DMX REFERENCE

Profile Light Engine FC 5Deg

Vari-Lite



Manufacturer	Vari-Lite
GDTF file	Vari-Lite_Profile_Light_Engine_FC_5Deg_29934.gdtf
GDTF revision	Update upload by GDTFservice.com, powered by Crescit, commissioned by Strand. · 2022-11-02
Generated	2026-11-24

Contents

1 About this manual 2
2 Quick reference 3
3 Safety instructions 4
4 Product description 4
5 Installation 5
6 Connections 5
7 Operation 6
8 Functions at a glance 6
9 DMX channels 8
Mode SSCC Mode 9
Mode SOCC Mode 12
Mode SQCC Mode 13
10 Technical specifications 14
11 Maintenance and cleaning 14
12 Troubleshooting 15
13 Disposal 15

1 About this manual

This document describes the Profile Light Engine FC 5Deg by Vari-Lite. It was compiled from the GDTF file Vari-Lite_Profile_Light_Engine_FC_5Deg_29934.gdtf from the GDTF-Share library.

File revision: “Update upload by GDTFservice.com, powered by Crescit, commissioned by Strand.”.

The DMX modes, the channel functions and the technical data are given as the GDTF file states them. Installation, operation from the device's control panel, service and safety instructions are described in the manufacturer's original user manual, which takes precedence over this document.

This document was not issued or endorsed by Vari-Lite; product names and trademarks belong to their owners.

Safety notices are marked with signal words according to the severity of the hazard: DANGER – an imminent hazard that will result in death or serious injury; WARNING – a potential hazard that could result in death or serious injury; CAUTION – a potential hazard that could result in minor injury or property damage; NOTE – additional information for correct and safe use.

> **NOTE** This product is designed for stage and effect lighting. It is not suitable for household room illumination.

2 Quick reference

Parameter	Value
Weight	9.3 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
SSCC Mode	14	36	1, 15, 29, 43, ...
SOCC Mode	18	28	1, 19, 37, 55, ...
SQCC Mode	4	128	1, 5, 9, 13, ...

No light? Check these channels

- SSCC Mode: CH 3 Shutter at 0–9, 100–109 or 180–189
- SOCC Mode: CH 3 Shutter at 0–9, 100–109 or 180–189
- SQCC Mode: CH 3 Shutter at 0–9, 100–109 or 180–189



Read the manual before use



Do not stare into the light



Indoor use only

3 Safety instructions



Read the manual before use



Do not stare into the light



Indoor use only

⚠ WARNING

- This device is intended for professional use. Installation, connection, setup and maintenance must be carried out only by suitably qualified persons who have read this manual.
- Use the device only for its intended purpose and as described in this manual.
- Do not open the housing and do not modify or tamper with the device. Refer all repairs to an authorized service center.
- Do not use the device if its housing, power or data cable, or a connector is damaged, if the device has been dropped, or if liquid or a foreign object has entered it. In such a case, have it checked by a service center.
- Disconnect the device from the power supply before cleaning, maintenance or any work on the connections.
- After moving the device from a cold to a warm environment, let it reach room temperature before switching it on to prevent condensation inside.
- The device is not a toy; keep it out of the reach of children.

⚠ WARNING

- This device is designed for indoor use only. Protect it from rain, splashing water, moisture and dust, and do not place containers with liquids on it.
- Do not operate the device in high humidity, near water, or where condensation can form on it.

⚠ CAUTION

- This device emits intense light. Do not look directly into the light source or the beam at close range; doing so may damage your eyes.
- Do not aim the beam at the eyes of people or animals at close range, and do not view the light source through optical instruments (binoculars, camera lenses).
- Do not aim the beam at flammable or heat-sensitive materials at close range.

⚠ CAUTION

- Strobe and fast flashing light effects can trigger epileptic seizures in susceptible people (photosensitive epilepsy) and can cause nausea or disorientation.
- Inform the audience and performers in advance that strobe effects will be used, for example with a notice at the entrance, and do not use them longer than necessary.

4 Product description

Description in the GDTF file

“Strand Leko LED Profile FC utilizes new fan control technology, ensuring these new high-powered LED fixtures are suitable for use in the quietists of applications”

5 Installation

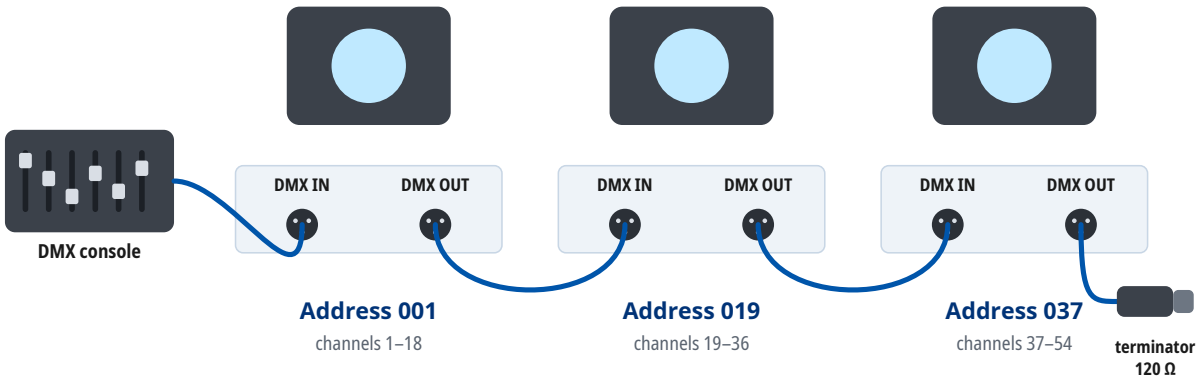
⚠ WARNING

- Rigging must be carried out only by qualified persons in accordance with applicable regulations, in particular those for work at height.
- The supporting structure and fixings must safely carry the weight of all suspended devices; verify their load capacity in advance.
- Weight of the device: 9.3 kg.
- Use suitable mounting hardware (for example truss clamps) and tighten all screw connections properly.
- Always secure the suspended device against falling with a safety cable of adequate load capacity, routed through a fixed point of the device and around the supporting structure.
- During installation and removal, keep people out of the area below the work position.
- Regularly inspect the fixings and the safety cable for damage, corrosion and loosening.

6 Connections

- Use shielded cable designed for DMX512 with an impedance of 110 Ω. Ordinary microphone cable is not suitable for DMX, especially over longer distances.
- Connect the devices in a daisy chain: connect the DMX OUT of one device to the DMX IN of the next. Do not split the line with Y-cables or wire it in a star; the line may be split only with a DMX splitter.
- Connect the shield to pin 1 only. Do not connect the shield (ground) to the metal shell of the connector; this can cause short circuits or erratic behavior.
- XLR pin assignment: pin 1 – shield (ground), pin 2 – Data- (Data Complement), pin 3 – Data+ (Data True). On 5-pin connectors, pins 4 and 5 are not connected; a 5-pin connector can be connected to a 3-pin one with a cable adapter.
- Terminate the end of the line (for impedance matching): plug an XLR connector with a 120 Ω, ¼ W resistor between pins 2 and 3 into the DMX OUT of the last device. This reduces the risk of erratic behavior.
- Connect no more than 32 devices to one DMX line. For more devices or longer runs, use a DMX splitter or booster.

DMX line



Mode SOCC Mode: every unit occupies 18 channels from its address. At most 32 units on one line; for more units or longer runs use a DMX splitter. A 120 Ω terminator closes the last DMX OUT.

7 Operation

Setting the DMX address

- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “SOCC Mode”: 18.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied channel does not exceed 512. Devices with the same start address and mode respond identically.
- For several devices in a row in the DMX mode “SOCC Mode”, you can use, for example, the start addresses 1, 19, 37, 55.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.
- The device supports RDM (Remote Device Management), two-way communication with the controller over the DMX line.

8 Functions at a glance

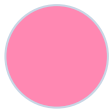
Functions in each DMX mode

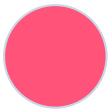
	SSCC Mode 14 channels	SOCC Mode 18 channels	SQCC Mode 4 channels
Dimmer	1, 6	1, 6	1
Shutter / strobe	3	3	3
Color mixing	7, 9, 11	6× (7–17)	
Color temperature	13		
Color wheel	4	4	4

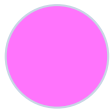
Color wheel

1
Moroccan Pink - Color
DMX 11–14

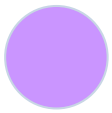
2 
Pink - Color
DMX 15–18

3 
Flesh Pink - Color
DMX 19–22

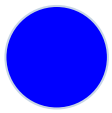
4 
Bright Rose - Color
DMX 23–26

5 
Follies Pink - Color
DMX 27–30

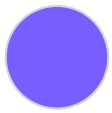
6 
Fuchsia Pink - Color
DMX 31–34

7 
Surprise Pink - Color
DMX 35–38

8 
Congo Blue - Color
DMX 39–42

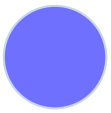
9 
Blue - Color
DMX 43–46

10 
Virgin Blue - Color
DMX 47–50

11 
Midnight Maya - Color
DMX 51–54

12 
Double C T Blue - Color
DMX 55–58

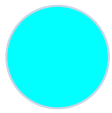
13 
Slate Blue - Color
DMX 59–62

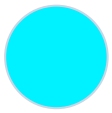
14 
Regal Blue - Color
DMX 63–66

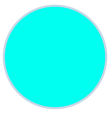
15 
Full C T Blue - Color
DMX 67–70

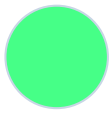
16 
Steel Blue - Color
DMX 71–74

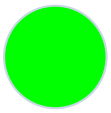
17 
Lighter Blue - Color
DMX 75–78

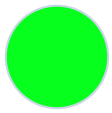
18 
Cyan - Color
DMX 79–82

19 
Marine Blue - Color
DMX 83–86

20 
Soft Green - Color
DMX 87–90

21 
Moss Green - Color
DMX 91–94

22 
Green - Color
DMX 95–98

23 
Fem Green - Color
DMX 99–102

24
JAS Green - Color
DMX 103–106

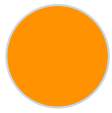
25
Pale Green - Color
DMX 107–110

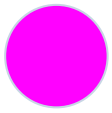
26
Spring Yellow - Color
DMX 111–114

27
Yellow - Color
DMX 115–118

28 
Deep Amber - Color
DMX 119–122

29 
Chrome Orange - Color
DMX 123–126

30 
Orange - Color
DMX 127–130

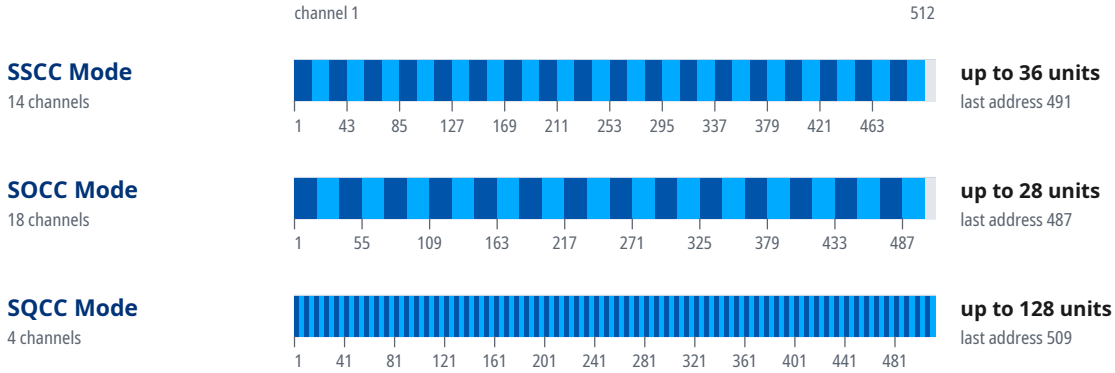
31 
Magenta - Color
DMX 131–134

32 
Flame Red - Color
DMX 135–138

33 
Purple
DMX 139–143

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “SOCC Mode”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	91	11	181	16	271
2	19	7	109	12	199	17	289
3	37	8	127	13	217	18	307
4	55	9	145	14	235	19	325
5	73	10	163	15	253	20	343

RDM personalities

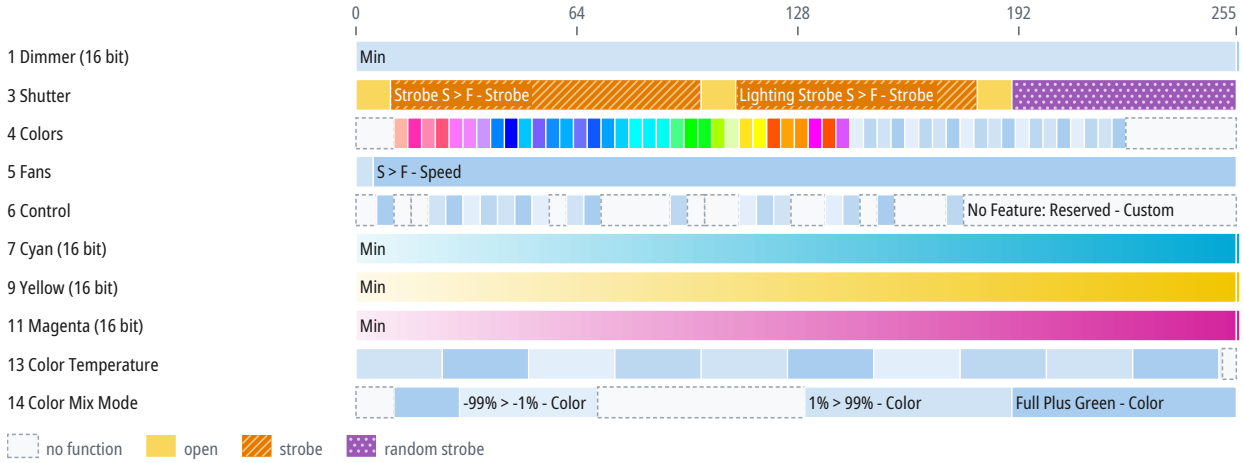
Mode	Channels	RDM personality
SSCC Mode	14	1
SOCC Mode	18	2
SQCC Mode	4	3

Mode SSCC Mode

16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 3 Shutter at 0–9, 100–109 or 180–189. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer	0–255	Min
		255	Max
2	Dimmer Fine	0–255	Fine adjustment of CH 1
3	Shutter	0–9	Open - Shutter Open
		10–99	Strobe S > F - Strobe
		100–109	Open - Shutter Open
		110–179	Lighting Strobe S > F - Strobe
		180–189	Open - Shutter Open
		190–255	Strobe Random S > F - Strobe Random
4	Colors	0–10	Color Off - Custom
		11–14	Moroccan Pink - Color
		15–18	Pink - Color
		19–22	Flesh Pink - Color
		23–26	Bright Rose - Color
		27–30	Follies Pink - Color
		31–34	Fuchsia Pink - Color
		35–38	Surprise Pink - Color
		39–42	Congo Blue - Color
		43–46	Blue - Color
		47–50	Virgin Blue - Color
		51–54	Midnight Maya - Color
		55–58	Double C T Blue - Color
		59–62	Slate Blue - Color

CH	Function	DMX	Description
4	Colors (continued)	63–66	Regal Blue - Color
		67–70	Full C T Blue - Color
		71–74	Steel Blue - Color
		75–78	Lighter Blue - Color
		79–82	Cyan - Color
		83–86	Marine Blue - Color
		87–90	Soft Green - Color
		91–94	Moss Green - Color
		95–98	Green - Color
		99–102	Fem Green - Color
		103–106	JAS Green - Color
		107–110	Pale Green - Color
		111–114	Spring Yellow - Color
		115–118	Yellow - Color
		119–122	Deep Amber - Color
		123–126	Chrome Orange - Color
		127–130	Orange - Color
		131–134	Magenta - Color
		135–138	Flame Red - Color
		139–142	Purple - Color
		143–146	User Preset 1 - Macro
		147–150	User Preset 2 - Macro
		151–154	User Preset 3 - Macro
		155–158	User Preset 4 - Macro
		159–162	User Preset 5 - Macro
		163–166	User Preset 6 - Macro
		167–170	User Preset 7 - Macro
		171–174	User Preset 8 - Macro
		175–178	User Preset 9 - Macro
		179–182	User Preset 10 - Macro
		183–186	User Preset 11 - Macro
		187–190	User Preset 12 - Macro
		191–194	User Preset 13 - Macro
		195–198	User Preset 14 - Macro
		199–202	User Preset 15 - Macro
		203–206	User Preset 16 - Macro
		207–210	User Preset 17 - Macro
		211–218	User Preset 18 - Macro
		219–222	User Preset 20 - Macro
		223–255	Channel Off - Custom
5	Fans	0–4	Fan - Custom
		5–255	S > F - Speed

CH	Function	DMX	Description
6	Control	0–5	Idle - Custom
		6–10	Full Luminaire Recal - Reset
		11–15	Fixture Shutdown - Custom
		16–20	No Feature: Reserved - Custom
		21–25	Display-Menu On - Custom
		26–30	Display-Menu Off - Custom
		31–35	Tungsten Dimming On - Custom
		36–40	Tungsten Dimming Off - Custom
		41–45	Dimming Curve Linear - Dimmer
		46–50	Dimming Curve S-Curve - Dimmer
		51–55	Dimming Curve Square Law - Dimmer
		56–60	No Feature: Reserved - Custom
		61–65	Dimmer Snap On - Speed
		66–70	Dimmer Snap Off - Speed
		71–90	No Feature: Reserved - Custom
		91–95	Color Calibration On - Reset
		96–100	Color Callbration Off - Custom
		101–110	No Func - Custom
		111–115	Standard Mode - Custom
		116–120	Studio Mode - Custom
		121–125	Whisper Mode - Custom
		126–135	No Feature: Reserved - Custom
		136–140	Fan On - Custom
		141–145	Fan Auto - Custom
		146–150	No Feature: Reserved - Custom
		151–155	Record Color Preset - Custom
		156–170	No Feature: Reserved - Custom
		171–175	Reset Fixture To Default - Reset
		176–255	No Feature: Reserved - Custom
7	Cyan	0–255	Min
		255	Max
8	Cyan Fine	0–255	Fine adjustment of CH 7
9	Yellow	0–255	Min
		255	Max
10	Yellow Fine	0–255	Fine adjustment of CH 9
11	Magenta	0–255	Min
		255	Max
12	Magenta Fine	0–255	Fine adjustment of CH 11
13	Color Temperature	0–24	1800K - CTC
		25–49	2700K - CTC
		50–74	3000K - CTC
		75–99	3200K - CTC

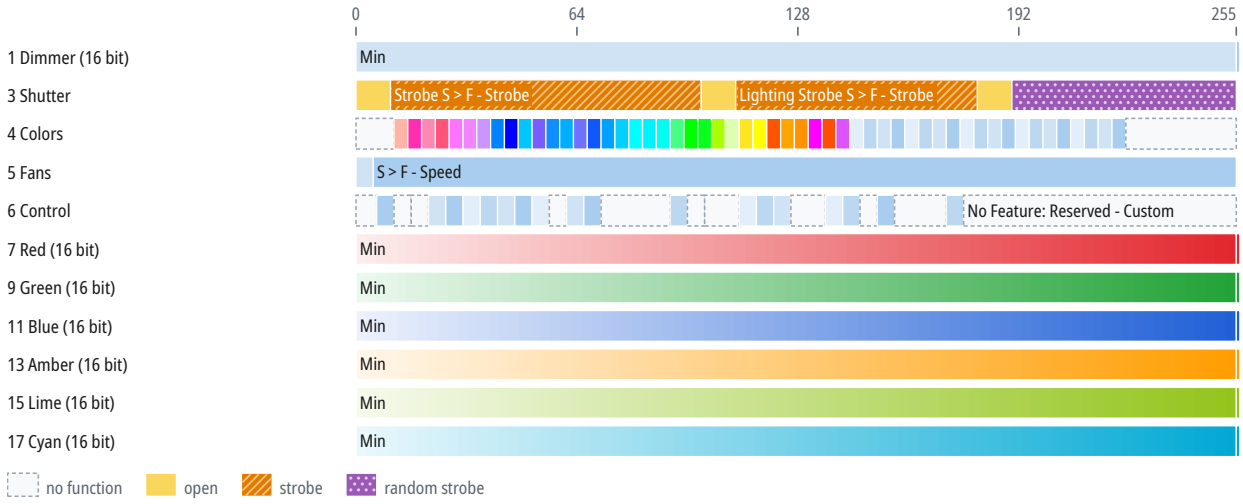
CH	Function	DMX	Description
13	Color Temperature (continued)	100–124	4000K - CTC
		125–149	4500K - CTC
		150–174	5000K - CTC
		175–199	5600K - CTC
		200–224	6500K - CTC
		225–249	8000K - CTC
		250	10000K - CTC
		251–255	Reserved - Custom
14	Color Mix Mode	0–10	No Feature: No Func - Custom
		11–29	Full Minus Green - Color
		30–69	-99% > -1% - Color
		70–129	No Feature: No Func - Custom
		130–189	1% > 99% - Color
		190–255	Full Plus Green - Color

Mode SOCC Mode

16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 3 Shutter at 0–9, 100–109 or 180–189. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 7 Red 255, CH 9 Green 255, CH 11 Blue 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer		Same as CH 1 in the mode “SSCC Mode” (p. 9)
2	Dimmer Fine	0–255	Fine adjustment of CH 1
3	Shutter		Same as CH 3 in the mode “SSCC Mode” (p. 9)
4	Colors		Same as CH 4 in the mode “SSCC Mode” (p. 9)
5	Fans		Same as CH 5 in the mode “SSCC Mode” (p. 10)
6	Control		Same as CH 6 in the mode “SSCC Mode” (p. 11)
7	Red	0–255	Min

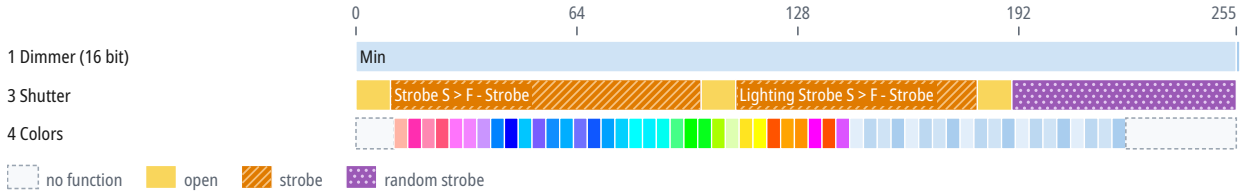
CH	Function	DMX	Description
7	Red (continued)	255	Max
8	Red Fine	0–255	Fine adjustment of CH 7
9	Green	0–255	Min
		255	Max
10	Green Fine	0–255	Fine adjustment of CH 9
11	Blue	0–255	Min
		255	Max
12	Blue Fine	0–255	Fine adjustment of CH 11
13	Amber	0–255	Min
		255	Max
14	Amber Fine	0–255	Fine adjustment of CH 13
15	Lime	0–255	Min
		255	Max
16	Lime Fine	0–255	Fine adjustment of CH 15
17	Cyan	0–255	Min
		255	Max
18	Cyan Fine	0–255	Fine adjustment of CH 17

Mode SQCC Mode

16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 3 Shutter at 0–9, 100–109 or 180–189. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255.

Channel functions at a glance

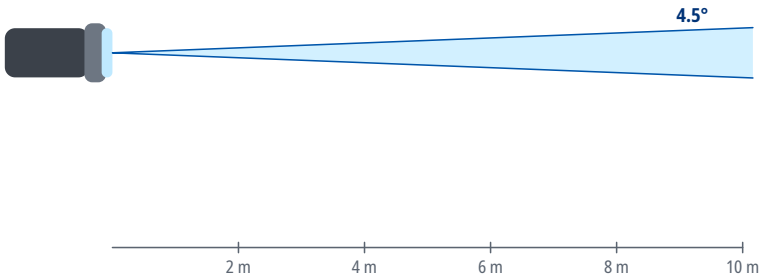


CH	Function	DMX	Description
1	Dimmer		Same as CH 1 in the mode “SSCC Mode” (p. 9)
2	Dimmer Fine	0–255	Fine adjustment of CH 1
3	Shutter		Same as CH 3 in the mode “SSCC Mode” (p. 9)
4	Colors		Same as CH 4 in the mode “SSCC Mode” (p. 9)

10 Technical specifications

Parameter	Value
Light	
Light source	LED
LED power	300 W
Luminous flux	8,000 lm
Color temperature	6,350 K
Color rendering index (CRI)	92
Optics	
Beam angle	4.5°
Control	
RDM	yes (manufacturer ID 0x736C, device model ID 0x0118)
Dimensions and construction	
Weight	9.3 kg
Operating environment	
Operating temperature	0 to 40 °C

Spot diameter



Distance	Ø 4.5°
2 m	0.16 m
4 m	0.31 m
6 m	0.47 m
8 m	0.63 m
10 m	0.79 m
15 m	1.2 m

Spot diameter square to the beam axis, calculated from the beam angle.

11 Maintenance and cleaning

- Before cleaning and maintenance, switch the device off, disconnect it from the power supply and let it cool down.
- Clean the housing with a soft, dry or slightly damp cloth. Do not use solvents, abrasive cleaners or pressure washers, and make sure no liquid gets into the device.
- Clean optical parts (lenses, front glass), if the device has any, with a soft lint-free cloth and a cleaner intended for optics or glass.
- Regularly inspect the housing, cables, connectors and fixings. Have damaged parts replaced by a service center.
- How often to clean depends on the environment; dust, smoke and fog make the device dirty much faster.

12 Troubleshooting

Problem	Remedy
The device does not switch on	Check the supply voltage, the cables and the fuse, if the device has one.
The device does not respond to DMX	Check the start address, the selected DMX mode and whether it matches the profile in the controller, the cable connection to DMX IN, and the controller output (universe).
The device behaves erratically or flickers	Check the terminator at the end of the line, the condition and wiring of the cables (shield on pin 1 only), the number of devices on the line (32 at most), and that the line is not split without a splitter.
Only some devices on the line respond	Check the cable and connectors between the last working and the first non-working device, and make sure all devices on the line are switched on.
Devices respond to the wrong channels or affect each other	Check that the addresses do not overlap and that the DMX mode on the devices matches the patch in the controller.
The device or the connected load does not light up although it receives DMX	Check the values of the dimmer, shutter and strobe channels against the DMX channel table. For the DMX modes for which the sources state it, the chapter DMX channels gives under the mode's heading which channels must be open.

13 Disposal

The crossed-out wheeled bin symbol on the product, in the manual or on the packaging means that the product must not be disposed of with unsorted household waste at the end of its life.

Take the end-of-life equipment to a collection point, for example a municipal collection site or a retailer. Proper disposal enables materials to be recycled and helps prevent possible negative effects on the environment and human health.

Follow the regulations applicable in your country; in the Czech Republic, take-back is governed by Act No. 542/2020 Coll., on End-of-Life Products.

Recycle the packaging materials according to their type.