DMX REFERENCE

XCORE Beam

Bright

Manufacturer	Bright
GDTF file	Bright_XCORE_Beam_106129.gdtf
GDTF revision	Initial upload, Uploaded to GDTF Share. · 2025-07-31
Generated	2026-11-23

Contents

1 About this manual 2
2 Quick reference 3
3 Safety instructions 4
4 Installation 5
5 Connections 5
6 Operation 6
7 Functions at a glance 6
8 DMX channels 7
Mode 10 channel 8
Mode 2 channel 10
Mode 22 channel 12
Mode 3 channel 14
Mode 64 channel 14
9 Technical specifications 16
10 Maintenance and cleaning 16
11 Troubleshooting 17
12 Disposal 17

1 About this manual

This document describes the XCORE Beam by Bright. It was compiled from the GDTF file Bright_XCORE_Beam_106129.gdtf from the GDTF-Share library.

File revision: “Initial upload, Uploaded to GDTF Share.”.

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 Bright; 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

DMX modes

Mode	Channels	Units in one universe	First start addresses
10 channel	10	51	1, 11, 21, 31, ...
2 channel	2	256	1, 3, 5, 7, ...
22 channel	22	23	1, 23, 45, 67, ...
3 channel	3	170	1, 4, 7, 10, ...
64 channel	64	8	1, 65, 129, 193, ...

No light? Check these channels

- 10 channel: CH 5 Dimmer above 0; CH 7 Shutter at 8–15 “open” or 120–127 or 184–190 or 248–255
- 2 channel: CH 1 Dimmer above 0
- 22 channel: CH 5 Dimmer 1 above 0; CH 7 Shutter 1 at 8–15 “open” or 120–127 or 184–190 or 248–255; CH 13 Dimmer 2 above 0; CH 15 Shutter 2 at 8–15 “open” or 120–127 or 184–190 or 248–255; CH 16 Dimmer 3 above 0; CH 17 Dimmer 4 above 0; CH 18 Dimmer 5 above 0; CH 19 Dimmer 6 above 0; CH 20 Dimmer 7 above 0; CH 21 Dimmer 8 above 0; CH 22 Dimmer 9 above 0
- 64 channel: CH 5 Dimmer above 0 (the same in each of the 8 cells); CH 7 Shutter at 8–15 “open” or 120–127 or 184–190 or 248–255 (the same in each of the 8 cells)



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 Installation

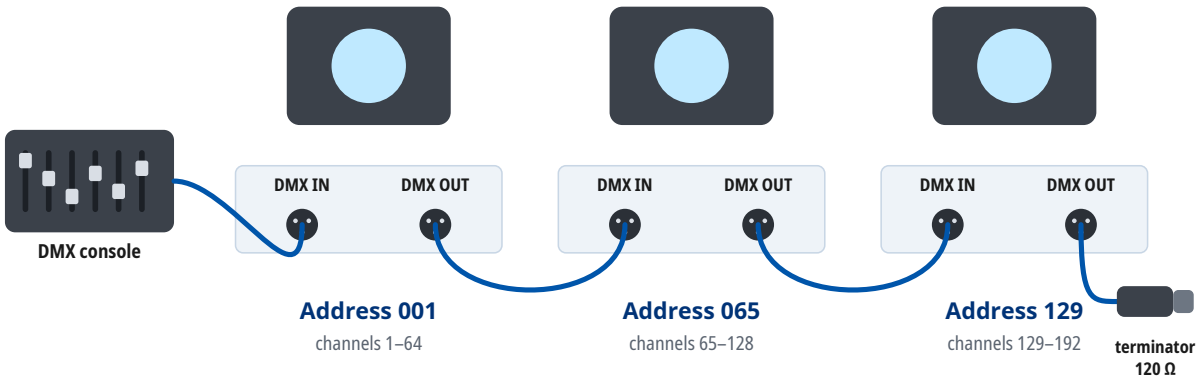
⚠ WARNING

- 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.
- 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.

5 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 64 channel: every unit occupies 64 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.

6 Operation

Setting the DMX address

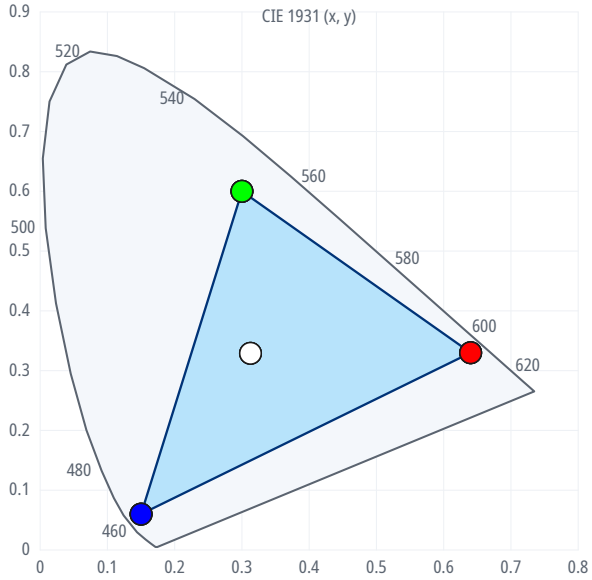
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “64 channel”: 64.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied 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 “64 channel”, you can use, for example, the start addresses 1, 65, 129, 193.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.

7 Functions at a glance

Functions in each DMX mode

	10 channel 10 channels	2 channel 2 channels	22 channel 22 channels	3 channel 3 channels	64 channel 64 channels
Dimmer	5	1	5, 13, 16–22	✓	8× (5–61)
Dimmer resolution	16 bit	8 bit	16 bit		16 bit
Shutter / strobe	7		7, 15		8× (7–63)
Color mixing	1–4		1–4, 9–12	1–3	32 channels (1–60)
Effects / macros	9	2			

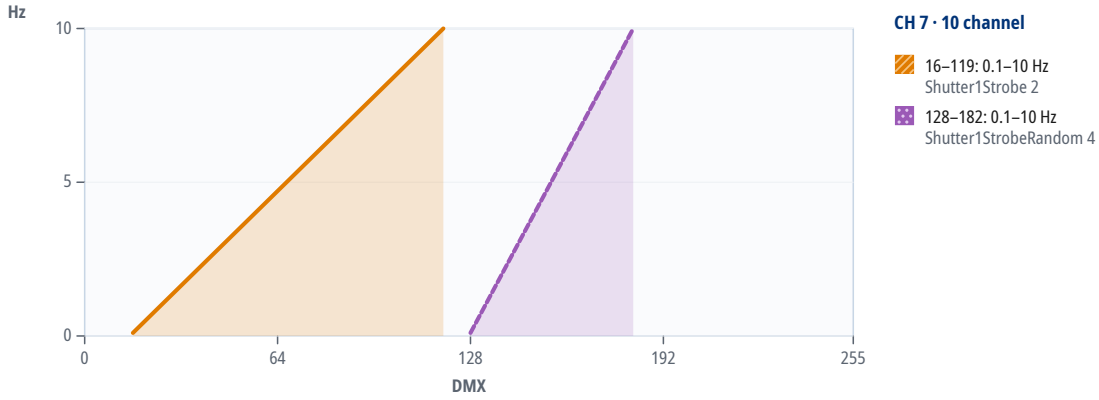
LED colors and the colors they mix



LED	x	y
R__10 channel	0.640	0.330
G__10 channel	0.300	0.600
B__10 channel	0.150	0.060
White__10 channel	0.313	0.329
R__22 channel	0.640	0.330
G__22 channel	0.300	0.600
B__22 channel	0.150	0.060
White__22 channel	0.313	0.329
R__3 channel	0.640	0.330
G__3 channel	0.300	0.600
B__3 channel	0.150	0.060
R__64 channel	0.640	0.330

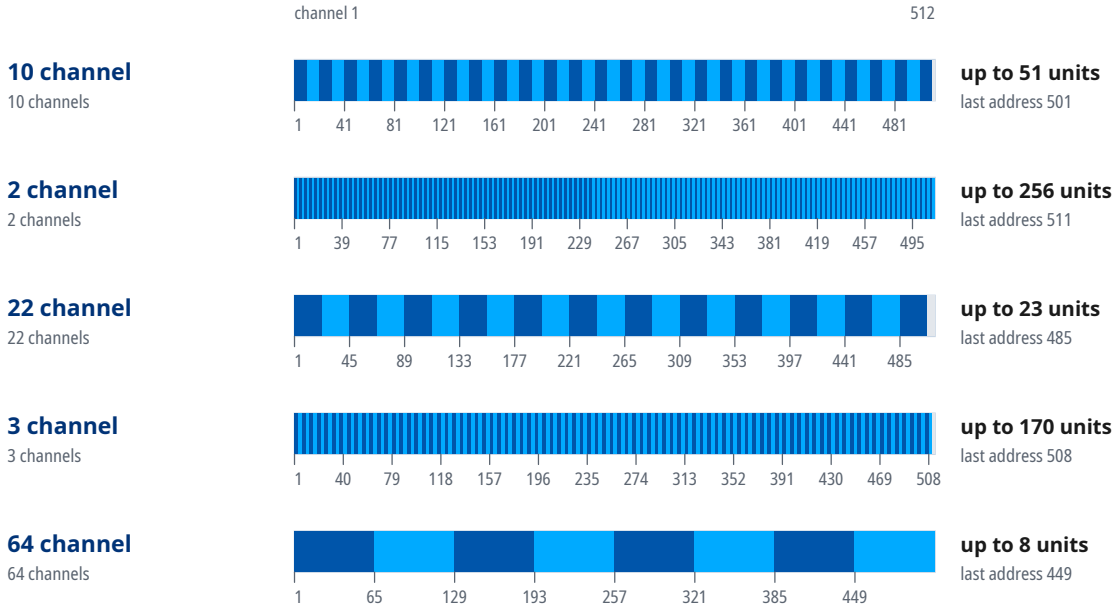
The shaded area holds the colors the LEDs can mix; the dots are the LED colors the GDTF file states.

Strobe rate



8 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “64 channel”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	321	11	U2 · 129	16	U2 · 449
2	65	7	385	12	U2 · 193	17	U3 · 1
3	129	8	449	13	U2 · 257	18	U3 · 65
4	193	9	U2 · 1	14	U2 · 321	19	U3 · 129
5	257	10	U2 · 65	15	U2 · 385	20	U3 · 193

Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode 10 channel

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 Dimmer above 0; CH 7 Shutter at 8–15 “open” or 120–127 or 184–190 or 248–255. The GDTF file gives these values for a console's Highlight function: CH 1 Red 255, CH 2 Green 255, CH 3 Blue 255, CH 4 White 0, CH 5 Dimmer 255, CH 7 Shutter 12.

CH	Function	DMX	Description
1	Red		Color RGB_R 1
		0	Min
		1–254	Min … max
		255	Max
2	Green		Color RGB_G 1
		0	Min
		1–254	Min … max
		255	Max
3	Blue		Color RGB_B 1
		0	Min
		1–254	Min … max
		255	Max
4	White		Color RGB_W 1
		0	Min
		1–254	Min … max
		255	Max
5	Dimmer	0–255	Closed … open
		255	Open
6	Dimmer Fine	0–255	Fine adjustment of CH 5
7	Shutter	0–7	Shutter 1: closed
		8–15	Shutter 1: open
		16	Min Strobe
		17–118	Min Strobe … max Strobe
		119	Max Strobe
		120–127	Shutter 1: open (2)
		128	Min Rnd
		129–182	Min Rnd … max Rnd
		183	Max Rnd
		184–190	Shutter 1: open (3)
		191	SHUTTERAUDIO 6
		192	Min Audio
		193–246	Min Audio … max Audio
		247	Max Audio
		248–255	Shutter 1: open (4)
8	Dimmer Curve	0–31	Instant

CH	Function	DMX	Description
8	Dimmer Curve (continued)	32–63	Short rise time
		64–95	Medium rise time
		96–127	Long rise time
		128–158	Extra long rise time
		159–255	No function
9	COLORMIXER	0	Straw
		1	Min Position
		2–18	Min Position … max Position
		19	Max Position
		20	Warm white
		21	Min Position (2)
		22–38	Min Position (2) … max Position (2)
		39	Max Position (2)
		40	White
		41	Min Position (3)
		42–58	Min Position (3) … max Position (3)
		59	Max Position (3)
		60	Cool white
		61	Min Position (4)
		62–78	Min Position (4) … max Position (4)
		79	Max Position (4)
		80	Blue
		81	Min Position (5)
		82–98	Min Position (5) … max Position (5)
		99	Max Position (5)
		100	Magenta
		101	Min Position (6)
		102–118	Min Position (6) … max Position (6)
		119	Max Position (6)
		120	Red
		121	Min Position (7)
		122–138	Min Position (7) … max Position (7)
		139	Max Position (7)
		140	Orange
		141	Min Position (8)
		142–158	Min Position (8) … max Position (8)
		159	Max Position (8)
		160	Yellow
		161	Min Position (9)
		162–178	Min Position (9) … max Position (9)
		179	Max Position (9)
		180	Green

CH	Function	DMX	Description
9	COLORMIXER (continued)	181	Min Position (10)
		182–198	Min Position (10) ... max Position (10)
		199	Max Position (10)
		200	Teal
		201	Min Position (11)
		202–218	Min Position (11) ... max Position (11)
		219	Max Position (11)
		220	Cyan
		221	Min Position (12)
		222–238	Min Position (12) ... max Position (12)
		239	Max Position (12)
		240	Blue (2)
		241	Min Position (13)
		242–253	Min Position (13) ... max Position (13)
		254	Max Position (13)
		255	Blackout
10	MODE	0–7	Entry 0
		8–15	Aura
		16–23	Ring
		24–31	MODE: Centre
		32–39	Centre+aura
		40–47	Ring+aura
		48–55	Centre+ring
		56–63	Centre+ring+aura
		64	Min Cycle
		65–158	COLORCYCLE 2
		159	MODE 3
		160	Entry 0 (2)
		161–254	COLORCYCLE 4
		255	Max Cycle

Mode 2 channel

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255.

CH	Function	DMX	Description
1	Dimmer	0	Closed
		1–254	Closed ... open
		255	Open
2	COLORMIXER	0	Straw
		1	Min Position
		2–18	Min Position ... max Position
		19	Max Position

CH	Function	DMX	Description
2	COLORMIXER (continued)	20	Warm white
		21	Min Position (2)
		22–38	Min Position (2) ... max Position (2)
		39	Max Position (2)
		40	White
		41	Min Position (3)
		42–58	Min Position (3) ... max Position (3)
		59	Max Position (3)
		60	Cool white
		61	Min Position (4)
		62–78	Min Position (4) ... max Position (4)
		79	Max Position (4)
		80	Blue
		81	Min Position (5)
		82–98	Min Position (5) ... max Position (5)
		99	Max Position (5)
		100	Magenta
		101	Min Position (6)
		102–118	Min Position (6) ... max Position (6)
		119	Max Position (6)
		120	Red
		121	Min Position (7)
		122–138	Min Position (7) ... max Position (7)
		139	Max Position (7)
		140	Orange
		141	Min Position (8)
		142–158	Min Position (8) ... max Position (8)
		159	Max Position (8)
		160	Yellow
		161	Min Position (9)
		162–178	Min Position (9) ... max Position (9)
		179	Max Position (9)
		180	Green
		181	Min Position (10)
		182–198	Min Position (10) ... max Position (10)
		199	Max Position (10)
		200	Teal
		201	Min Position (11)
		202–218	Min Position (11) ... max Position (11)
		219	Max Position (11)
		220	Cyan
		221	Min Position (12)

CH	Function	DMX	Description
2	COLORMIXER (continued)	222–253	Min Position (12) ... max Position (12)
		254	Max Position (12)
		255	Blue (2)

Mode 22 channel

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 Dimmer 1 above 0; CH 7 Shutter 1 at 8–15 “open” or 120–127 or 184–190 or 248–255; CH 13 Dimmer 2 above 0; CH 15 Shutter 2 at 8–15 “open” or 120–127 or 184–190 or 248–255; CH 16 Dimmer 3 above 0; CH 17 Dimmer 4 above 0; CH 18 Dimmer 5 above 0; CH 19 Dimmer 6 above 0; CH 20 Dimmer 7 above 0; CH 21 Dimmer 8 above 0; CH 22 Dimmer 9 above 0. The GDTF file gives these values for a console's Highlight function: CH 1 Red 1 255, CH 2 Green 1 255, CH 3 Blue 1 255, CH 4 White 1 0, CH 5 Dimmer 1 255, CH 7 Shutter 1 12, CH 9 Red 2 255, CH 10 Green 2 255, CH 11 Blue 2 255, CH 12 White 2 0, CH 13 Dimmer 2 255, CH 15 Shutter 2 12, CH 16 Dimmer 3 255, CH 17 Dimmer 4 255, CH 18 Dimmer 5 255, CH 19 Dimmer 6 255, CH 20 Dimmer 7 255, CH 21 Dimmer 8 255, CH 22 Dimmer 9 255.

CH	Function	DMX	Description
1	Red 1		Color RGB_R 1
		0	Min
		1–254	Min ... max
		255	Max
2	Green 1		Color RGB_G 1
		0	Min
		1–254	Min ... max
		255	Max
3	Blue 1		Color RGB_B 1
		0	Min
		1–254	Min ... max
		255	Max
4	White 1		Color RGB_W 1
		0	Min
		1–254	Min ... max
		255	Max
5	Dimmer 1	0–255	Closed ... open
		255	Open
6	Dimmer 1 Fine	0–255	Fine adjustment of CH 5
7	Shutter 1	0–7	Shutter 1: closed
		8–15	Shutter 1: open
		16	Min Strobe
		17–118	Min Strobe ... max Strobe
		119	Max Strobe
		120–127	Shutter 1: open (2)
		128	Min Rnd
		129–182	Min Rnd ... max Rnd

CH	Function	DMX	Description
7	Shutter 1 (continued)	183	Max Rnd
		184–190	Shutter 1: open (3)
		191	SHUTTERAUDIO 6
		192	Min Audio
		193–246	Min Audio ... max Audio
		247	Max Audio
		248–255	Shutter 1: open (4)
8	Dimmer Curve		Same as CH 8 in the mode “10 channel” (p. 8)
9	Red 2		Color RGB_R 1
		0	Min
		1–254	Min ... max
		255	Max
10	Green 2		Color RGB_G 1
		0	Min
		1–254	Min ... max
		255	Max
11	Blue 2		Color RGB_B 1
		0	Min
		1–254	Min ... max
		255	Max
12	White 2		Color RGB_W 1
		0	Min
		1–254	Min ... max
		255	Max
13	Dimmer 2	0–255	Closed ... open
		255	Open
14	Dimmer 2 Fine	0–255	Fine adjustment of CH 13
15	Shutter 2	0–7	Shutter 1: closed
		8–15	Shutter 1: open
		16	Min Strobe
		17–118	Min Strobe ... max Strobe
		119	Max Strobe
		120–127	Shutter 1: open (2)
		128	Min Rnd
		129–182	Min Rnd ... max Rnd
		183	Max Rnd
		184–190	Shutter 1: open (3)
		191	SHUTTERAUDIO 6
		192	Min Audio
		193–246	Min Audio ... max Audio
		247	Max Audio
		248–255	Shutter 1: open (4)

CH	Function	DMX	Description
16	Dimmer 3	0	Closed
		1–254	Closed … open
		255	Open
17	Dimmer 4	0	Closed
		1–254	Closed … open
		255	Open
18	Dimmer 5	0	Closed
		1–254	Closed … open
		255	Open
19	Dimmer 6	0	Closed
		1–254	Closed … open
		255	Open
20	Dimmer 7	0	Closed
		1–254	Closed … open
		255	Open
21	Dimmer 8	0	Closed
		1–254	Closed … open
		255	Open
22	Dimmer 9	0	Closed
		1–254	Closed … open
		255	Open

Mode 3 channel

The GDTF file gives these values for a console's Highlight function: CH 1 Red 255, CH 2 Green 255, CH 3 Blue 255.

CH	Function	DMX	Description
1	Red		Same as CH 1 in the mode “10 channel” (p. 8)
2	Green		Same as CH 2 in the mode “10 channel” (p. 8)
3	Blue		Same as CH 3 in the mode “10 channel” (p. 8)

Mode 64 channel

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 Dimmer above 0 (the same in each of the 8 cells); CH 7 Shutter at 8–15 “open” or 120–127 or 184–190 or 248–255 (the same in each of the 8 cells). The GDTF file gives these values for a console's Highlight function: CH 1 Red 255 (the same in each of the 8 cells), CH 2 Green 255 (the same in each of the 8 cells), CH 3 Blue 255 (the same in each of the 8 cells), CH 4 White 0 (the same in each of the 8 cells), CH 5 Dimmer 255 (the same in each of the 8 cells), CH 7 Shutter 12 (the same in each of the 8 cells).

CH	Function	DMX	Description
1	Red 1		Color RGB_R 1
		0	Min
		1–254	Min … max

CH	Function	DMX	Description
1	Red 1 (continued)	255	Max
2	Green 1		Color RGB_G 1
		0	Min
		1–254	Min … max
		255	Max
3	Blue 1		Color RGB_B 1
		0	Min
		1–254	Min … max
		255	Max
4	White 1		Color RGB_W 1
		0	Min
		1–254	Min … max
		255	Max
5	Dimmer 1	0–255	Closed … open
		255	Open
6	Dimmer 1 Fine	0–255	Fine adjustment of CH 5
7	Shutter 1	0–7	Shutter 1: closed
		8–15	Shutter 1: open
		16	Min Strobe
		17–118	Min Strobe … max Strobe
		119	Max Strobe
		120–127	Shutter 1: open (2)
		128	Min Rnd
		129–182	Min Rnd … max Rnd
		183	Max Rnd
		184–190	Shutter 1: open (3)
		191	SHUTTERAUDIO 6
		192	Min Audio
		193–246	Min Audio … max Audio
		247	Max Audio
		248–255	Shutter 1: open (4)
8	Dimmer Curve 1	0–31	Instant
		32–63	Short rise time
		64–95	Medium rise time
		96–127	Long rise time
		128–158	Extra long rise time
		159–255	No function

CH 1–64: 8 cells of 8 channels each. Every cell works as cell 1 in the table above (CH 1–8); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	White	Dimmer	Dimmer Fine	Shutter	Dimmer Curve
1	1	2	3	4	5	6	7	8
2	9	10	11	12	13	14	15	16
3	17	18	19	20	21	22	23	24
4	25	26	27	28	29	30	31	32
5	33	34	35	36	37	38	39	40
6	41	42	43	44	45	46	47	48
7	49	50	51	52	53	54	55	56
8	57	58	59	60	61	62	63	64

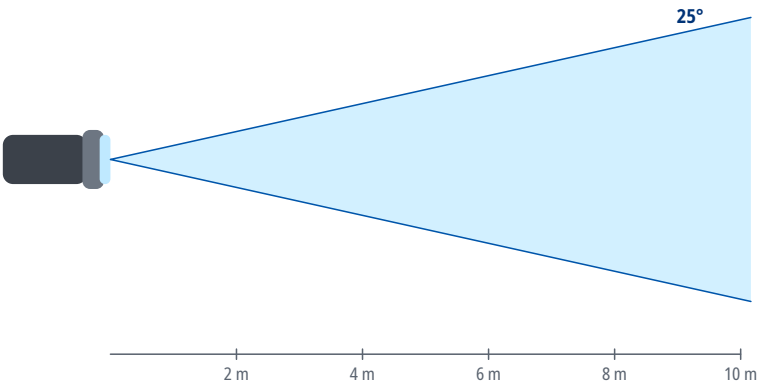
9 Technical specifications

Parameter	Value
Operating temperature	0 to 40 °C

Speeds and ranges

Parameter	Value
Strobe frequency	0.1–10 Hz

Spot diameter



Distance	Ø 25°
2 m	0.89 m
4 m	1.8 m
6 m	2.7 m
8 m	3.5 m
10 m	4.4 m
15 m	6.7 m

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

10 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.

11 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.

12 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.