DMX REFERENCE

BRICK 32

DTS Lighting



Manufacturer	DTS Lighting
GDTF file	DTS_Lighting_BRICK_32_149354.gdtf
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1 About this manual

This document describes the Brick 32 by DTS Lighting. It was compiled from the GDTF file DTS_Lighting_BRICK_32_149354.gdtf from the GDTF-Share library.

File revision: “REV2”.

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 DTS Lighting; 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	10 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
10ch Mode	10	51	1, 11, 21, 31, ...
RGBW	4	128	1, 5, 9, 13, ...
6ch Mode	6	85	1, 7, 13, 19, ...
"Fine" Mode	10	51	1, 11, 21, 31, ...

No light? Check these channels

- 10ch Mode: CH 5 Shutter at 10–19 or 230–255 “Open”
- 6ch Mode: CH 5 Shutter at 10–19 or 230–255 “Open”


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

“BRICK 32 is a high-performance LED wash light designed for outdoor installations. Equipped with 32 four-color LEDs and 4 independent sectors for dynamic effects, it offers flexibility, durability, and efficiency. It features interchangeable beam angles, an integrated power supply, and a built-in DMX

wireless transmitter. The robust housing and adjustable bracket ensure reliability and stability. Supporting DMX 512/RDM protocols, it is an ideal choice for professional and scenic applications.”

5 Installation

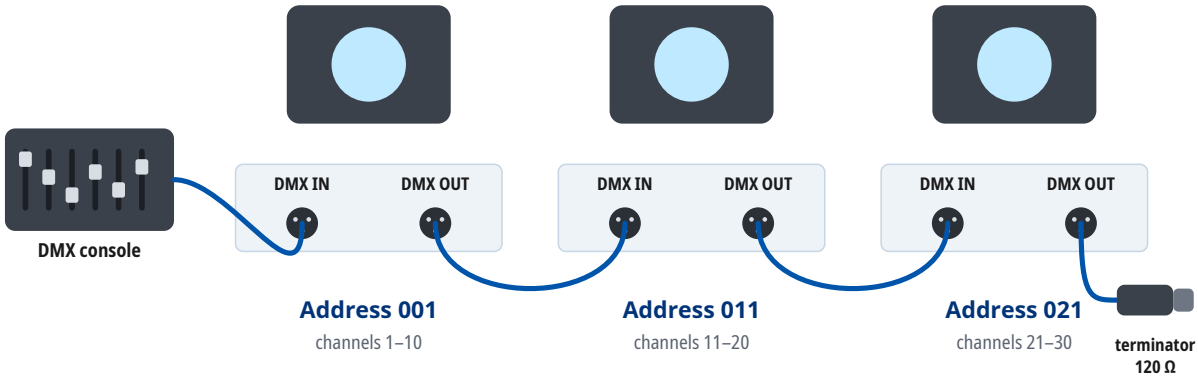
⚠ **WARNING**

- 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: 10 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 10ch Mode: every unit occupies 10 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 “10ch Mode”: 10.
- 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 “10ch Mode”, you can use, for example, the start addresses 1, 11, 21, 31.
- 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

	10ch Mode 10 channels	RGBW 4 channels	6ch Mode 6 channels	"Fine" Mode 10 channels
Dimmer	6		6	9
Dimmer resolution	16 bit		8 bit	16 bit
Shutter / strobe	5		5	
Color mixing	1–4	1–4	1–4	4× (1–7)
Color temperature	8			
Effects / macros	9			

Color wheel

1 No Function
DMX 0–14

2 L019 Fire
DMX 15–24

3 L020 Medium Amber
DMX 25–34

4 L025 Sunset Red
DMX 35–44

5 L101 Yellow
DMX 45–54

6 L104 Deep Amber
DMX 55–64

7 L106 Primary Red
DMX 65–74

8 L111 Dark Pink
DMX 75–84

9 L113 Magenta
DMX 85–94

10 L118 Light Blue
DMX 95–104

11 L122 Fern Green
DMX 105–114

12 L126 Mauve
DMX 115–124

13 L137 Special Lavender
DMX 125–134

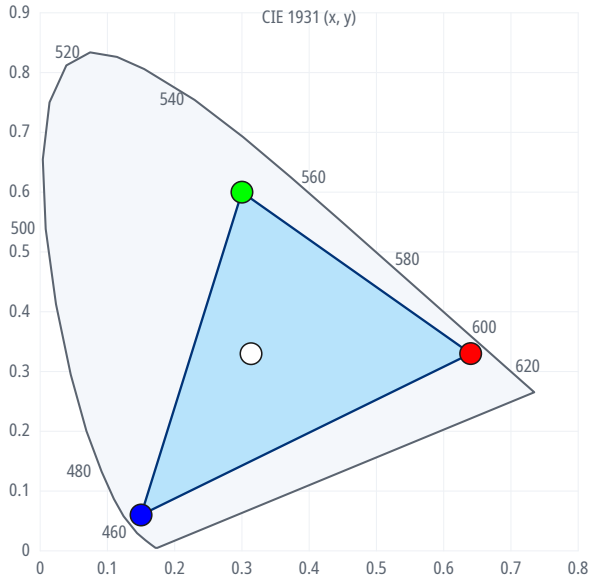
14 L139 Primary Green
DMX 135–144

15 L147 Apricot
DMX 145–154

16 L154 Pale Rose
DMX 155–164

17 L181 Congo Blue
DMX 165–175

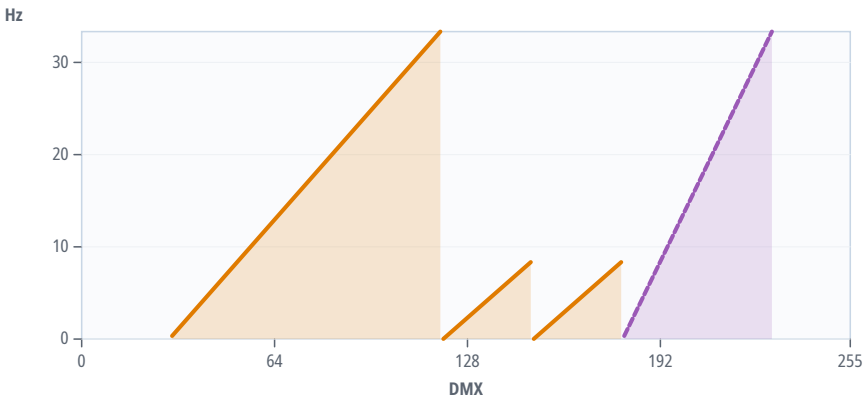
LED colors and the colors they mix



LED	x	y
Red	0.640	0.330
Green	0.300	0.600
Blue	0.150	0.060
White	0.314	0.330

The shaded area holds the colors the LEDs can mix; the dots are the LED colors the GDTF file states.

Strobe rate

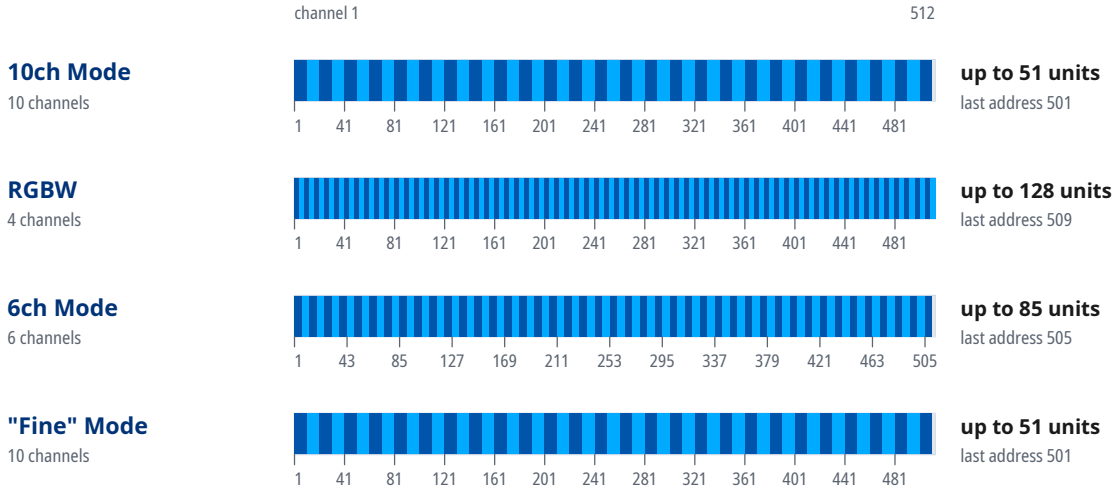


CH 5 · 10ch Mode

- 30–119: 0.34–33.3 Hz
  Strobe
- 120–149: 0.02–8.34 Hz
  Pulse Up
- 150–179: 0.02–8.34 Hz
  Pulse Down
- 180–229: 0.34–33.3 Hz
  Random Strobe

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “10ch Mode”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	51	11	101	16	151
2	11	7	61	12	111	17	161
3	21	8	71	13	121	18	171
4	31	9	81	14	131	19	181
5	41	10	91	15	141	20	191

RDM personalities

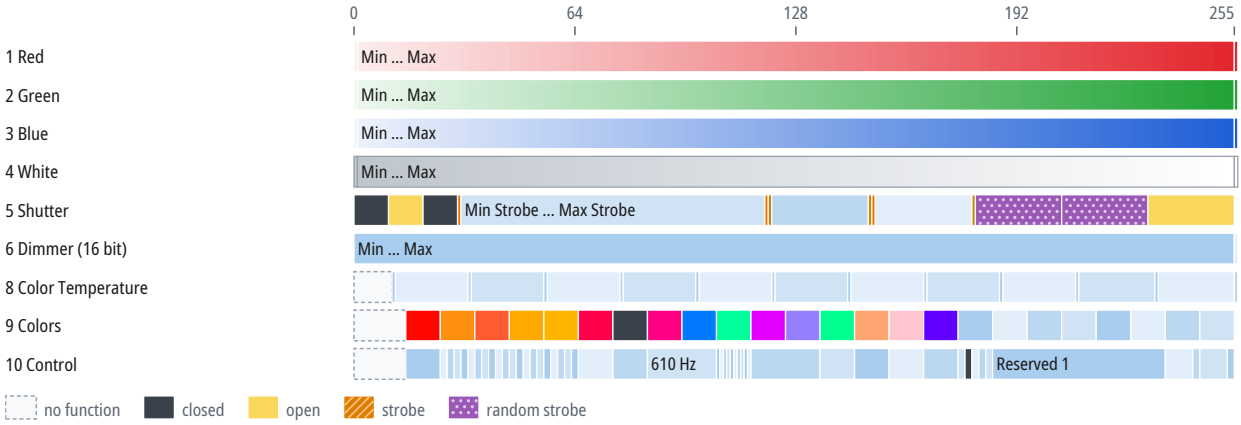
Mode	Channels	RDM personality
10ch Mode	10	1
RGBW	4	2
6ch Mode	6	3
"Fine" Mode	10	4

Mode 10ch 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 5 Shutter at 10–19 or 230–255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 5 Shutter 15, CH 6 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Red	0	Min
		1–254	Min ... Max
		255	Max
2	Green	0	Min
		1–254	Min ... Max
		255	Max
3	Blue	0	Min
		1–254	Min ... Max
		255	Max
4	White	0	Min
		1–254	Min ... Max
		255	Max
5	Shutter	0–9	Shutter: Closed
		10–19	Shutter: Open
		20–29	Shutter: Closed
		30	Min Strobe
		31–118	Min Strobe ... Max Strobe
		119	Max Strobe
		120	Min Pulse Up
		121–148	Min Pulse Up ... Max Pulse Up
		149	Max Pulse Up
		150	Min Pulse Down
		151–178	Min Pulse Down ... Max Pulse Down
		179	Max Pulse Down

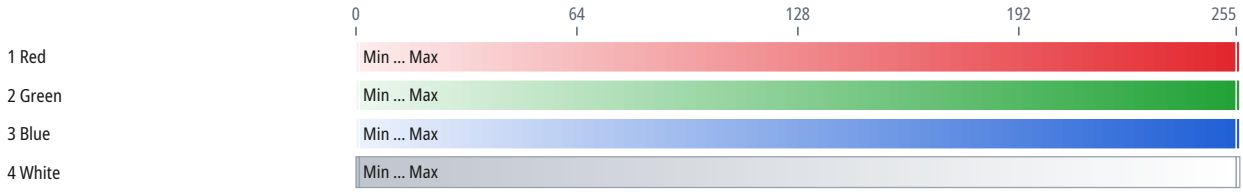
CH	Function	DMX	Description
5	Shutter (continued)	180–204	Random Strobe (0.34–33.3 Hz)
		205–229	Full Random Strobe (0.34–33.3 Hz)
		230–255	Shutter: Open
6	Dimmer	0–255	Min … Max
		255	Max
7	Dimmer Fine	0–255	Fine adjustment of CH 6
8	Color Temperature	0–10	No Function
		11	2700 K
		12–32	2700 K … 3000 K
		33	3000 K
		34–54	3000 K … 3200 K
		55	3200 K
		56–76	3200 K … 3500 K
		77	3500 K
		78–98	3500 K … 4000 K
		99	4000 K
		100–120	4000 K … 4500 K
		121	4500 K
		122–142	4500 K … 5000 K
		143	5000 K
		144–164	5000 K … 5600 K
		165	5600 K
		166–186	5600 K … 6000 K
		187	6000 K
		188–208	6000 K … 6500 K
		209	6500 K
		210–231	6500 K … 7000 K
		232	7000 K
		233–254	7000 K … 8000 K
		255	8000 K
9	Colors	0–14	No Function
		15–24	L019 Fire
		25–34	L020 Medium Amber
		35–44	L025 Sunset Red
		45–54	L101 Yellow
		55–64	L104 Deep Amber
		65–74	L106 Primary Red
		75–84	L111 Dark Pink
		85–94	L113 Magenta
		95–104	L118 Light Blue
		105–114	L122 Fern Green
		115–124	L126 Mauve

CH	Function	DMX	Description
9	Colors (continued)	125–134	L137 Special Lavender
		135–144	L139 Primary Green
		145–154	L147 Apricot
		155–164	L154 Pale Rose
		165–174	L181 Congo Blue
		175–184	Rainbow speed 1
		185–194	Rainbow speed 2
		195–204	Rainbow speed 3
		205–214	Rainbow speed 4
		215–224	Rainbow speed 5
		225–234	Rainbow speed 6
		235–244	Rainbow speed 7
		245–255	Rainbow speed 8
10	Control	0–14	No Function
		15–24	Smooth OFF
		25–26	Smooth 1
		27–28	Smooth 2
		29–30	Smooth 3
		31–32	Smooth 4
		33–34	Smooth 5
		35–36	Smooth 6
		37–38	Smooth 7
		39–40	Smooth 8
		41–42	Smooth 9
		43–44	Smooth 10
		45–46	Smooth 11
		47–48	Smooth 12
		49–50	Smooth 13
		51–52	Smooth 14
		53–54	Smooth 15
		55–56	Smooth 16
		57–58	Smooth 17
		59–60	Smooth 18
		61–62	Smooth 19
		63–64	Smooth 20
		65–74	Gamma 2_0
		75–84	Gamma Linear
		85–104	610 Hz
		105	800 Hz
		106	1000 Hz
		107	1500 Hz
		108	2000 Hz

CH	Function	DMX	Description
10	Control (continued)	109	2500 Hz
		110	3000 Hz
		111	3500 Hz
		112	4000 Hz
		113	4500 Hz
		114	5000 Hz
		115–134	Reserved
		135–144	Boost ON
		145–154	Boost OFF
		155–164	Display Standby OFF
		165–174	Display Stanby ON
		175–176	NoDMX - Keep Last
		177–178	NoDMX - BlackOut
		179–180	NoDMX - Full RGB
		181–182	NoDMX - DemoProgram
		183–184	NoDMX - SingleCUE
		185–234	Reserved 1
		235–242	Standard Mode
		243–244	Auto Mode
		245–252	Silent Mode
		253–255	Set Functions Default

Mode RGBW

Channel functions at a glance

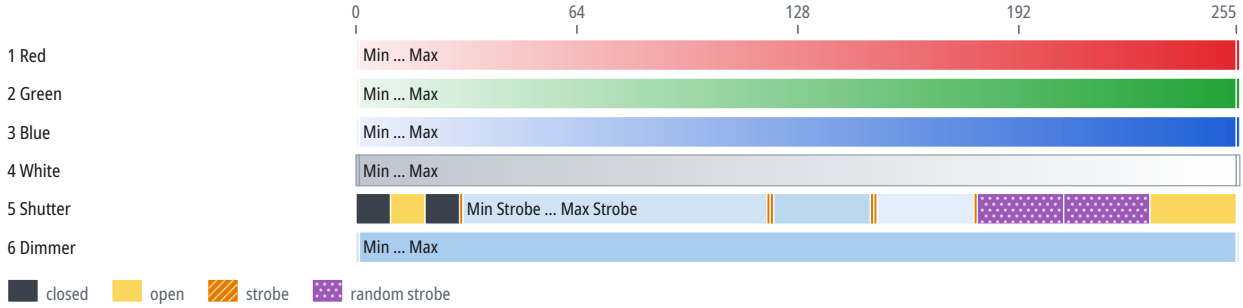


CH	Function	DMX	Description
1	Red		Same as CH 1 in the mode “10ch Mode” (p. 9)
2	Green		Same as CH 2 in the mode “10ch Mode” (p. 9)
3	Blue		Same as CH 3 in the mode “10ch Mode” (p. 9)
4	White		Same as CH 4 in the mode “10ch Mode” (p. 9)

Mode 6ch Mode

If the device receives DMX in this mode but gives no light, check these channels: CH 5 Shutter at 10–19 or 230–255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 5 Shutter 15, CH 6 Dimmer 255.

Channel functions at a glance



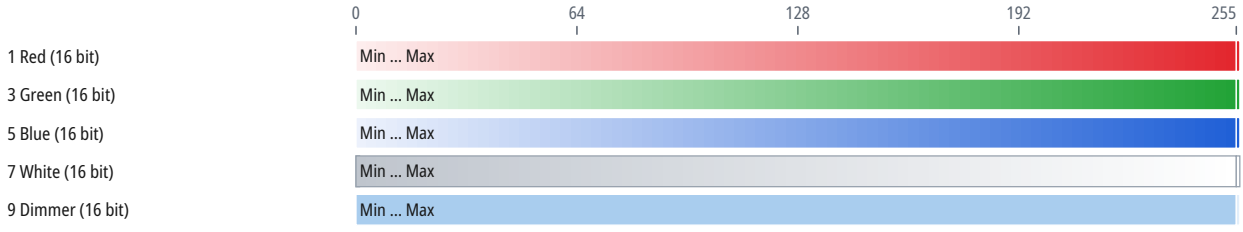
CH	Function	DMX	Description
1	Red		Same as CH 1 in the mode “10ch Mode” (p. 9)
2	Green		Same as CH 2 in the mode “10ch Mode” (p. 9)
3	Blue		Same as CH 3 in the mode “10ch Mode” (p. 9)
4	White		Same as CH 4 in the mode “10ch Mode” (p. 9)
5	Shutter		Same as CH 5 in the mode “10ch Mode” (p. 9)
6	Dimmer	0	Min
		1–254	Min ... Max
		255	Max

Mode "Fine" Mode

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

The GDTF file gives these values for a console's Highlight function: CH 9 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Red	0–255	Min ... Max
		255	Max
2	Red Fine	0–255	Fine adjustment of CH 1
3	Green	0–255	Min ... Max
		255	Max
4	Green Fine	0–255	Fine adjustment of CH 3
5	Blue	0–255	Min ... Max

CH	Function	DMX	Description
5	Blue (continued)	255	Max
6	Blue Fine	0–255	Fine adjustment of CH 5
7	White	0–255	Min ... Max
		255	Max
8	White Fine	0–255	Fine adjustment of CH 7
9	Dimmer		Same as CH 6 in the mode “10ch Mode” (p. 10)
10	Dimmer Fine	0–255	Fine adjustment of CH 9

10 Technical specifications

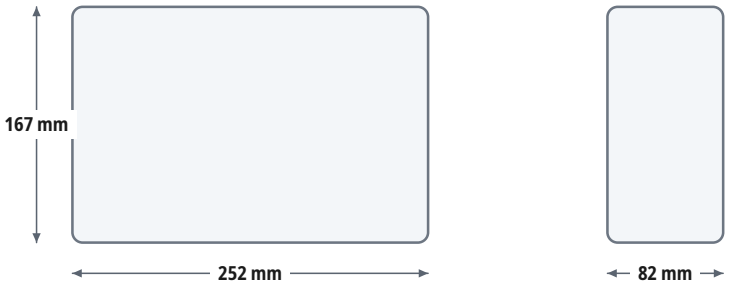
Parameter	Value
Light	
Light source	LED
LED power	360 W
Luminous flux	11,500 lm
Color temperature	6,000 K
Color rendering index (CRI)	70
Optics	
Beam angle	8°
Control	
DMX connection	5-pin XLR IN/OUT
RDM	yes (manufacturer ID 0x0710, device model ID 0x0D40)
Electrical	
Power connectors	powerCON TRUE1 IN
Dimensions and construction	
Weight	10 kg
Operating environment	
Operating temperature	-20 to 45 °C

Speeds and ranges

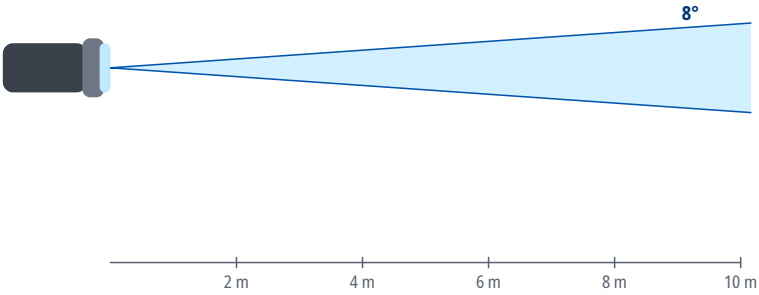
Parameter	Value
Color temperature range	2700–8000 K
Strobe frequency	0.34–33.3 Hz
LED frequency	610–5000 Hz

Dimensions

weight 10 kg



Spot diameter



Distance	Ø 8°
2 m	0.28 m
4 m	0.56 m
6 m	0.84 m
8 m	1.1 m
10 m	1.4 m
15 m	2.1 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.