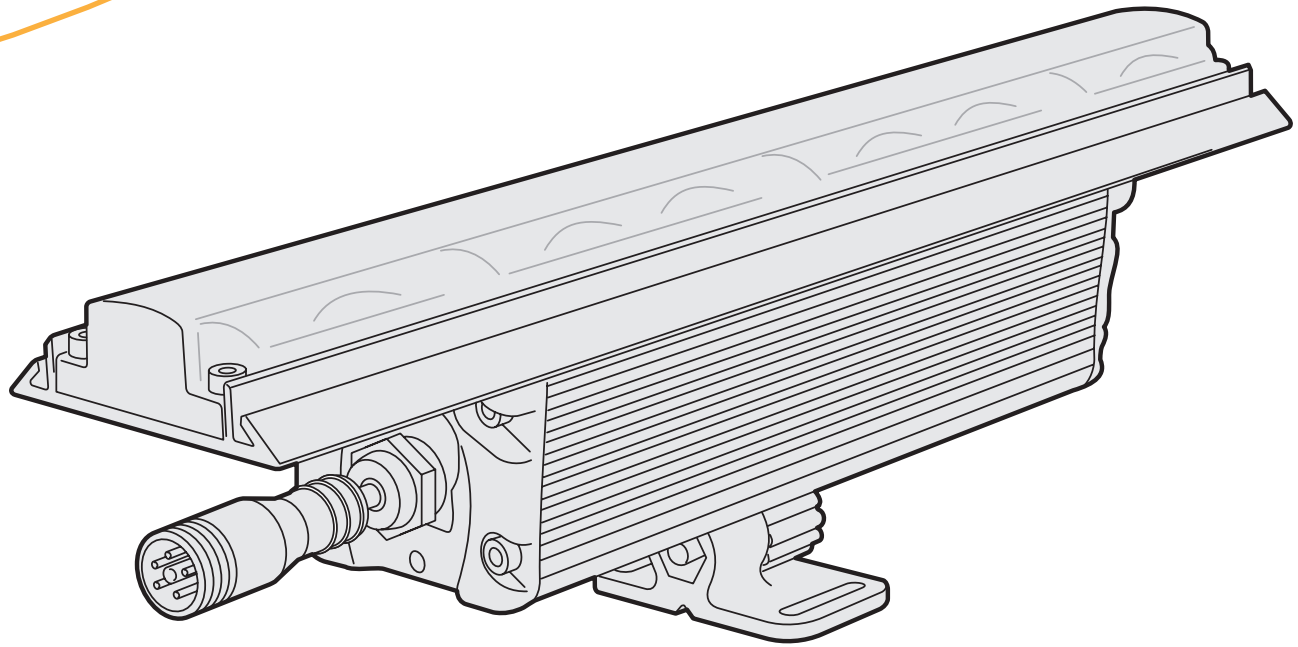
FIXTURE

GXD GRAZER SERIES

USER MANUAL



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CONTENTS

INTRODUCTION

WELCOME

Introducing the GXD controllable outdoor fixture range from LED CTRL. These robust IP66 fixtures are designed to provide a grazing effect at close proxmity for a wide range of applications.

Available in several sizes, 305mm, 610mm, 915mm and 1220mm lengths, these versatile fixtures connect in series using combined power and data cables, with IP rated connectors for easy installation and maintenance.

The range is available in a range of colour options as listed below:

- White - 2400K, 2700K, 3000K, 3500K, 4000K, 5000K, and 6000K white emitters,
- RGB - Red, green and blue LED emitters,
- RGBW - Red, green, blue and cool white LED emitters,
- RGBA - Red, green, blue and amber LED emitters, or
- DW (Dynamic White) - 2200K, 3500K and 5000K white emitters.

Choose from five beam angle optics to provide the perfect fit for your installation:

- 10° x 10°,
- 10° x 60°,
- 30° x 60°,
- 60° x 60°, or
- Assymetric wall wash (20° angle).

Fixture control is achieved using industry standard protocols including DMX-512A and SPI, with each protocol offering its own advantages for certain applications. RDM enabled for Remote Device management which allows addressing and optional monitoring.

An integral wide range power supply within each unit accepts mains power between 100-277VAC at either 50 or 60Hz and delivers power to an energy efficient fixture at just 20W/305mm section.

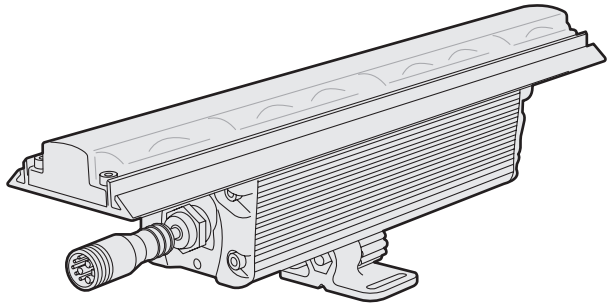
A wide range of accessories, including glare control, cabling, mounting and control options, ensure the GXD range has you covered for any project.

SAFETY

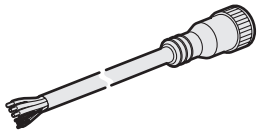
- Ensure fixtures are securely mounted, with appropriate fixing method and surface.
- Primary power should be supplied from a correctly fused, earthed and be installed in accordance with all local electrical standards.

SUPPLIED ITEMS

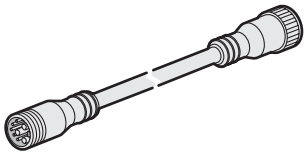
GXD 305mm, 610mm, 915mm or 1220mm with matching glare shield
(and two small locking screws)



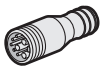
OPTIONAL EXTRAS



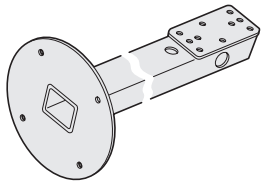
Feeder Cables	
GXD-DF-1m	1m DMX Feeder Cable
GXD-SF-1m	1m SPI Feeder Cable
GXD-DF-3m	3m DMX Feeder Cable
GXD-SF-3m	3m SPI Feeder Cable
GXD-DF-5m	5m DMX Feeder Cable
GXD-SF-5m	5m SPI Feeder Cable



Link Cables	
GXD-DL-1m	1m DMX Link Cable
GXD-SL-1m	1m SPI Link Cable
GXD-DL-3m	3m DMX Link Cable
GXD-SL-3m	3m SPI Link Cable
GXD-DL-5m	5m DMX Link Cable
GXD-SL-5m	5m SPI Link Cable
GXD-DL-XX	Custom Length DMX Link Cable
GXD-SL-XX	Custom Length SPI Link Cable

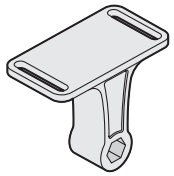


End Cap
GXD-DT



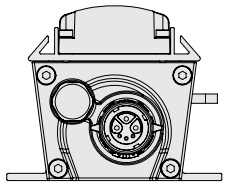
Extension Bars

GXD-EXT-150	150mm
GXD-EXT-300	300mm
GXD-EXT-1000	1000mm



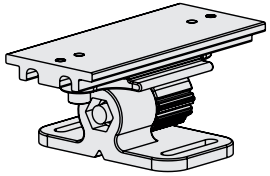
90° Fixed Bracket

GXD-M-F90



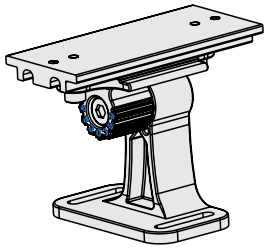
Fixed Straight Bracket

GXD-M-FS



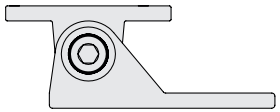
30° Angle Adjustment

GXD-M-A30



90° Angle Adjustment

GXD-M-A90

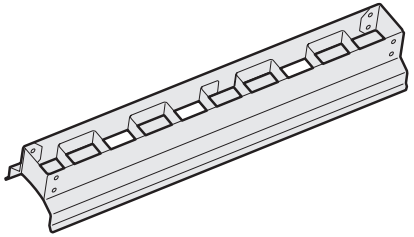


120° Angle Adjustment

GXD-M-A120

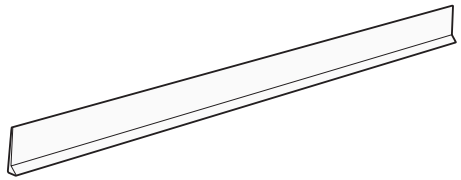
Custom Mounting Options

GXD-M-XX



Glare Control Louvres

GXD-G-L305	305mm
GXD-G-L610	610mm
GXD-G-L915	915mm
GXD-G-L1220	1220mm



Glare Control Insert

GXD-G-I305	305mm
GXD-G-I610	610mm
GXD-G-I915	915mm
GXD-G-I1220	1220mm

INSTALLATION

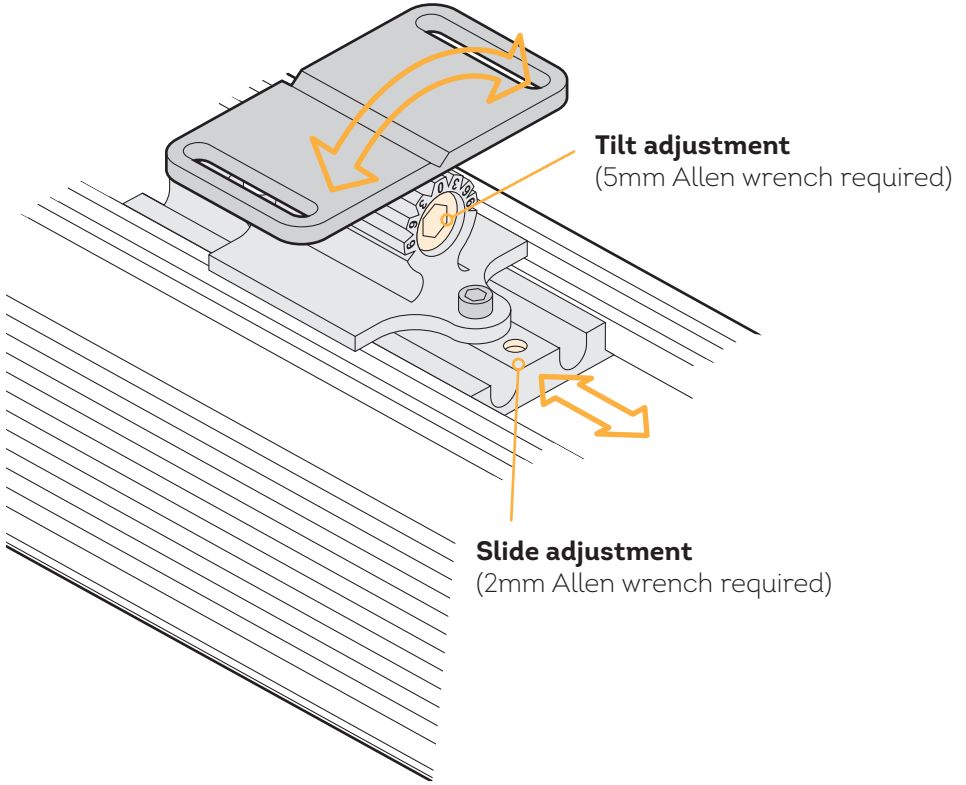
When installing each GXD fixture, ensure that the surface is level and nothing is protruding to damage the mounting bracket(s). Suitable mounting surfaces include steel, aluminium, concrete or wood structures.

Each mount base has two slots measuring 25x5mm (1" x 0.2") and the base has a thickness of 4mm (0.16"). Select bolts or screws (not supplied) that fit the mount base(s) correctly and are particularly suited to the mounting surface.

MOUNT ADJUSTMENT

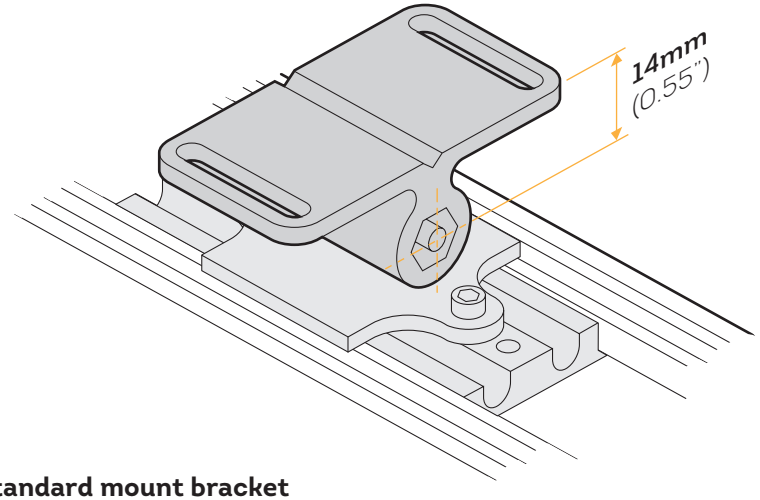
The standard mount(s) provided with each GXD fixture (305mm models have one mount, the rest of the range is provided with two) allow tilt angles of roughly 30 degrees from vertical to be achieved. Use a 5mm Allen wrench to adjust the tilt angle.

Ensure that each base is securely fixed to the mounting surface with appropriate fixings. Mounting accessories can be adjusted along the fixture by loosening the locking mechanism with a 2mm Allen wrench. Ensure they are tightened after adjustment.



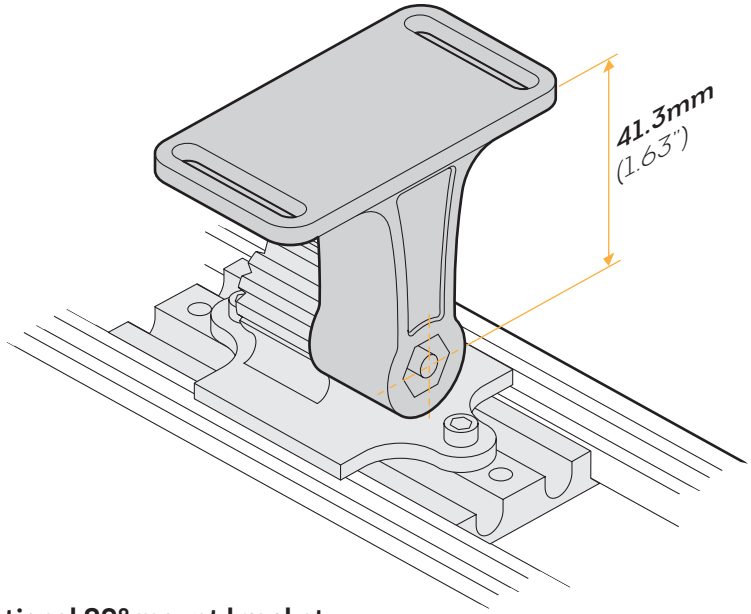
OPTIONAL 90° BRACKET

The standard mount brackets supplied with each GXD are able to achieve roughly 30 degrees (from vertical) tilt in either direction. To achieve tilt angles up to 90 degrees, you will need to replace the standard brackets with optional 90° brackets.



Standard mount bracket
(0 to ~30 degree angles possible)

To fit the optional bracket, remove the tilt adjust bolt (5mm Allen wrench required), remove the standard bracket and replace with the new part.



Optional 90° mount bracket
(0 to ~90 degree angles possible)

OPTIONAL GLARE CONTROL

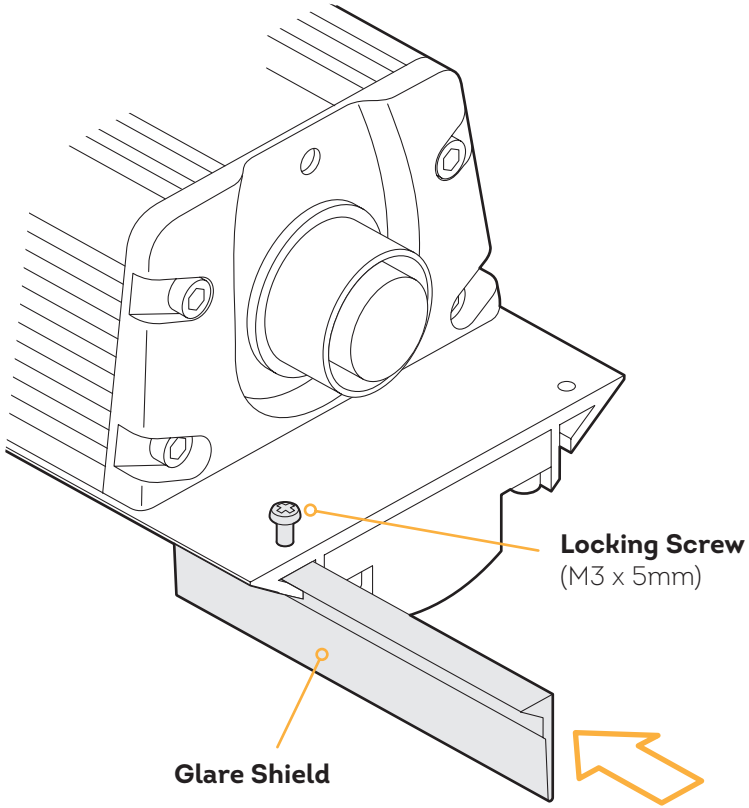
The GXD range offers modular glare control including an optional shield or louvre accessory, which can be easily added to the fixture as shown in the images below.

TO INSERT THE GLARE SHIELD

1. Carefully slide the glare shield into either of the two channels located on either side of the emitter housing.

Note: You may find that the glare shield is tight and difficult to slide in, particularly on the 1220mm models. If so, smear a small quantity of suitable lubricant onto the angled base of the glare shield to help it slide.

2. When the shield is fully in place, on the underside of the fixture, insert one of the supplied small locking screws at either end and tighten them to keep the shield firmly in place.



FITTING AN OPTIONAL LOUVRE

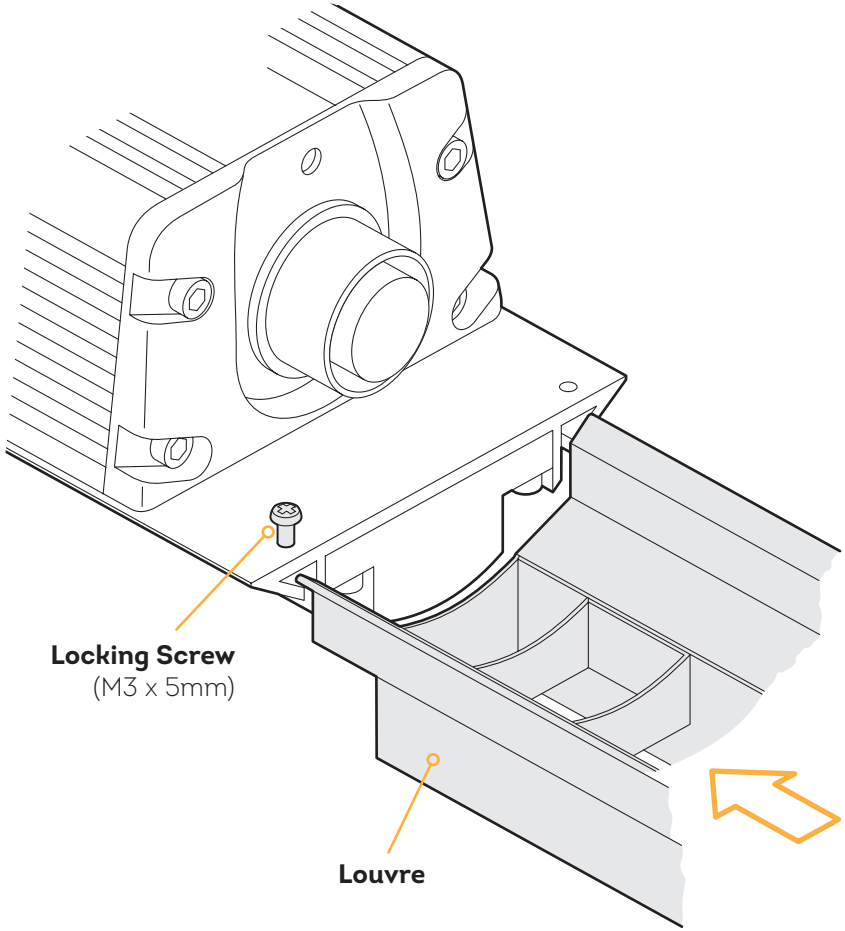
Optional louvres are available to eliminate side spill in all directions.

TO FIT AN OPTIONAL LOUVRE

1. Carefully slide the louvre into the two channels located on either side of the emitter housing.

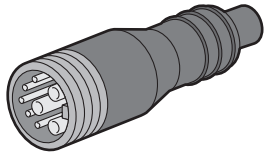
Note: You may find that the louvre is tight and difficult to slide in, particularly on the 1220mm models. If so, smear a small quantity of suitable lubricant onto the angled lips of the louvre to help it slide.

2. When the louvre is fully in place, on the underside of the fixture, insert one of the supplied small locking screws at either end (on opposite sides) and tighten them to keep the louvre firmly in place.



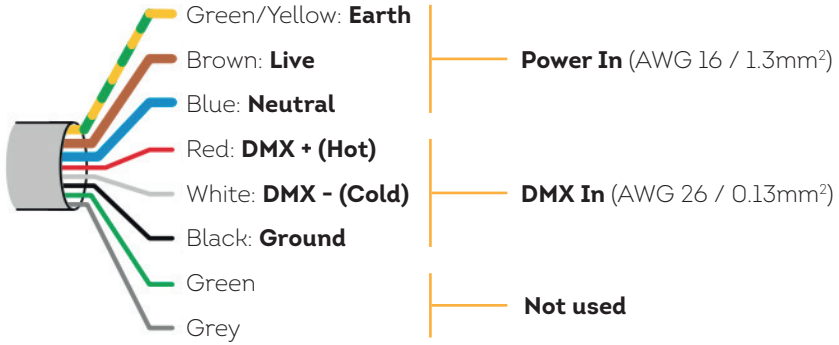
POWER AND CONTROL WIRING

Power and control are combined within the IP67-rated feed cables cords. Input and output connectors are FINEcables® M20 (3+5P), with a male input connector located at one end and female output connector at the other. Connector placements are such that abutted units can be directly connected without need for extra cables.



FINEcables® M20
(3+5P) male

The cable colour designations for the optional feed in cable are as follows:



POWER

The power requirements are as follows:

- Voltage: 100-277VAC 50/60Hz
- Power: 20W per 305mm section (40W for a 610mm model, 60W for a 915mm model, 80W for a 1220mm model)

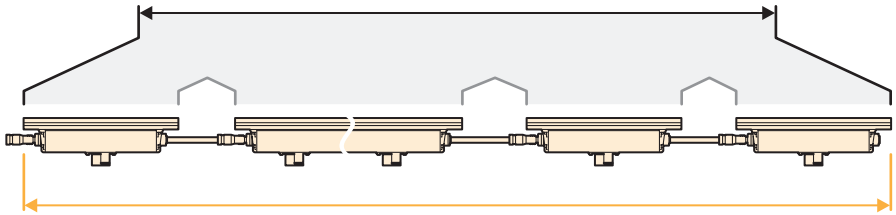
CONTROL

The control links use three cores for the DMX512 / RDM connections.

MAXIMUM NUMBER OF FIXTURES CHECK keep for now

The maximum number of fixtures that can be connected (using GXD Series cabling accessories) in a single series run is dependent on the supply voltage, as follows:

240/277VAC supply: 30m (100 feet) of total fixture length
120VAC supply: 15m (50 feet) of total fixture length



240/277VAC supply: 152m (500 feet) of total fixture **plus** cable length
120VAC supply: 76m (250 feet) of total fixture **plus** cable length

Runs can consist of mixtures of 305mm, 610mm, 915mm and 1220mm fixtures, as required, providing the total length of fixtures (and the total length of fixtures plus cable lengths) is not exceeded. See also the advice on in-rush currents given on the next page.

In damp or wet location installations, ensure that the output connector of the final fixture has an end cap fitted [GXD-DT] to prevent moisture ingress.

IN-RUSH CURRENTS

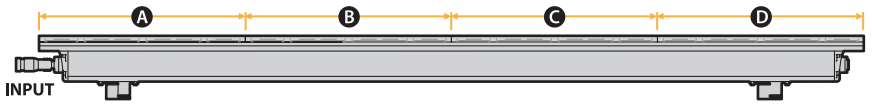
Although LED fixtures are low power devices compared to their traditional source equivalents, their power supplies exhibit a trait known as 'in-rush' when first powered on. This is caused by various components within the switched mode power supply initially topping themselves up with power. The in-rush period lasts milliseconds and does not cause any effect when a handful of units are powered on at the exact same time. However, if many fixtures are linked to the same power input, they will momentarily pull a current that may greatly exceed their normal operating level. This may affect over-current trips when power is applied and should be anticipated when planning the power panel size requirements. It is recommended to use D-Curve breakers or equivalent to overcome the in-rush current. The in-rush current values for the GXD fixtures are as follows:

- GXD 305mm: 30A max @ full load
- GXD 610mm: 40A max @ full load
- GXD 915mm: 40A max @ full load
- GXD 1220mm: 40A max @ full load

CHECK

DMX CHANNEL DESIGNATIONS

The various GXD variants apply their LED emitters to DMX channels in different ways, as summarised in the table below. The 305mm models always operate in **Standard** (STD) mode while the 610mm, 915mm and 1220mm models use **Extended** (EXD) mode by default, but can be changed to standard (STD) mode using a DMX/RDM tool (see page 12). When a 610mm, 915mm or 1220mm model operates in standard mode, all four of its emitter sections operate in unison.



DMX	RGB		RGBW		RGBA		Dynamic White	
	(EXD)	(STD)	(EXD)	(STD)	(EXD)	(STD)	(EXD)	(STD)
1	Ⓐ Red	Red	Ⓐ Red	Red	Ⓐ Red	Red	Ⓐ 2200K	2200K
2	Ⓐ Green	Green	Ⓐ Green	Green	Ⓐ Green	Green	Ⓐ 3500K	3500K
3	Ⓐ Blue	Blue	Ⓐ Blue	Blue	Ⓐ Blue	Blue	Ⓐ 5000K	5000K
4	Ⓑ Red		Ⓐ CW	CW	Ⓐ Amber	Amber	Ⓑ 2200K	
5	Ⓑ Green		Ⓑ Red		Ⓑ Red		Ⓑ 3500K	
6	Ⓑ Blue		Ⓑ Green		Ⓑ Green		Ⓑ 5000K	
7	Ⓒ Red		Ⓑ Blue		Ⓑ Blue		Ⓒ 2200K	
8	Ⓒ Green		Ⓑ CW		Ⓑ Amber		Ⓒ 3500K	
9	Ⓒ Blue		Ⓒ Red		Ⓒ Red		Ⓒ 5000K	
10	Ⓓ Red		Ⓒ Green		Ⓒ Green		Ⓓ 2200K	
11	Ⓓ Green		Ⓒ Blue		Ⓒ Blue		Ⓓ 3500K	
12	Ⓓ Blue		Ⓒ CW		Ⓒ Amber		Ⓓ 5000K	
13			Ⓓ Red		Ⓓ Red			
14			Ⓓ Green		Ⓓ Green			
15			Ⓓ Blue		Ⓓ Blue			
16			Ⓓ CW		Ⓓ Amber			

CW - Cool White

The channel allocations above are shown beginning at DMX address 1. When you configure a fixture with an alternative DMX address, that value will become the first channel in the list shown above and the other channels will increment from there.

OPERATION

ADDRESSING FIXTURES

GXD fixtures have no external controls and instead rely on RDM (Remote Device Management) for all configuration via the DMX interface. This allows multiple devices to be configured either before or after installation.

GXD SPI fixtures have self addressing capability and addressing is handled within the SPI controllers.

Various third party DMX/RDM tools are available; LED CTRL particularly recommend the our DXA - DMX Addressing Tool for this task.

DMX PERSONALITY MODE SELECTION

The GXD range features two modes of operation Extended (EXD) and Standard (STD):

- Standard (STD) mode - Each fixture operates as an individual unit.
- Extended (EXD) mode - Each 305mm section operates as an individual "pixel"
  - 610mm - 2 Pixels
  - 915mm - 3 Pixels
  - 1220mm - 4 Pixels.

Note: GXD 305mm models always operate in standard (STD) mode.

For a summary of how channels are allocated in both modes for all the model variants, see page 11.

To select between STD and EXD modes, use a suitable RDM (Remote Device Management) tool. Various third party tools are avaible however LED CTRL recommends our DXA tool for this task.

TESTING EMITTER OUTPUT

We recommend testing the addressing of each fixture before installation on-site to ensure it has been done correctly. This can be achieved through our DXA tool or various third party DMX/RDM tools.

FURTHER INFORMATION

TROUBLESHOOTING

LUMINAIRE DOESN'T TURN ON

- Check that power is correctly applied to the fixture and that there is no damage to the power input cord.
- Use an RDM tool to check the settings and internal temperature of the fixture.
- Using an RDM tool, check that the DMX address set within the fixture matches that being output by the controlling source device.
- Check that the DMX + A and DMX - B lines on the incoming control link have not been crossed.

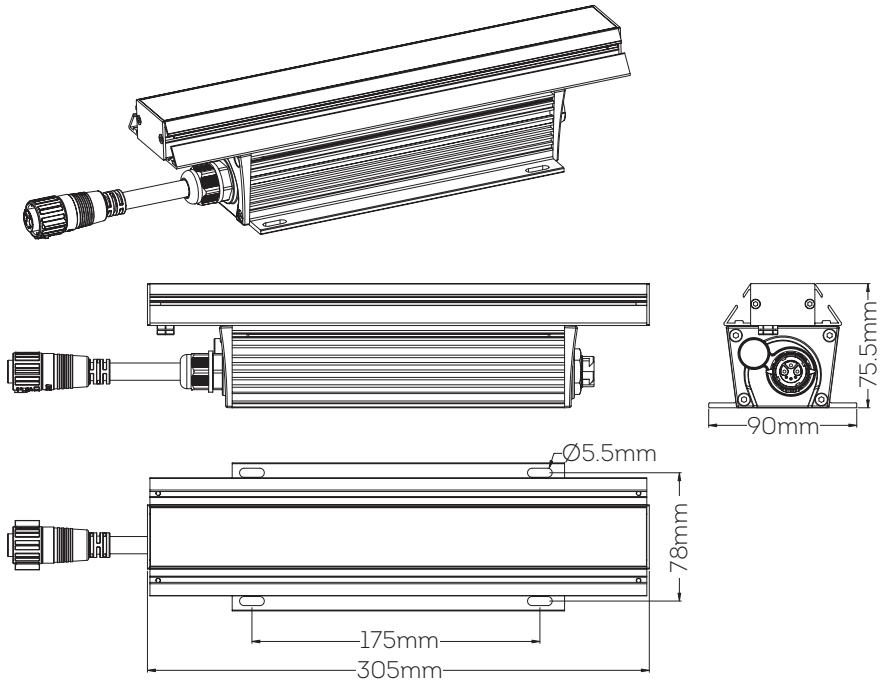
SPECIFICATIONS

Colour	White (2400K, 2700K, 3000K, 3500K, 4000K, 5000K, 6000K), RGB, RGBW, RGBA, Dynamic White (2200K-5000K)
Beam Angle	10°x 10°, 10°x 60°, 30°x 60°, 60°x 60°, Asymmetric wall wash (20° angle)
Optional Glare Control	Louvre and Shield
Maximum Fixtures in Series	15m (50') @ 120V, 30m (100') @ 240/277VAC
Total Lumens	693lm (305mm), 1386lm (610mm), 2079lm (915mm), 2,772lm (1220mm)
Centre Beam Candela	1979 (RGBW 10°x 60° - Full On)
Control	DMX (+ RDM configuration) Fixtures can be controlled in segments of 305mm or per fixture. **SPI is self addressing*
Mounting	30° Swivel Mount Included, 90° Swivel Mount Optional
Power Consumption	20W (305mm), 40W (610mm), 60W (915mm), 80W (1220mm)
Operating Voltage	100-277VAC, 50/60Hz

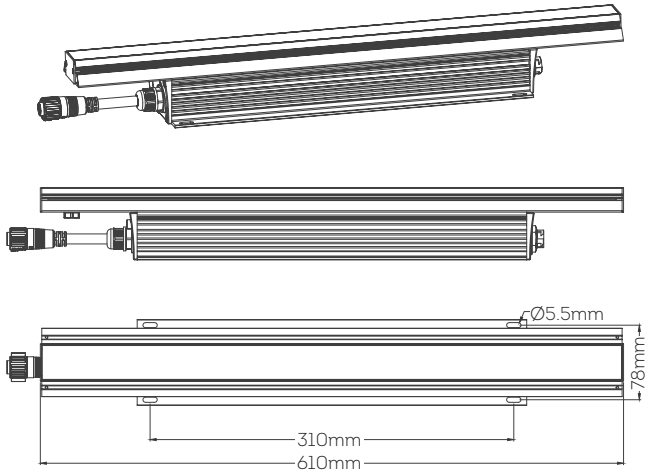
Lumen Maintenance	L70 @ 150,000 Hours (25° C)
Finish	Anodised Brushed Aluminium, Corrosion resistant
Housing Material	Aluminium with Polycarbonate Lens or 5mm Tempered Glass Lens
Operating Temperature	-40°C to 50°C (-40°F to 122°F)
IP Rating	IP66, Wet Location
IK Rating	IK08
Fixture Connectors	Multipin IP68 Connectors, End to end jumpers attached to each fixture
Warranty	5 Years
Weight	1.35kg (305mm), 2.7kg (610mm), 4.05kg (915mm), 5.4kg (1220mm)
Dimensions	L:305mm/610mm/915mm/1220mm W:75.5mm H:90mm
Certifications	

DIMENSIONS

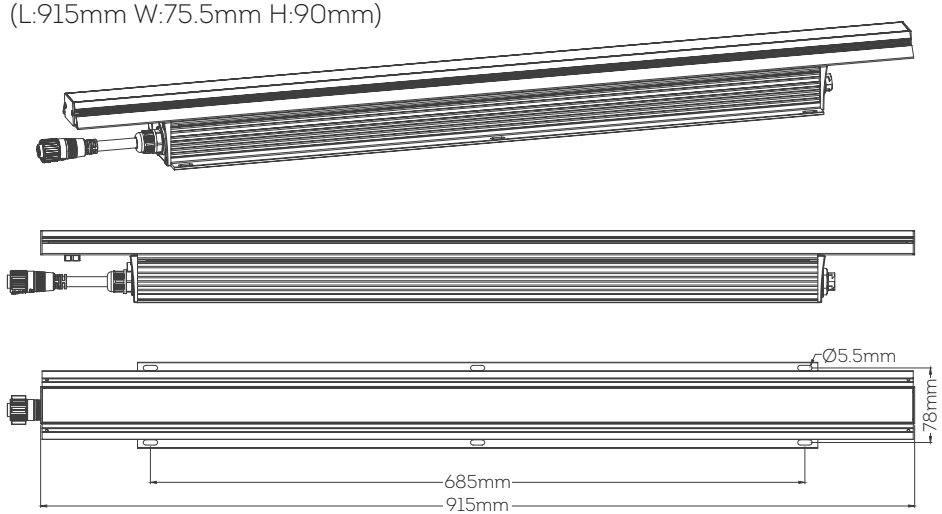
305mm
(L:305mm W:75.5mm H:90mm)



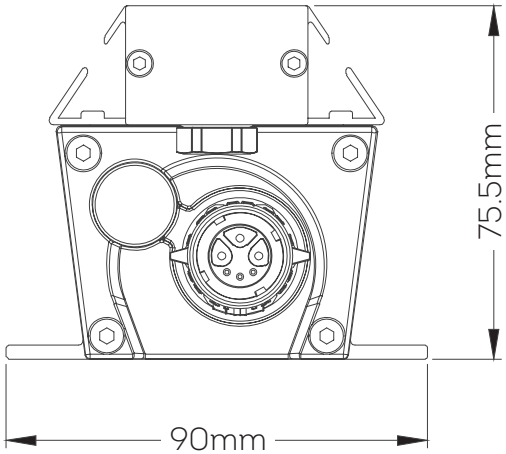
610mm
(L:610mm W:75.5mm H:90mm)

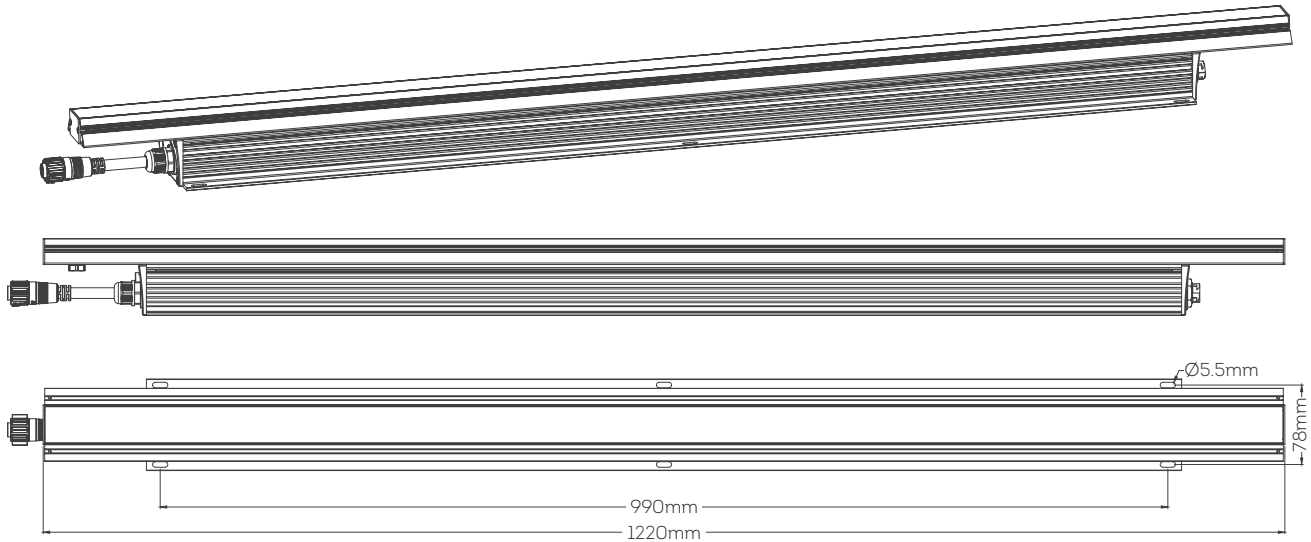


915mm
(L:915mm W:75.5mm H:90mm)



1220mm
(L:1220mm W:75.5mm H:90mm)





LIMITED PRODUCT WARRANTY

A. LED CTRL hereby warrants, to the original purchaser, LED CTRL finished products to be free of manufacturing defects in material and workmanship for a standard period of:

- **Fixtures:** 5 Years (1,825 days) from the date of purchase.
- **Flex Products:** 3 Years (1,095 days) from the date of purchase.
- **Controllers:** 2 Years (730 days) from the date of purchase.

It is the owner's responsibility to establish the date and place of purchase and warranty terms by acceptable evidence, at the time service is sought.

B. For warranty service, send the product only to the LED CTRL factory. All shipping charges must be pre-paid. If the requested repairs or service (including parts replacement) are within the terms of this warranty, LED CTRL will pay return shipping charges only to a designated point within Australia. If the entire instrument is sent, it must be shipped in its original package. No accessories should be shipped with the product.

If any accessories are shipped with the product, LED CTRL shall have no liability whatsoever for loss of or damage to any such accessories, nor for the safe return there of. LED CTRL reserves the right to replace the item with same or similar product at its discretion.

C. This warranty is void if the serial number has been altered or removed; if the product is modified in any manner which LED CTRL concludes, after inspection, affects the reliability of the product; if the product has been repaired or serviced by anyone other than the LED CTRL factory unless prior written authorisation was issued to purchaser by LED CTRL; if the product is damaged because not properly maintained as set forth in the instruction manual.

D. This is not a service contract, and this warranty does not include maintenance, cleaning or periodic check-up nor do we guarantee as part of this warranty any lumen performance during period. Parts not covered by this warranty include: fuses, external power supplies, third party items not manufactured by LED CTRL. During the period specified above, LED CTRL will replace defective parts at its expense, and will absorb all expenses for warranty service and repair labour by reason of defects in material or workmanship. The sole responsibility of LED CTRL under this warranty shall be limited to the repair of the product, or replacement thereof, including parts, at the sole discretion of LED CTRL. At no time will installation or re-installation or products labour or liability costs will be assumed by LED CTRL. All products covered by this warranty were manufactured after January 1, 2020, and bear identifying serial number marks to that effect.

E. LED CTRL reserves the right to make changes in design and/or improvements upon its products without any obligation to include these changes in any products theretofore manufactured No warranty, whether expressed or implied, is given or made with respect to any accessory supplied with products describe above. Except to the extent prohibited by applicable law, all implied warranties made by LED CTRL in connection with this product, including warranties of merchantability or fitness, are limited in duration to the warranty period set forth above. And no warranties, whether expressed or implied, including warranties of merchantability or fitness, shall apply to this product after said period has expired.

F. Marine or extreme weather location applications using LED CTRL products are subject to a 2 year limited warranty and LED CTRL must be notified prior to delivery of units for such applications so that preventative treatment can be made to the products to ensure proper performance and product life with a special marine code coating/sealing process at an additional cost.

G. The consumer's and or dealer's sole remedy shall be such repair or replacement as is expressly provide above; and under no circumstances shall LED CTRL be liable for any loss or damage, direct or consequential, arising out of the use of, or inability to use, this product. This warranty is the only written warranty applicable to LED CTRL products and supersedes all prior warranties and written descriptions of warranty terms and conditions heretofore published.

FIXTURE

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