 Hz to 6,6 Hz Pulse-Out Strobing Duty Cycle Puls-Out Time: 250 ms to 50 ms Duty Cycle Closed Time: 1000 ms to 100 ms Open 0,9 Hz to 20 Hz Random Strobing Duty Cycle Open Time: 100 ms to 25 ms Duty Cycle Closed Time: 1000 ±500 ms to 25 ±12 ms Open	126 ÷ 127 128 ÷ 188 189 ÷ 190 191 ÷ 251 252 ÷ 255	255
					4	4	RED COARSE 0÷100%	000 ÷ 255	000
						5	RED FINE 0÷100%	000 ÷ 255	000
					5	6	GREEN COARSE 0÷100%	000 ÷ 255	000
						7	GREEN FINE 0÷100%	000 ÷ 255	000
					6	8	BLUE COARSE 0÷100%	000 ÷ 255	000
						9	BLUE FINE 0÷100%	000 ÷ 255	000
					7	10	PC AMBER COARSE 0÷100%	000 ÷ 255	000
						11	PC AMBER FINE 0÷100%	000 ÷ 255	000
					8	12	MINT COARSE 0÷100%	000 ÷ 255	000
						13	MINT FINE 0÷100%	000 ÷ 255	000
					9	14	ROYAL BLUE COARSE 0÷100%	000 ÷ 255	000
						15	ROYAL BLUE FINE 0÷100%	000 ÷ 255	000
							CCT (Linear) 2800 K 2800 - 3000 K 3000 K 3000 C 3000 S 3200 K 3200 C 3200 C 3400 C 3400 C 3400 C 3600 C 360	0 0 ÷ 24 24 24 ÷ 44 44 + 62 63 63 ÷ 79 79 ÷ 93 93 ÷ 106 106 † 118 118 + 129 129 + 139 139	156

 Γ –					4600 - 4800 K	139 ÷ 148	
					4800 K	148	
					4800 - 5000 K 5000 K	148 ÷ 156 156	
					5000-5200 K	156 ÷ 163	
					5200 K	163	
					5200 - 5400 K 5400 K	163 ÷ 171 171	
					5400 - 5600 K	171 ÷ 177	
					5600 K	177	
		4	4		5600 - 6000 K 6000 K	177 ÷ 189 189	
					6000 K	189 ÷ 202	
					6500 K	202	
					6500 - 7000 K	202 ÷ 212	
					7000 K 7000 - 8000 K	213 213 ÷ 230	
					8000 K	230	
					8000 - 9000 K 9000 K	230 ÷ 244	
					9000 K	244 244 ÷ 255	
					10000 K	255	
					TINT (Linear)		
					+25 % magenta +20 % to +25 % magenta	0 1 ÷ 25	
					+20 % to +25 % magenta +20 % magenta	26	
					+15 % to +20 % magenta	27 ÷ 50	
					+15 % magenta +10 % to +15 % magenta	51 52 ÷ 76	
					+10 % magenta	77	
					+5 % to +10 % magenta	78 ÷ 91	
					+5 % magenta +0 % to +5 % magenta	92 93 ÷ 127	
			5		balanced	128	128
					+0 % to +5 % green	129 ÷ 152	
					+5 % green +5 % to +10 % green	153 154 ÷ 178	
					+10 % green	179	
					+10 % to +15 % green	180 ÷ 203	
					+15 % green +15 % to +20 % green	204 205 ÷ 219	
					+20 % green	220	
					+20 % to +25 % green	221 ÷ 254	
					+25 % green	255	DOD 055
	2	5	6		COLOUR MIX 1 Channel Function depending on Set		RGB: 255 CMY: 000
	_		_		Colour mode	000 ÷ 255	HS: 000
			_		COLOUR MIX 2		
	3	6	7		Channel Function depending on Set Colour mode (non used in HS)	000 : 255	RGB: 255
					COLOUR MIX 3	000 ÷ 255	CMY: 000 RGB: 255
	4	7	8		Channel Function depending on Set		CMY: 000
					Colour mode	000 ÷ 255	HS: 000
					COLOUR WHEEL		
					Open Red	0 ÷ 1 2 ÷ 3	
					Green	4 ÷ 5	
					Blue	6 ÷ 7	
					Cyan Magenta	8 ÷ 9 10 ÷ 11	
					Yellow	12 ÷ 13	
					L.744 Dirty White	14 ÷ 15	
					L.197 Alice Bllue L.181 Congo Blue	16 ÷ 17 18 ÷ 19	000
					L.174 Dark Steel Blue	20 ÷ 21	
					L.170 Deep Lavender	22 ÷ 23	
					L.169 Lilac Ting L.165 Daylight Blue	24 ÷ 25 26 ÷ 27	
					L.164 Flame Red	28 ÷ 29	
					L.162 Bastard Amber	30 ÷ 31	
					L.158 Deep Orange L.152 Pale Gold	32 ÷ 33	
					L.147 Apricot	34 ÷ 35 36 ÷ 37	
 				 		 	

L.141 Right Blue				
L 139 Primary Green L 137 Special Lavender 4 2 + 43 L 138 Deposit Depo		I 141 Bright Blue	38 ÷ 39	
L137 Special Lavender L132 Insel Lavender L132 Medium Blue L135 Deep Golden Amber L132 Bright Pink L132 Bright Pink L132 Bright Pink L132 Bright Pink L134 Bright Brink L135 Deep Golden Amber L136 L136 Deep Golden Amber L137 Steep L138 L138 Deep L33 L136 Deep Golden Amber L137 Steep L33 L136 Deep Golden Amber L137 Steep L33 L136 Deep L33 L136 Deep L33 L136 Medium Blue Golden Golden L137 Steep L33 L138 Deep L33 L139 L34 Deep L33 L130 L34 Deep L34 L130 L34 Deep L34 L130 Straw L130 L34 Deep L34 L34 Deep L34 Deep L34 L35				
L 135 Pale Lavender L 132 Medium Blue L 138 Medium Blue L 138 Medium Blue L 128 Maxve L 128 Maxve L 128 Maxve L 129 Maxve L 129 L 128 Maxve L 129 Maxv				
L122 Medium Blue			44 ÷ 45	
L128 Bright Pink 50 * 51 L124 Dark Oreen 54 + 55 L124 Dark Oreen 54 + 55 L121 Lee Green 54 + 55 L121 Lee Green 56 * 57 L119 Dark Blue 58 * 57 L119 Dark Blue 58 * 57 L119 Dark Blue 60 * 61 L119 Light Blue 64 * 65 L115 Peacock Blue 64 * 65 L115 Peacock Blue 66 * 67 L111 Dark Pink 70 * 71 L110 Middle Rose 72 * 73 L109 Light Salmon 74 + 75 L109 Light Salmon 74 + 75 L109 Light Salmon 74 + 75 L109 Light Rose 76 * 77 L101 Light Rose 76 * 77 L101 Light Rose 76 * 77 L102 Light Amber 82 * 83 L103 Straw 84 * 85 L102 Light Amber 88 * 87 L109 Dark Yellow Green 90 * 91 L090 Dark Yellow Green 90 * 91 L091 Dark Yellow Green 90 * 91 L092 Dark Sallow 94 * 97 L093 Pink Camanton 100 * 101 L036 Medium Pink 104 * 105 L035 Light Pink 104 * 107 L037 Light Pink 104 * 107 L038 Light Pink 104 * 107 L039 Pink Camanton 100 * 101 L030 Medium Amber 112 * 113 L031 Light Pink 104 * 105 L032 Dark Amber 108 * 109 * 109 L034 Despring Pink 104 * 105 L035 Light Pink 104 * 105 L036 Medium Pink 102 * 103 L037 Despring Pink 104 * 105 L038 Light Pink 104 * 105 L039 Pink Camanton 100 * 101 L030 Medium Amber 112 * 113 L030 Light Pink 104 * 105 L031 Sight Pink 104 * 105 L032 Dark Amber 108 * 109				
L126 Maiure 52 + 53 L124 Dark Green 56 + 55 L121 Lee Green 56 + 55 L121 Lee Green 56 + 57 L119 Dark Blue 60 + 61 L117 Steel Blue 60 + 67 L118 Magnata 68 + 69 L111 Dark Pink 70 + 71 L110 Middle Rose 72 + 73 L109 Light Salmon 74 + 75 L108 English Rose 76 + 77 L107 Light Rose 78 + 77 L107 Light Rose 78 + 77 L107 Light Rose 78 + 77 L108 Straw Marber 82 + 83 L109 Straw Marber 84 + 85 L109 Straw Marber 84 + 85 L100 Straw Marber 84 + 85 L101 Straw Marber 84 + 85 L102 Straw Marber 96 + 97 L103 Straw Marber 96 + 97 L105 Light Lawnder 96 + 97 L105 Light Lawnder 98 + 99 L107 Just Blue 92 + 93 L108 Sty Blue 92 + 93 L108 Sty Blue 94 + 95 L109 Just Blue 94 + 97				
L124 Dark Green				
L121 Leg Green 56 + 57 L119 Dark Blue 58 + 59 L118 Light Blue 60 + 61 L117 Steel Blue 60 + 61 L117 Steel Blue 64 + 65 L116 Medium Blue-Green 64 + 65 L117 Peacock Blue 66 + 67 L117 Dark Plink 70 - 71 L110 Middle Rose 72 - 73 L107 Light Saimon 74 - 73 L108 Jegh Plank 74 - 74 L109 Compan 80 - 81 L104 Deep Amber 82 + 83 L103 Straw 84 + 85 L102 Light Amber 86 + 87 L100 Spring Yellow 88 + 89 L009 Dark Yellow Green 90 + 91 L079 Just Blue 92 + 93 L088 Sky Blue 94 + 95 L088 Lavender 98 + 97 L052 Light Lavender 108 + 109 L020 Dark Amber 110 + 111 L020 Medium Amber 112 + 113 L019 Fire 114 + 115 L017 Surprise Peach 116 + 117 L013 Straw Tint 118 + 119 L010 Medium Vellow 120 + 121 L021 Lost John Loren 122 + 123 L152 Pale Gold 124 + 125 L053 Compan 126 + 127 L015 Deep Straw 128 + 127 L016 Deep Straw 128 + 127 L017 Deep Purple 13 + 13 L019 Tier 134 + 135 L019 Tier 134 + 1				
L119 Dark Blue		I .		
L118 Light Blue				
L116 Medium Blue-Green 64 + 65 67 L113 Magenta 68 + 69 L111 Dark Pink 70 + 71 L110 Indidde Rose 72 + 73 L109 Light Salmon 74 + 75 L108 English Rose 76 + 77 L107 Light Rose 76 + 77 L107 Light Rose 78 + 79 L105 Crange 80 + 81 L103 Straw 84 + 85 L103 Straw 84 + 85 L103 Straw 84 + 85 L103 Straw 85 L103 Straw 86 + 87 L103 Spring Yellow Green 90 + 91 L079 Just Blue 92 + 93 L108 Sky Blue 94 + 95 L108 L108 L108 L108 L108 L108 L108 L108				
L115 Peacock Blue 66 + 67 L111 Jak Pink 70 + 71 L110 Middle Rose 72 + 73 L109 Light Salmon 74 + 75 L108 English Rose 78 + 79 L107 Light Rose 78 + 79 L107 Light Rose 78 + 79 L108 Light Rose 88 + 87 L104 Deep Amber 82 + 83 L103 Straw 84 + 85 L102 Light Amber 84 + 85 L100 Spring Yellow Green 90 + 91 L079 Just Blue 92 + 93 L008 Sky Blue 94 + 95 L008 Sky Blue 94 + 95 L008 Loss Lavender 98 + 99 L039 Pink Carnation 100 + 101 L036 Medium Pink 102 + 103 L035 Light Pink 104 + 105 L025 Surses Red 106 + 107 L021 Gold Amber 110 + 111 L020 Medium Amber 112 + 113 L019 Fire 114 + 115 L017 Surprise Peach 116 + 117 L013 Straw Wint 118 + 119 L010 Medium Felow 122 + 123 L104 College Straw 128 + 129 L048 Rose Purple 130 + 131 L322 Soft Green 132 + 124 L048 Rose Purple 130 + 131 L322 Soft Green 134 + 135 L323			62 ÷ 63	
L113 Magenta (68 + 69) L110 Dairk Pink (70 + 71) L110 L110 L110 L110 L110 L110 L110 L111 Dairk Pink (70 + 71) L110 L110 L110 L110 L110 L110 L110 L110				
L111 Dark Pink				
L110 Middle Rose				
L109 Light Salmon				
L108 English Rose L107 Light Rose L105 Orange R8 + 79 L105 Orange R9 + 81 L104 Deep Amber R2 + 83 L103 Straw R1 + 85 L102 Light Amber R1 + 86 + 87 L100 Spring Yellow R8 + 89 L090 Dark Yellow Green P0 + 91 L079 Just Blue P2 + 93 L088 Sky Blue P4 + 95 L058 Lavender P1 + 96 + 97 L052 Light Lavender P1 + 96 + 97 L052 Light Lavender P1 + 104 + 105 L053 Light Pink P1 + 104 + 105 L054 Medium Pink L025 Sunset Red L025 Sunset Red L025 Sunset Red L021 Gold Amber L021 Gold Amber L102 Light Amber L110 L111 L020 Medium Amber L112 + 113 L019 Fire L14 + 115 L017 Surprise Peach L16 + 117 L013 Straw Tint L013 Straw Tint L014 L247 Lee Minus Green L124 + 125 L152 Pale Gold L124 T L25 L152 Pale Gold L124 + 125 L155 Orange L048 Rose Purple L048 Rose Purple L048 Rose Purple L048 Rose Purple L039 Creen L048 Rose Purple L039 Creen L048 Rose Purple L048 Rose Purple L048 Rose Purple L039 Creen L048 Rose Purple L048 Rose Purple L048 Rose Purple L058 Creen L05				
L 105 Orange L 104 Deep Amber R 2 + 83 L 103 Straw B 4 + 85 L 102 Light Amber B 6 + 87 L 100 Spring Yellow B 8 + 89 L 100 Spring Yellow B 8 + 89 L 1079 Just Blue L 04 + 95 L 058 Layender L 059 Layender			76 ÷ 77	
L104 Deep Amber			78 ÷ 79	
L 103 Straw 84 + 85 L 102 Light Amber 86 + 87 L 100 Spring Yellow 88 + 89 L 1000 Dark Yellow Green 90 + 91 L 079 Just Blue 92 + 93 L 04 + 95 L 058 Sky Blue 94 + 95 L 058 Lavender 96 + 97 L 052 Light Lavender 96 + 97 L 039 Pink Carnation 100 + 101 L 036 Medium Pink 102 + 103 L 035 Light Pink 104 + 105 L 025 Sunset Red 106 + 107 L 020 Sark Amber 110 + 111 L 020 Medium Amber 1110 + 111 L 020 Medium Amber 1110 + 111 L 021 Medium Amber 1110 + 111 L 021 Fire 114 + 115 L 017 Surprise Peach 116 + 117 L 013 Straw Tint 118 + 119 L 010 Medium Yellow 120 + 121 L 247 Lee Minus Green 122 + 123 L 152 Pale Gold 124 + 125 L 152 Pale Gold 124 + 125 L 048 Rose Purple 130 + 131 L 797 Deep Purple 130 + 131 L 797 Deep Purple 130 + 131 L 320 Str Green 134 + 135 Reserved 136 + 211 2800K 212 + 213 3000K 214 + 215 3200K 214 + 215 3200K 214 + 215 3200K 214 + 215 3200K 224 + 225 4400K 228 + 229 4400K 228 + 239 5400K 244 + 245 5500K 244 + 245 5500K 244 + 245 5600K 246 + 247 6600K 248 + 249				
L102 Light Amber L100 Dark Yellow B8 + 89 L000 Dark Yellow Green J00 + 91 L1075 Just Blue J2 + 93 L088 Sky Blue 94 + 95 L088 Layender 96 + 97 L032 Light Lavender 97 + 99 L039 Pink Camation J00 + 101 L036 Medium Pink J02 + 103 L035 Light Pink J03 + 106 + 107 L032 Dark Amber J04 + 105 L032 Dark Amber J10 + 101 L032 Dark Amber J10 + 111 L030 Medium Amber J110 + 111 L030 Medium Amber J110 + 111 L031 Straw Tint L032 L32 Soft Green L034 L036 Rose Purple L035 Rose Purple L036 Rose Purple L037 Lose Purple L038 Rose Purple L039 Rose Purple L030 Rose Purple L039 Rose Purple L030 Rose Purple L039 Rose Purple L030 Rose Purple L030 Rose Purple L030 Rose Purp				
L100 Spring Yellow L090 Dark Yellow Green 90 + 91 L079 Just Blue 92 + 93 L088 Ly Blue 94 + 95 L088 Lavender 96 + 97 L032 Light Lavender 97 + 99 L039 Pink Carnation 100 + 101 L036 Medium Pink 102 + 103 L025 Sunset Red 106 + 107 L025 Sunset Red 106 + 107 L026 Just Amber 109 + 110 L027 Medium Amber 110 + 111 L020 Medium Amber 110 + 111 L021 Gold Amber 110 + 111 L021 Gold Amber 110 + 115 L019 Fire 114 + 115 L019 Fire 114 + 115 L019 Fire 114 + 115 L011 Surprise Peach 110 + 117 L013 Straw Tint 118 + 119 L010 Medium Yellow 120 + 121 L247 Lee Minus Green 122 + 123 L152 Pale Gold 124 + 125 L105 Crange 126 + 127 L015 Deep Straw 128 + 129 L048 Rose Purple 132 + 133 L325 Soft Green 134 + 135 Reserved 136 + 211 2800K 212 + 213 3000K 214 + 215 3200K 214 + 215 3400K 212 + 221 3400K 224 + 225 4400K 226 + 227 4400K 227 + 223 4000K 228 + 229 4600K 238 + 239 5600K 244 + 245 5000K 244 + 245 5000K 244 + 245 8000K 242 + 243 6500K 244 + 247 8000K 245 + 255 COLOUR WHEEL SATURATION (Linear)				
L090 Dark Yellow Green L079 Just Blue 92 + 93 L088 Sky Blue 94 + 95 L038 Lavender 86 + 97 L032 Light Lavender 98 + 99 L039 Pink Camation 100 + 101 L035 Medium Pink 102 + 103 L035 Light Pink 104 + 105 L025 Susset Red 106 + 107 L022 Dark Amber 109 + 109 L021 Gold Amber 110 + 111 L020 Medium Amber 112 + 113 L019 Fire 114 + 115 L017 Surprise Peach 116 + 117 L013 Straw Tint 118 + 119 L010 Medium Yellow 120 + 121 L121 Pela Gold 1124 + 125 L152 Pale Gold 1152 Pale Gold 116 + 127 L015 Orange 124 + 125 L105 Orange 126 + 127 L016 Deep Straw 1048 Rose Purple 130 + 131 L797 Deep Purple 131 + 135 Reserved 134 + 135 Reserved 135 + 211 2800K 212 + 213 3000K 214 + 215 3400K 212 + 213 3400K 212 + 213 3400K 212 + 213 3400K 212 + 213 3400K 214 + 215 3400K 222 + 221 3800K 224 + 225 4200K 234 - 231 5200K 234 - 235 5200K 236 - 237 5400K 237 - 231 4800K 238 - 237 5400K 244 - 245 6500K 244 - 247 8000K 245 - 247 8000K 246 - 247 8000K 252 - 253 6 - X- OCOLOUR WHEEL SATURATION (Linear)				
L L079 Just Blue 92 + 93 L L088 Layender 94 + 95 L L058 Layender 98 + 97 L L052 Light Lavender 98 + 99 L 039 Pink Carnation 100 + 101 L 036 Medium Pink 102 + 103 L 035 Light Pink 100 + 105 L 025 Sunset Red 106 + 107 L 021 Gold Amber 109 + 112 + 113 L 021 Gold Amber 110 + 111 L 020 Medium Amber 110 + 111 L 021 Gold Amber 110 + 111 L 021 Fire 114 + 115 L 019 Fire 114 + 115 L 017 Surprise Peach 116 + 117 L 013 Straw Tint 118 + 119 L 010 Medium Yellow 120 + 121 L 247 Lee Minus Green 122 + 123 L 152 Pale Gold 124 + 125 L 152 Pale Gold 124 + 125 L 015 Deep Straw 120 + 127 L 015 Deep Straw 120 + 127 L 016 Deep Straw 120 + 127 L 017 Deep Purple 132 + 133 L 325 Soft Green 134 + 135 Reserved 136 + 211 2800K 212 + 213 3000K 214 + 215 3200K 214 + 215 3400K 218 + 219 3400K 224 + 225 4400K 224 + 225 4400K 224 + 225 4400K 223 + 225 5200K 234 + 235 5200K 234 + 246 600K 232 + 237 5400K 238 + 239 5400K 238 + 239 5400K 244 + 247 8000K 245 + 247 8000K 244 + 247 8000K 245 + 247 8000K 245 + 247 8000K 245 + 247 8000K 246 + 247 8000K 247 + 245 8000K 248 + 247 8000K 248 + 245				
LOSB Sky Blue				
L032 Light Lavender				
L.039 Pink Carnation				
L.036 Medium Pink				
8 9 1.035 Light Pink 1.025 Sunset Red 1.06 + 107 1.022 Dark Amber 1.08 + 109 1.021 Gold Amber 1.10 + 111 1.020 Medium Amber 1.11 + 113 1.019 Fire 1.017 Surprise Peach 1.018 + 119 1.019 Fire 1.017 Surprise Peach 1.018 + 119 1.010 Medium Vellow 1.014 Leg Pink 1.015 Crange 1.02 + 125 1.152 Pale Gold 1.152 Pale Gold 1.155 Peap Straw 1.152 Pale Gold 1.105 Orange 1.26 + 127 1.015 Deep Straw 1.28 + 129 1.048 Rose Purple 1.30 + 131 1.797 Deep Purple 1.32 + 133 1.322 Soft Green 1.34 + 135 1.322 Soft Green 1.34 + 135 1.322 Soft Green 1.36 + 211 2.800K 2.16 + 217 3.800K 2.16 + 227 3.800K 2.16 + 227 4.800K 2.20 + 221 3.800K 2.20 + 221 3.800K 2.20 + 225 4.800K 2.20				
8 9 L025 Sunset Red 106 ± 107 L022 Dark Amber 108 ± 109 L021 Gold Amber 110 ± 111 L020 Medium Amber 1110 ± 111 L020 Medium Amber 1112 ± 113 L019 Fire 1114 ± 115 L017 Surprise Peach 116 ± 117 L013 Straw Tint 118 ± 119 L010 Medium Yellow 120 ± 121 L224 Lea Minus Green 122 ± 123 L152 Pale Gold 124 ± 125 L155 Pale Gold 124 ± 125 L155 Pale Gold 124 ± 125 L015 Orange 126 ± 127 L015 Deep Straw 128 ± 129 L048 Rose Purple 130 ± 131 L797 Deep Purple 132 ± 133 L325 Soft Green 134 ± 135 Reserved 136 ± 211 2800K 211 ± 213 3000K 214 ± 215 3200K 216 ± 217 3400K 218 ± 219 3600K 214 ± 215 3200K 216 ± 217 3400K 220 ± 221 3800K 220 ± 221 3800K 220 ± 221 3800K 224 ± 225 4200K 226 ± 227 4400K 226 ± 227 4400K 226 ± 227 4400K 228 ± 229 4600K 230 ± 231 4800K 230 ± 233 5000K 234 ± 235 5000K 238 ± 239 5600K 244 ± 245 7000K 248 ± 247 8000K 255 ± 253 6 × COLOUR WHEEL SATURATION (Linear)		I .		
8 9 L022 Dark Amber 108 ± 109 L021 Gold Amber 110 ± 111 L020 Medium Amber 110 ± 111 L020 Medium Amber 112 ± 113 L019 Fire 114 ± 115 L017 Surprise Peach 1116 ± 117 L013 Straw Tint 118 ± 119 L010 Medium Yellow 120 ± 121 L247 Lee Minus Green 122 ± 123 L152 Pale Gold 124 ± 125 L015 Deap Straw 128 ± 129 L048 Rose Purple 130 ± 131 L797 Deap Purple 132 ± 133 L322 Soft Green 134 ± 135 Reserved 134 ± 215 Reserved 134 ± 215 Reserved 134 ± 217 Reserved 136				
LU21 Gold Amber LU20 Medium Amber LU31 Straw Tint LU17 Surprise Peach LU16 Medium Yellow LU16 LU17 Surprise Peach LU17 Surprise Peach LU18 Medium Yellow LU20 H211 LU24 Lee Minus Green LU24 LU25 LU35 Crange LU35 Crange LU35 Crange LU36 LU35 Crange LU36 LU35 Crange LU36 LU36 Crange LU36 LU36 Crange LU36 LU37 Crange LU38 Rose Purple LU30 LU31 LU31 LU31 LU31 LU31 LU31 LU31 LU31				
L019 Fire	8 9	L.021 Gold Amber	110 ÷ 111	
L017 Surprise Peach L013 Straw Tint L013 Straw Tint L010 Medium Yellow L120 + 121 L247 Lee Minus Green L22 + 123 L152 Pale Gold L124 + 125 L105 Orange L126 + 127 L015 Deep Straw L128 + 129 L048 Rose Purple L32 + 133 L322 Soft Green L32 + 133 L322 Soft Green L32 + 135 Reserved L32 + 213 S000K L14 + 215 L320 Soft Green L34 + 135 Reserved L36 + 211 L377 Deep Purple L32 + 133 L322 Soft Green L34 + 135 Reserved L36 + 211 L377 Deep Purple L32 + 213 L320 Soft Green L34 + 215 L322 Soft Gre		I .		
L013 Straw Tint 118 + 119 L010 Medium Yellow 120 + 121 L247 Lee Minus Green 122 + 123 L152 Pale Gold 124 + 125 L105 Orange 126 + 127 L015 Deep Straw 128 + 129 L048 Rose Purple 130 + 131 L797 Deep Purple 132 + 133 L322 Soft Green 134 + 135 Reserved 136 + 211 2800K 212 + 213 3000K 214 + 215 3200K 216 + 217 3400K 218 + 219 3600K 220 + 221 3800K 210 + 225 4200K 226 + 227 4400K 222 + 223 4000K 224 + 225 4200K 226 + 227 4400K 228 + 229 4400K 228 + 229 4400K 230 + 231 4800K 230 + 231 4800K 232 + 233 5000K 233 + 235 5000K 234 + 235 5000K 234 + 235 5000K 236 + 237 5400K 238 + 239 5600K 240 + 241 6000K 242 + 241 6000K 246 + 247 8000K 248 + 249 9000K 250 + 251 10000K 250 + 251 10000K 250 + 251 10000K 250 + 251 10000K 252 + 253 6 × On 254 + 255				
L.010 Medium Yellow 120 ÷ 121 L.247 Lee Minus Green 122 ÷ 123 L.152 Pale Gold 124 ÷ 125 L.155 Crange 126 ÷ 127 L.015 Deep Straw 128 ÷ 129 L.048 Rose Purple 130 ÷ 131 L.797 Deep Purple 132 ÷ 133 L.322 Soft Green 134 ÷ 135 Reserved 136 ÷ 211 2800K 214 ÷ 215 3200K 216 ÷ 217 3400K 214 ÷ 215 3200K 216 ÷ 217 3400K 220 ÷ 221 3800K 222 ÷ 223 4000K 222 ÷ 223 4000K 224 ÷ 225 4200K 226 ÷ 227 4400K 226 ÷ 227 4400K 228 ÷ 229 4600K 230 ÷ 231 4800K 230 ÷ 231 4800K 230 ÷ 231 4800K 230 ÷ 231 4800K 232 ÷ 233 5000K 234 ÷ 235 5000K 236 ÷ 237 5400K 236 ÷ 237 5400K 236 ÷ 237 5400K 236 ÷ 237 5400K 242 ÷ 242 † 242 54 6500K 244 ÷ 245 7000K 246 ÷ 247 8000K 242 ÷ 243 6500K 244 ÷ 245 7000K 246 ÷ 247 8000K 248 ÷ 249 9000K 250 ÷ 251 10000K 250 ÷ 251 10000K 250 ÷ 255 † 255 † COLOUR WHEEL SATURATION (Linear)				
L 247 Lee Minus Green 122 ÷ 123 L 152 Pale Gold 124 ÷ 125 L 105 Crange 126 ÷ 127 L 015 Deep Straw 128 ÷ 129 L 048 Rose Purple 130 ÷ 131 L 177 Deep Purple 132 ÷ 133 L 322 Soft Green 134 ÷ 135 Reserved 136 ÷ 211 2800K 211 ÷ 213 3000K 214 ÷ 215 3200K 216 ÷ 217 3400K 218 ÷ 219 3600K 210 ÷ 219 3600K 214 ÷ 215 3200K 216 ÷ 217 3400K 218 ÷ 219 3600K 220 ÷ 221 3800K 220 ÷ 221 3800K 220 ÷ 221 3800K 222 ÷ 223 4000K 224 ÷ 225 4200K 226 ÷ 227 4400K 228 ÷ 229 4600K 230 ÷ 231 4800K 230 ÷ 231 4800K 232 ÷ 233 5000K 234 ÷ 235 5000K 234 ÷ 235 5000K 234 ÷ 235 5000K 236 ÷ 237 5400K 228 ÷ 229 4600K 230 ÷ 231 4800K 232 ÷ 233 5000K 234 ÷ 235 5000K 234 ÷ 235 5000K 234 ÷ 235 5000K 240 ÷ 241 6000K 240 ÷ 241 6000K 240 ÷ 241 6000K 242 ÷ 243 6500K 244 ÷ 245 7000K 246 ÷ 247 8000K 248 ÷ 249 9000K 250 ÷ 251 10000K 252 ÷ 253 6 × ⊘n COLOUR WHEEL SATURATION (Linear)				
L105 Orange 126 + 127 L015 Deep Straw 128 + 129 L048 Rose Purple 130 + 131 L797 Deep Purple 132 + 133 L322 Soft Green 134 + 135 Reserved 1336 + 211 2800K 212 + 213 3000K 214 + 215 3200K 216 + 217 3400K 218 + 219 3600K 218 + 219 3600K 220 + 221 3800K 222 + 223 4000K 224 + 225 4200K 224 + 225 4200K 226 + 227 4400K 228 + 229 4600K 230 + 231 4800K 232 + 233 5000K 234 + 235 5200K 234 + 235 5200K 236 + 237 5400K 238 + 239 5600K 240 + 241 6000K 240 + 241 6000K 242 + 243 6500K 240 + 241 6000K 244 + 245 7000K 246 + 247 8000K 246 + 247 8000K 248 + 249 9000K 250 + 251 10000K 252 + 253 6 × On COLOUR WHEEL SATURATION (Linear)				
L.015 Deep Straw L.048 Rose Purple L.048 Rose Purple L.77 Deep Purple L.32 + 133 L.322 Soft Green Reserved 134 + 135 Reserved 136 + 211 2800K 212 + 213 3000K 214 + 215 3200K 216 + 217 3400K 218 + 219 3600K 218 + 219 3600K 218 + 219 3600K 220 + 221 3800K 222 + 223 4000K 224 + 225 4200K 224 + 225 4200K 226 + 227 4400K 228 + 229 4600K 230 + 231 4800K 232 + 233 5000K 233 + 237 5600K 234 + 235 5200K 238 + 237 5600K 238 + 244 6500K 244 + 245 7000K 250 + 251 10000K 250 + 251 10000K 250 + 251 10000K 250 + 255 10000K 255 + 255 COLOUR WHEEL SATURATION (Linear)		L.152 Pale Gold	124 ÷ 125	
L.048 Rose Purple L.797 Deep Purple 132 ÷ 133 L.322 Soft Green 134 ÷ 135 Reserved 136 ÷ 211 2800K 212 ÷ 213 3000K 214 ÷ 215 3200K 216 ÷ 217 3400K 218 ÷ 219 3600K 220 ÷ 221 3800K 220 ÷ 221 3800K 220 ÷ 221 4000K 224 ÷ 225 4000K 226 ÷ 227 4400K 226 ÷ 227 4400K 228 ÷ 229 4600K 230 ÷ 231 4800K 232 ÷ 233 5000K 233 ÷ 231 5000K 233 ÷ 237 5400K 238 ÷ 244 6500K 244 ÷ 245 7000K 244 ÷ 245 7000K 246 ÷ 247 8000K 246 ÷ 247 8000K 250 ÷ 251 10000K 250 ÷ 251 10000K 252 ÷ 253 6 × On				
L.797 Deep Purple L.322 Soft Green 134 ÷ 135 Reserved 136 ÷ 211 2800K 212 ÷ 213 3000K 214 ÷ 215 3200K 216 ÷ 217 3400K 218 ÷ 219 3600K 220 ÷ 221 3800K 222 ÷ 223 4000K 224 ÷ 225 4200K 226 ÷ 227 4400K 228 ÷ 229 4600K 230 ÷ 231 4800K 230 ÷ 231 4800K 230 ÷ 231 4800K 230 ÷ 231 5000K 234 ÷ 235 5200K 236 ÷ 237 5400K 238 ÷ 237 5400K 238 ÷ 239 5600K 238 ÷ 239 5600K 244 ÷ 244 6000K 244 ÷ 245 7000K 244 ÷ 247 8000K 250 ÷ 251 10000K 250 ÷ 251 10000K 250 ÷ 251 10000K 252 ÷ 253 6 × On COLOUR WHEEL SATURATION (Linear)				
L.322 Soft Green 134 ÷ 135 Reserved 136 ÷ 211 2800K 212 ÷ 213 3000K 214 ÷ 215 3200K 216 ÷ 217 3400K 218 * 219 3600K 222 ÷ 223 4000K 222 ÷ 223 4000K 224 ÷ 225 4200K 226 ÷ 227 4400K 228 * 229 4600K 230 ÷ 231 4800K 230 ÷ 231 4800K 232 ÷ 233 5000K 232 ÷ 233 5000K 234 ÷ 235 5200K 236 ÷ 237 5400K 238 ÷ 237 5500K 244 ÷ 247 7000K 246 ÷ 247 7000K 246 ÷ 247 7000K 246 ÷ 247 7000K 250 ÷ 251 10000K 250 ÷ 251 10000K 250 ÷ 251 10000K 250 ÷ 251 10000K 255 ÷ 253 6 × On 254 ÷ 255				
Reserved 2800K 2112 + 213 3000K 214 + 215 3200K 3100K 216 + 217 3400K 218 + 219 3600K 220 + 221 3800K 222 + 223 4000K 224 + 225 4000K 224 + 225 4200K 226 + 227 4400K 228 + 229 4600K 230 + 231 4800K 232 + 233 5000K 232 + 233 5000K 233 + 235 5200K 236 + 237 5400K 238 + 239 5600K 238 + 239 5600K 238 + 239 5600K 238 + 237 5400K 238 + 237 5400K 238 + 244 6000K 244 + 245 6500K 244 + 245 7000K 244 + 245 7000K 246 + 247 8000K 246 + 247 8000K 250 + 251 10000K 250 + 251 10000K 255 + 255 COLOUR WHEEL SATURATION (Linear)				
2800K 212 ÷ 213 3000K 214 ÷ 215 3200K 216 ÷ 217 34400K 218 ÷ 219 3600K 222 ÷ 221 3800K 222 ÷ 223 4000K 222 ÷ 225 4200K 226 ÷ 227 4400K 228 ÷ 229 4600K 228 ÷ 229 4600K 230 ÷ 231 4800K 230 ÷ 231 4800K 230 ÷ 231 5000K 234 ÷ 235 5200K 236 ÷ 237 5400K 238 ÷ 239 5600K 236 ÷ 237 5400K 238 ÷ 239 5600K 240 ÷ 241 6000K 242 ÷ 243 6500K 244 ÷ 245 7000K 244 ÷ 245 7000K 246 ÷ 247 8000K 250 ÷ 251 10000K 250 ÷ 251 10000K 250 ÷ 251 10000K 255 ÷ 251 10000K 255 ÷ 255 55 50 € COLOUR WHEEL SATURATION (Linear)				
3200K 3400K 218 ÷ 217 3400K 218 ÷ 219 3600K 220 ÷ 221 3800K 222 ÷ 223 4000K 224 ÷ 225 4200K 226 ÷ 227 4400K 228 ÷ 229 4600K 230 ÷ 231 4800K 232 ÷ 233 5000K 234 ÷ 235 5200K 236 ÷ 237 5400K 238 ÷ 237 5400K 238 ÷ 239 5600K 238 ÷ 237 5400K 238 ÷ 237 5400K 238 ÷ 244 5600K 244 ÷ 245 7000K 244 ÷ 245 7000K 246 ÷ 247 8000K 246 ÷ 247 8000K 248 ÷ 249 9000K 250 ÷ 251 10000K 255 ÷ 251 10000K 255 ÷ 253 6 × On				
3400K 3600K 220 ÷ 221 3800K 220 ÷ 221 3800K 222 ÷ 223 4000K 224 ÷ 225 4200K 226 ÷ 227 4400K 228 ÷ 229 4600K 230 ÷ 231 4800K 232 ÷ 233 5000K 234 ÷ 235 5000K 234 ÷ 235 5200K 236 ÷ 237 5400K 238 ÷ 239 5600K 240 ÷ 241 6000K 242 ÷ 243 6500K 244 ÷ 245 7000K 244 ÷ 245 7000K 246 ÷ 247 8000K 250 ÷ 251 10000K 250 ÷ 251 252 ÷ 253 6 × On COLOUR WHEEL SATURATION (Linear)				
3600K 3800K 222 ÷ 221 3800K 222 ÷ 223 4000K 224 ÷ 225 4200K 226 ÷ 227 4400K 228 ÷ 229 4600K 230 ÷ 231 4800K 232 ÷ 233 5000K 234 ÷ 235 5200K 236 ÷ 237 5400K 238 ÷ 239 5600K 238 ÷ 239 5600K 240 ÷ 241 6000K 242 ÷ 243 6500K 244 ÷ 245 7000K 244 ÷ 245 7000K 246 ÷ 247 8000K 250 ÷ 251 10000K 250 ÷ 251 10000K 252 ÷ 253 6 × On COLOUR WHEEL SATURATION (Linear)				
3800K 222 ÷ 223 4000K 224 ÷ 225 4200K 4200K 226 ÷ 227 4400K 228 ÷ 229 4400K 228 ÷ 229 4600K 230 ÷ 231 4800K 232 ÷ 233 5000K 234 ÷ 235 5200K 236 ÷ 237 5400K 238 ÷ 239 5600K 238 ÷ 239 5600K 238 ÷ 239 5600K 244 ÷ 241 6000K 242 ÷ 243 6500K 244 ÷ 245 7000K 244 ÷ 245 7000K 246 ÷ 247 8000K 248 ÷ 249 9000K 250 ÷ 251 10000K 252 ÷ 253 6 × On COLOUR WHEEL SATURATION (Linear)				
4000K 224 ÷ 225 4200K 226 ÷ 227 4400K 228 ÷ 229 4600K 230 ÷ 231 4800K 232 ÷ 233 5000K 234 ÷ 235 5200K 236 ÷ 237 5400K 238 ÷ 239 5600K 240 ÷ 241 6000K 242 ÷ 243 6500K 244 ÷ 245 7000K 246 ÷ 247 8000K 248 ÷ 249 9000K 250 ÷ 251 10000K 250 ÷ 251 10000K 252 ÷ 253 6 × On 254 ÷ 255 COLOUR WHEEL SATURATION (Linear)				
4200K		1		
4600K			226 ÷ 227	
4800K 232 ÷ 233 5000K 234 ÷ 235 5200K 236 ÷ 237 5400K 238 ÷ 239 5600K 240 ÷ 241 6000K 242 ÷ 243 6500K 244 ÷ 245 7000K 246 ÷ 247 8000K 248 ÷ 249 9000K 250 ÷ 251 10000K 250 ÷ 251 10000K 252 ÷ 253 6 × On 254 ÷ 255 COLOUR WHEEL SATURATION (Linear)				
S000K 234 ÷ 235 5200K 236 ÷ 237 5400K 238 ÷ 239 5600K 240 ÷ 241 6000K 242 ÷ 243 6500K 244 ÷ 245 7000K 244 ÷ 247 8000K 248 ÷ 249 9000K 250 ÷ 251 10000K 252 ÷ 253 6 × On COLOUR WHEEL SATURATION (Linear)				
5200K 236 ÷ 237 5400K 238 ÷ 239 5600K 240 ÷ 241 6000K 242 ÷ 243 6500K 244 ÷ 245 7000K 244 ÷ 245 7000K 246 ÷ 247 8000K 246 ÷ 247 8000K 250 ÷ 251 10000K 250 ÷ 251 10000K 252 ÷ 253 6 × On COLOUR WHEEL SATURATION (Linear)				
5400K 238 ÷ 239 5600K 240 ÷ 241 6000K 242 ÷ 243 6500K 244 ÷ 245 7000K 246 ÷ 247 8000K 248 ÷ 249 9000K 250 ÷ 251 10000K 252 ÷ 253 6 × On 254 ÷ 255				
5600K				
6500K 244 ÷ 245 7000K 246 ÷ 247 8000K 248 ÷ 249 9000K 250 ÷ 251 10000K 252 ÷ 253 6 × On 254 ÷ 255 COLOUR WHEEL SATURATION (Linear)			240 ÷ 241	
7000K 246 ÷ 247 8000K 248 ÷ 249 9000K 250 ÷ 251 10000K 252 ÷ 253 6 x On 254 ÷ 255 COLOUR WHEEL SATURATION (Linear)				
8000K 248 ÷ 249 9000K 250 ÷ 251 10000K 252 ÷ 253 6 × On 254 ÷ 255 COLOUR WHEEL SATURATION (Linear)				
9000K 250 ÷ 251 10000K 252 ÷ 253 6 x On 254 ÷ 255 COLOUR WHEEL SATURATION (Linear)				
10000K 252 ÷ 253 6 x On 254 ÷ 255 COLOUR WHEEL SATURATION (Linear)				
6 x On 254 ÷ 255 COLOUR WHEEL SATURATION (Linear)				
		COLOUR WHEEL SATURATION (Linear)		
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100 % to 95 % 95 % to 90 % 95 % to 90 % 90 % to 85 % 88 % 39 85 % to 80 % 80 % 100 % to 75 % 75 % 100 % to 65 % 90 % 100 % to 55 % 101 % 100 % to 55 % 101 % 100 % to 55 % 101 % 101 % 102 % 104 % 105 % 105 % 106 % 107 % 107 % 108 % 109 % 109 % 100
95 % to 90 % 90 % to 85 % 90 % to 85 % 85 % 85 % to 80 % 85 % to 80 % 85 % to 75 % 75 % 75 % 70 % to 65 % 60 % 65 * 76 70 % to 65 % 60 % 90 102 60 % to 55 % 116 * 127 10 10 10 10 10 10 10 10 10 10 10 10 10
90 % to 85 % 27 ÷ 38 85 % to 80 % 40 ÷ 50 80 % 51 80 % to 75 % 52 ÷ 63 75 % 64 75 % to 70 % 70 % to 65 % 78 ÷ 89 65 % to 60 % 91 ÷ 101 60 % 102 60 % to 55 % 116 ÷ 127 55 % to 50 % 128 129 ÷ 140 45 % to 40 % to 35 % 154 ÷ 165 35 % 103 ÷ 114 153 40 % to 35 % 154 ÷ 165 35 % 103 ÷ 179 30 % to 25 % 180 ÷ 181 192 125 % to 20 % 20 % to 15 % 205 ÷ 216 15 % 200 % 20 % to 15 % 200 ÷ 217
85 % to 80 % 40 + 50 80 % 40 + 50 80 % 51 80 % 551 80 % 551 80 % 64 755 % 52 ÷ 63 75 % 64 755 % to 70 % 77 70 % to 65 % 78 + 89 90 65 % 90 65 % to 60 % 102 60 % to 55 % 103 ÷ 114 55 % 115 55 % to 50 % 116 ÷ 127 50 % 128 50 % to 45 % 141 44 + 152 45 % to 40 % 142 + 152 40 % 153 % 154 + 165 35 % 166 35 % to 30 % 179 30 % to 25 % 180 + 181 192 25 % to 20 % 20 % to 15 % 205 ÷ 216 15 % 205 ÷ 216 15 %
85 % to 80 % 80 % 51 80 % to 75 % 75 % 64 75 % to 70 % 77 70 % to 65 % 65 % to 60 % 65 % to 60 % 60 % to 55 % 116 + 127 55 % to 50 % 118 55 % to 50 % 118 55 % to 40 % 45 % 141 45 % to 40 % 45 % 140 % to 35 % 153 % 30 % 179 30 % to 25 % 180 + 181 25 % 20 % 20 % to 15 % 20 % 20 % to 15 % 20 5 ÷ 216 217
80 % to 75 % 75 % 64 75 % to 70 % 75 % to 70 % 77 70 % to 65 % 65 ÷ 76 70 % 77 70 % to 65 % 65 % 90 65 % to 60 % 102 60 % to 55 % 116 ÷ 127 50 % 128 50 % to 45 % 129 ÷ 140 45 % 141 45 % to 40 % 45 % 144 45 % to 40 % 45 % 153 40 % to 35 % 35 % to 30 % 179 30 % to 25 % 180 ÷ 181 25 % 192 25 % to 20 % 20 % 20 % to 15 % 217
75 % to 70 % 75 % to 70 % 76 % 77 % 70 % to 65 % 78 + 89 65 % 65 % to 60 % 65 % to 60 % 102 60 % to 55 % 116 ÷ 127 55 % to 50 % 128 50 % to 45 % 141 45 % to 40 % 45 % 141 45 % to 40 % 153 40 % to 35 % 35 % to 30 % 30 % 179 30 % to 25 % 180 ÷ 181 25 % 20 % 20 % to 15 % 20 % 20 % to 15 % 217
70 % 77 70 % to 65 % 78 + 89 90 65 % to 60 % 65 % to 60 % 102 60 % to 55 % 113 ± 114 55 % to 50 % 116 + 127 50 % 128 50 % to 45 % 141 45 % to 40 % 45 % 142 ± 152 40 % 153 35 % 166 35 % to 30 % 30 % to 25 % 180 + 181 25 % 20 % to 15 % 20 % 20 % to 15 % 20 % 20 % to 15 % 217
70 % to 65 % 65 % 90 65 % to 60 % 65 % to 60 % 102 60 % to 55 % 1103 ÷ 114 55 % 115 55 % to 50 % 128 50 % to 45 % 141 45 % 141 45 % 141 45 % 153 40 % to 35 % 154 ÷ 165 35 % 166 35 % to 30 % 179 30 % to 25 % 180 ÷ 181 25 % 192 25 % to 20 % 20 % 20 % to 15 % 20 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$
65 % to 60 % 60 % 60 % 102 60 % to 55 % 110 * 115 55 % to 50 % 114 + 127 50 % 50 % to 45 % 45 % 45 % 40 % 45 % 40 % 535 % 166 35 % to 30 % 30 % 179 30 % to 25 % 25 % to 20 % 20 % to 15 % 20 % 20 % to 15 % 217
102 60 % to 55 % 55 % 55 % 55 % to 50 % 116 + 127 50 % 50 % to 45 % 45 % 45 % 45 % to 40 % 45 % 40 % to 35 % 35 % 166 35 % to 30 % 179 30 % to 25 % 25 % to 20 % 20 % to 15 % 20 % to 15 % 20 % to 15 % 20 % 20 % to 15 % 210 3 + 114 115 115 115 115 115 115 115 116 115 115
10 55 % to 50 % 116 + 127 50 % 128 50 % to 45 % 129 + 140 45 % 141 45 % to 40 % 142 + 152 40 % 153 40 % to 35 % 154 + 165 35 % 166 35 % to 30 % 167 + 178 30 % to 25 % 180 + 181 25 % 192 25 % to 20 % 20 % 204 20 % to 15 % 205 + 216 15 % 110 + 181 25 + 217
10 55 % to 50 % 116 ÷ 127 50 % 128 000 141 45 % 45 % 40 % 153 40 % to 35 % 35 % 166 35 % to 30 % 179 30 % to 25 % 25 % 25 % to 20 % 20 % 20 % to 15 % 20 % 20 % to 15 % 217
10
45 % to 40 % 141
40 % 153
40 % to 35 % 35 % 154 ÷ 165 35 % 166 35 % to 30 % 179 30 % to 25 % 180 ÷ 181 25 % 192 25 % to 20 % 20 % 20 % 20 % to 15 % 217
35 % to 30 % 167 ÷ 178 30 % 179 30 % to 25 % 180 ÷ 181 25 % 192 25 % to 20 % 20 % 20 % 20 % to 15 % 205 ÷ 216 15 % 217
30 % 179 180 ÷ 181 179 180 ÷ 181 192 192 5% 193 ÷ 203 20% 20% 205 ÷ 216 15 % 217
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25 % to 20 % 193 ÷ 203 204 20 % 205 ÷ 216 15 % 217
20 % to 15 % 205 ÷ 216 217
10 %
10 % to 5 % 231 ÷ 242
5 % 243 5 % to 0 % 244 ÷ 254
0%
CTO (Linear)
0 % to 5 % 1 ÷ 12
5 % 13 14 ÷ 25
10 % 26
10 % to 15 % 27 ÷ 38 39
15 % to 20 % 40 ÷ 50 20 % 51
20 % 51 52 ÷ 63
25 % 64 65 ÷ 76
30 %
30 % to 35 % 78 ÷ 89 35 % 90
11 35 % to 40 % 91 ÷ 101 000
40 % to 45 % 102 103 ÷ 114
45 % 115
45 % to 50 % 116 ÷ 127 50 % 128
50 % to 55 % 129 ÷ 140
55 % 141 55 % to 60 % 142 ÷ 152
60 %
60 % to 65 % 154 ÷ 165 65 % 166
65 % to 70 % 167 ÷ 178 70 %
70 % to 75 % 180 ÷ 181
75 % 192 193 ÷ 203
80 % 204

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					80 % to 85 %	205 ÷ 216	
					85 %	217	
					85 % to 90 % 90 %	218 ÷ 229 230	
					90 % to 95 %	230 231 ÷ 242	000
					95 %	243	
					95 % to 100 %	244 ÷ 254	
					100 %	255	
					CONTROL (hold 3 seconds)		
					No Function/Safe	0 ÷ 1	
					Colour Mix RGB	2 ÷ 3	
					Colour Mix CMY Colour Mix HS	4 ÷ 5	
					Dimmer Mode Linear	6 ÷ 7 8 ÷ 9	
					Dimmer Mode S-Curve	10 ÷ 11	
					Dimmer Mode Square Law	12 ÷ 13	
					Dimmer Mode Inverse Sq. Law	14 ÷ 15	
					Dimmer Speed Auto	16 ÷ 17	
					Dimmer Speed Slow	18 ÷ 19	
					Dimmer Speed Medium Dimmer Speed Fast	20 ÷ 21 22 ÷ 23	
					Tungsten Off	24 ÷ 25	
					Tungsten Slow	26 ÷ 27	
					Tungsten Medium	28 ÷ 29	
					Tungsten Fast	30 ÷ 31	
					LED Mode Brigtness	32 ÷ 33	
					LED Mode Quality	34 ÷ 35 36 ÷ 37	
					LED Frequency 625 Hz LED Frequency 1282 Hz	38 ÷ 39	
					LED Frequency 2500 Hz	40 ÷ 41	
					LED Frequency 5000 Hz	42 ÷ 43	
					LED Frequency 6400 Hz	44 ÷ 45	
					LED Frequency 25 kHz	46 ÷ 47	
					Fan Auto Fan Balanced	48 ÷ 49 50 ÷ 51	
					Fan Silent	50 ÷ 51	
	9	12	10	16	Reserved	54 ÷ 55	000
					Reserved	56 ÷ 57	
					Reserved	58 ÷ 59	
					Reserved	60 ÷ 61	
					Reserved Reserved	62 ÷ 63 64 ÷ 65	
					Reserved	66 ÷ 67	
					Reserved	68 ÷ 69	
					Reserved	70 ÷ 71	
					Reserved	72 ÷ 73	
					Fan Full	74 ÷ 75	
					Calibration Off Calibration On	76 ÷ 77 78 ÷ 79	
					Display Flip Regular	78 ÷ 79 80 ÷ 81	
					Display Flip Top Down	82 ÷ 83	
					Display Backlight On	84 ÷ 85	
					Display Backlight 10 s	86 ÷ 87	
					Display Backlight 20 s	88 ÷ 89	
					Display Backlight 30 s DMX Lost Blackout	90 ÷ 91 92 ÷ 93	
					DMX Lost Hold	92 ÷ 93 94 ÷ 95	
					DMX Lost Hold DMX Lost Master Static	96 ÷ 97	
					DMX Lost Master Effect 1	98 ÷ 99	
					DMX Lost Master Effect 2	100 ÷ 101	
					DMX Lost Master Effect 3	102 ÷ 103	
					DMX Lost Slave	104 ÷ 105	
					Reserved Reset All Channels Control	106 ÷ 253 254 ÷ 255	
	 1				Neset All Charmers Collifor	1 204 7 200	

13 - COLOUR WHEEL x, y

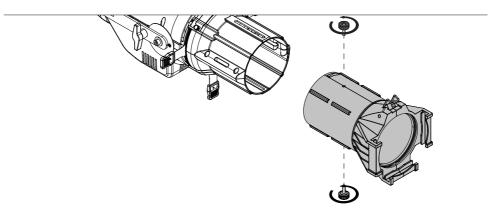
COLOUR WHEEL	x	у
Red	0.6994	0.29966
Green	0.23056	0.63346
Blue	0.1443	0.045155
Cyan	0.16445	0.18257
Magenta	0.30505	0.11886
Yellow	0.42434	0.46911
L.744 Dirty White	0.504	0.420
L.197 Alice Bllue	0.229	0.226
L.181 Congo Blue	0.197	0.075
L.174 Dark Steel Blue	0.293	0.322
L.170 Deep Lavender	0.400	0.310
L.169 Lilac Ting	0.410	0.367
L.165 Daylight Blue	0.209	0.271
L.164 Flame Red	0.660	0.324
L.162 Bastard Amber	0.452	0.399
L.158 Deep Orange	0.608	0.385
L.152 Pale Gold	0.467	0.396
L.147 Apricot	0.531	0.400
L.141 Bright Blue	0.150	0.267
L.139 Primary Green	0.210	0.672
L.137 Special Lavender	0.337	0.288
L.136 Pale Lavender	0.404	0.343
L.135 Deep Golden Amber	0.650	0.344
L.132 Medium Blue	0.152	0.198
L.128 Bright Pink	0.554	0.254
L.126 Mauve	0.441	0.177
L.124 Dark Green	0.218	0.610
L.121 Lee Green	0.386	0.529
L.119 Dark Blue	0.144	0.119
L.118 Light Blue	0.174	0.307
L.117 Steel Blue	0.325	0.385
L.116 Medium Blue-Green	0.143	0.397

COLOUR WHEEL	x	
L.115 Peacock Blue	0.200	0.411
L.113 Magenta	0.656	0.288
L.111 Dark Pink	0.516	0.317
L.110 Middle Rose	0.472	0.348
L.109 Light Salmon	0.491	0.367
L.108 English Rose	0.512	0.394
L.107 Light Rose	0.502	0.359
L.105 Orange	0.589	0.404
L.104 Deep Amber	0.528	0.452
L.103 Straw	0.454	0.415
L.102 Light Amber	0.501	0.449
L.100 Spring Yellow	0.477	0.483
L.090 Dark Yellow Green	0.207	0.663
L.079 Just Blue	0.156	0.146
L.068 Sky Blue	0.171	0.206
L.058 Lavender	0.301	0.187
L.052 Light Lavender	0.383	0.313
L.039 Pink Carnation	0.448	0.347
L.036 Medium Pink	0.490	0.340
L.035 Light Pink	0.455	0.364
L.025 Sunset Red	0.616	0.356
L.022 Dark Amber	0.640	0.353
L.021 Gold Amber	0.609	0.381
L.020 Medium Amber	0.556	0.420
L.019 Fire	0.662	0.327
L.017 Surprise Peach	0.533	0.393
L.013 Straw Tint	0.485	0.427
L.010 Medium Yellow	0.490	0.479
L.247 Lee Minus Green	0.452	0.353
L.152 Pale Gold	0.467	0.396
L.105 Orange	0.589	0.404
L.015 Deep Straw	0.542	0.443
L.048 Rose Purple	0.443	0.256
L.797 Deep Purple	0.395	0.150
L.322 Soft Green	0.252	0.467

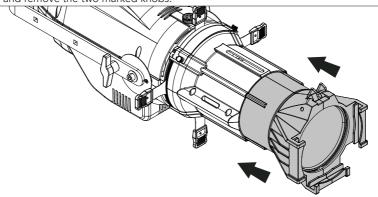
COLOUR WHEEL	x	у
2800K	0.450	0.409
3000K	0.435	0.404
3200K	0.422	0.399
3400K	0.410	0.393
3600K	0.398	0.388
3800K	0.388	0.382
4000K	0.379	0.376
4200K	0.371	0.371
4400K	0.363	0.366
4600K	0.356	0.361
4800K	0.349	0.356
5000K	0.344	0.358
5200K	0.339	0.353
5400K	0.333	0.349
5600K	0.329	0.345
6000K	0.320	0.337
6500K	0.311	0.328
7000K	0.304	0.321
8000K	0.292	0.308
9000K	0.284	0.299
10000K	0.278	0.291
6xOn	0.32065	0.28793

14 - ACCESSORIES INSTALLATION

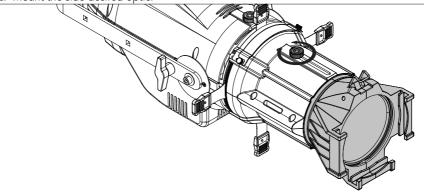
OPTIC (CODE ECLPRL - OPTIONAL)



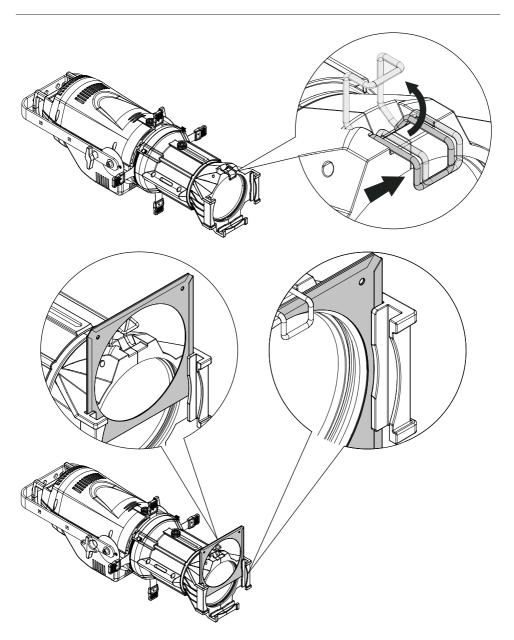
1. Loosen and remove the two marked knobs.



2. Mount the side desired optic.



3. Insert and tighten the knobs.



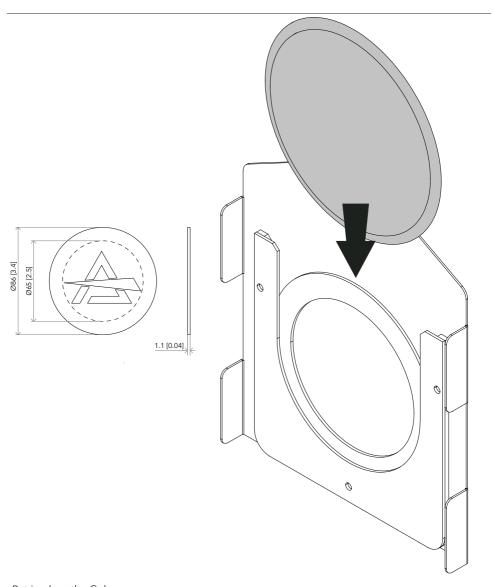
1. Push the clip, located at the top of the optics body, outwards and lift it. Then insert the filter into the marked track and close the clip, always applying an outward push.

NOTE: To remove the accessory, reverse the procedure.

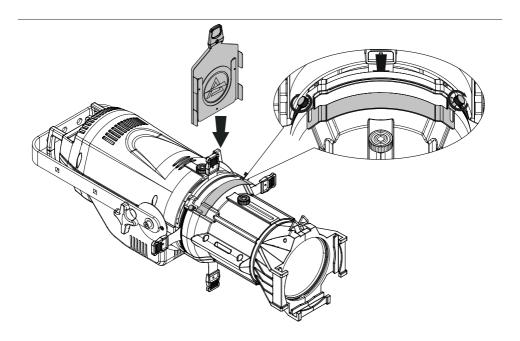
GOBO HOLDER (CODE ECLPRGH - OPTIONAL)

Gobo dimensions:

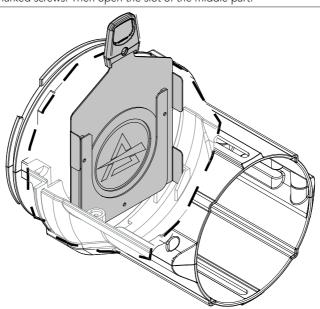
- Type B
- Ø external= 86 mm;
- Ø of image= 64.5 mm;
- Thinckness= 1.1 mm.



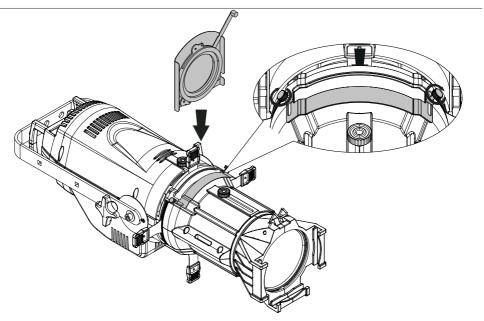
Put in place the Gobo.



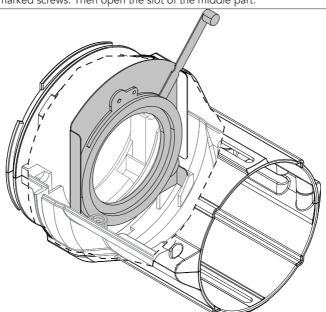
1. Loosen the marked screws. Then open the slot of the middle part.



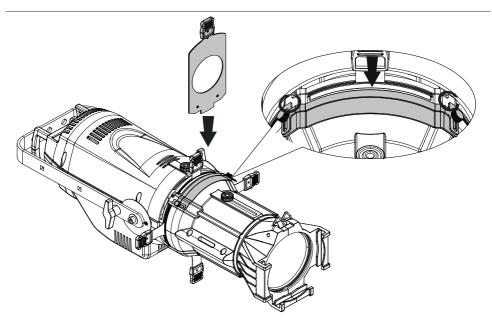
2. Insert the gobo holder into the slot. The flaps will go into the appropriate size. NOTE: To remove the accessory, reverse the procedure.



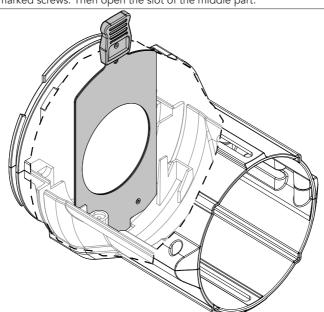
1. Loosen the marked screws. Then open the slot of the middle part.



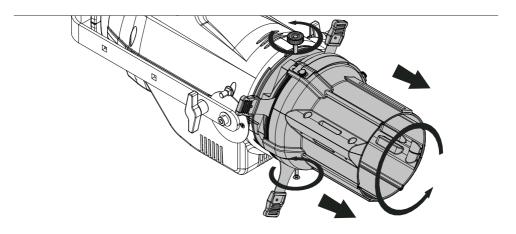
2. Insert the steel iris diaphram into the slot. The flaps will go into the appropriate size. NOTE: To remove the accessory, reverse the procedure.



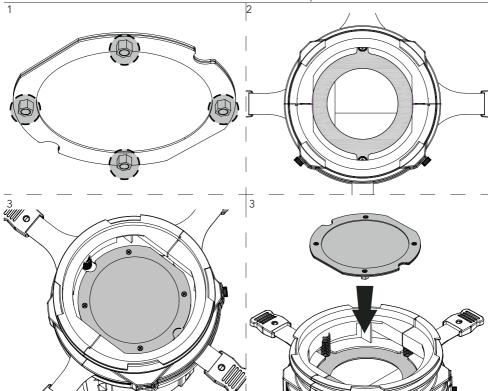
1. Loosen the marked screws. Then open the slot of the middle part.



2. Insert the Soft edge filter into the slot. NOTE: To remove the accessory, reverse the procedure.



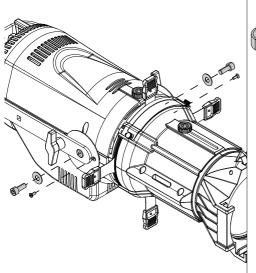
1. Loosen the marked knob and screw. Then rotate the middle part and remove it.

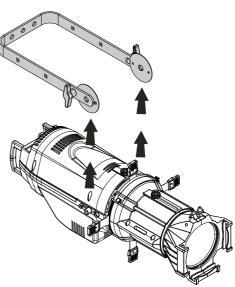


2. Insert the soft focus diffusion kit by placing the magnets (1) on the back of the framing system (2) of the middle part.

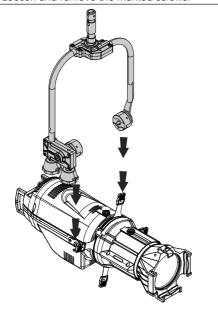
NOTE: To remove the accessory, reverse the procedure.

THE POLE OPERATED YOKE (CODE ECLPRPOYO - OPTIONAL)





1. Loosen and remove the marked screws.



3. Mount the Pole Operated Yoke bracket.

4. Tighten the screws.

2. Remove the bracket

NOTE: To remove the accessory, reverse the procedure.

15 - MAINTENANCE

MAINTENANCE AND CLEANING THE PRODUCT

WARNING: Disconnect from the mains before starting any maintenance work

It is recommended to clean the front at regular intervals, from impurities caused by dust, smoke, or other particles to ensure that the light is radiated at maximum brightness.

- For cleaning, disconnect the main plug from the socket. Use a soft, clean cloth moistened with a mild detergent. Then carefully wipe the part dry. For cleaning other housing parts use only a soft, clean cloth. Never use a liquid, it might penetrate the unit and cause damage to it.
- The user must clean the product periodically to maintain optimum performance and cooling. The
 user may also upload firmware (product software) to the fixture via the DMX signal input port or USB
 port using firmware and instructions from PROLIGHTS.
- The frequency of such maintenance operations is to be performed according to various factors, such
 as the amount of the use and the condition of the installation environment (air humidity, presence
 of dust, salinity, etc.). It is recommended that the product is subject to annual service by a qualified
 technician for special maintenance involving at least the following procedures:
- General cleaning of internal parts.
- For all the parts subject to friction, using lubricants specifically supplied by PROLIGHTS.
- General visual check of the internal components, cabling, mechanical parts, etc.
- Electrical, photometric and functional checks; eventual repairs.
- Cleaning the lenses. Only use neutral soap and water to clean the lenses, then dry it carefully with a soft, non-abrasive cloth.

WARNING: the use of alcohol or any other detergent could damage the lenses.

- All other service operations on the product must be carried out by PROLIGHTS, its approved service
 agents or trained and qualified personnel.
- It is PROLIGHTS policy to apply the strictest possible calibration procedures and use the best quality materials available to ensure optimum performance and the longest possible component lifetimes. However, optical components are subject to wear and tear over the life of the product, resulting in gradual changes in colours over many thousands of hours of use. The extent of wear and tear depends heavily on operating conditions and environment, so it is impossible to specify precisely whether and to what extent performance will be affected. However, you may eventually need to replace optical components if their characteristics are affected by wear and tear after an extended period of use and if you require fixtures to perform within very precise optical and colour parameters.
- Do not apply filters, lenses or other materials on lenses or other optical components. Use only accessories approved by PROLIGHTS.

REPLACING THE FUSE

WARNING: Before replacing the fuse, unplug the product from the mains.

Remove the old fuse from the housing with a suitable screwdriver (anticlockwise) and replace it with
one of the same type and of the same classification (T5A, 250 V).

VISUAL CHECK OF PRODUCT HOUSING

- The parts of the product cover/housing should be checked for eventual damages and breaking start at least every two months. In addition, especially the parts of the front lens holder have to be checked mechanically (by means of movement by the part) if it is firmly fastened to the fixture. If hint of a crack is found on some plastic part, do not use the product until the damaged part will be replaced.
- Cracks or another damages of the cover/housing parts can be caused by the product transportation or manipulation and also ageing process may influence materials.
- This checking is necessary for both fixed installations and preparing product for renting. Any free
 moving parts inside of the product, cracked cover/housing or any part of front lens not sitting properly in place need to be immediately replaced.

TROUBLESHOOTING

Problems	Possible causes	Checks and remedies		
Product doesn't power ON	No power to the product	Check that power is switched ON and cables are plugged in.		
	• Fuse blown or internal fault	Check if the Fuse is intact and eventually replace it if necessary. Contact the PROLIGHTS Service or authorized service partner. Do not remove parts and/or covers, or carry out any repairs or service that are not described in this Safety and User Manual unless you have both authorization from PROLIGHTS and the service documentation.		
Product reset correctly but does not respond correctly	Bad signal connection	 Inspect connections and cables. Fix eventual bad connections. Repair or replace damaged cables. 		
to the contoller.	Signal connection not terminated	Insert DMX termination plug in signal output socket of the last product on the signal line.		
	Incorrect addressing of the product	Check the product address and control settings		
	One of the product is defective and is corrupt- ing the signal transmis- sion on the signal line	Unplug the XLR in and out connectors and connect them directly together to bypass one product at a time until normal operation is regained. Once found the error, have that fixture serviced by a qualified technician.		
Timeout error after fixture reset.	One or more hardwarecomponents requiresmechanical adjustments	Check product stored error messages for more information. Contact PROLIGHTS Service or an authorized service partner.		
Mechanical effect loses position	Mechanical hardware require cleaning, adjust- ment or lubrification	Check product stored error messages for more information. Contact PROLIGHTS Service or an authorized service partner.		
Light output turn OFF Intermittently	Fixture is too hot	 Check product stored error messages. Allow product to cool. Clean the product and airflow filters. Reduce ambient temperature. 		
	Hardware failure (tem- perature sensor, fans, Light source)	Check product stored error messages for more information. Contact. PROLIGHTS Service or an authorized service partner.		
General low light intensity	Dirty lens assemblyDirty or damaged filters	Clean the fixture regularly. Install lens assembly properly.		

Contact an authorized service center in case of technical problems or not reported in the table can not be resolved by the procedure given in the table.

Note	

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