Acclaim™

AL Dot™

Contents

Introduction

Welcome

Welcome to the AL Dot range from Acclaim Lighting. These compact, aluminum bodied, wet location (IP66) fixtures are self-contained DMX/RDM nodes which emit singular dots of dimmable light. When used in multiples, they can create a large scale, low resolution graphic display.

AL Dots are available in two white light options (3000K or 4000K) as well as RGB and Spectrum RGBW (W=3000K) color mixing variants. There are three lens options to suit your installation type: Clear flat, diffused flat or diffused dome. Each AL Dot features a large screw threaded body (diameter 1.73"/44mm) with two aluminum locking rings to allow for panel mounting, where necessary.

Each AL Dot comes complete with an integral T-cable which combines power (24VDC) and control (DMX/RDM) to make it simple to daisy chain multiple units. All connectors are IP67 rated and feature secure locking to promote reliable operation in all conditions.

Each AL Dot is fully configurable using RDM (Remote Device Management) and can be assigned to any DMX address (a single address is required for each white light model, while the RGB and Spectrum RGBW versions require 3 and 4 DMX addresses respectively). A maximum of 50 AL Dots may be joined in a single daisy chain (due to power bus restrictions), however, this limit can be extended by using the optional power feed T-cable (see page 8).

Safety

- When fixtures are mounted off-ground, ensure they are securely fitted to an appropriate mounting surface.
- Ensure that the power input is supplied from a correctly fused, earthed and environmentally protected location.

Maintenance

CAUTION: Always isolate mains power before starting maintenance operations.

- Ensure that all mounting (and device) screws/bolts are fully tight and free of corrosion.
- Ensure there is no deformation to the housing, lenses or fixing points.
- Check that all power supply cables are free from physical damage or material fatigue.
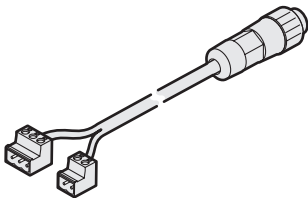- Use only genuine spare parts supplied by Acclaim Lighting.

Cleaning

- Use a moist, lint-free cloth when cleaning each fixture.
- Never use alcohol or solvents.

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Supplied items
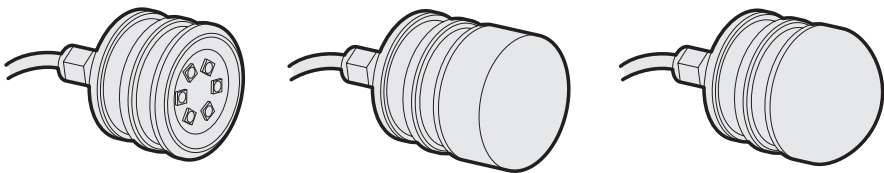
AL Dots with clear flat, diffused flat and diffused dome lens options
Available with 3000K, 4000K, RGB or Spectrum RGBW emitter options

Optional extras

Feed cable
10' (3m)   [ADOFC10]
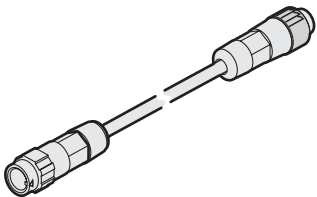
Link cables
1' (30cm)   [ADOLC1]
5' (1.5m)   [ADOLC5]
10' (3m)   [ADOLC10]

End cap   [ADOEC]

T-cable 1' (30cm)
(for extending daisy chains lengths)   [ADOT1]

continued overleaf

Optional extras (continued)
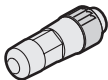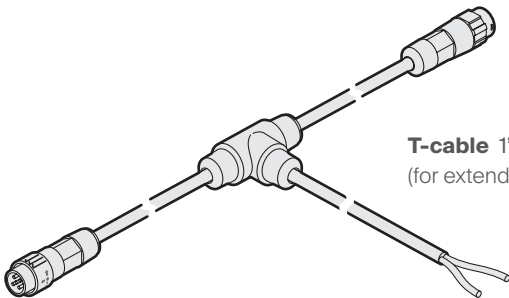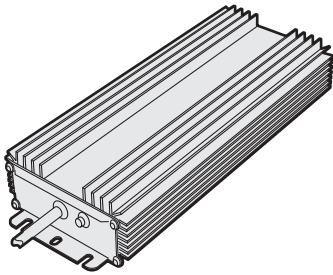
Power supplies
(100-240VAC, 50-60Hz input, 24VDC output:

60W output (up to 20 AL Dots)	[APS-60-24]
96W output (up to 32 AL Dots)	[APS-96-24]
200W output (up to 66 AL Dots)	[APS-200-24]
400W output (up to 133 AL Dots)	[APS-400-24]

Signal protocol converters (see page 10)
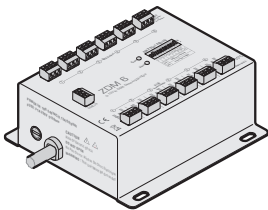
0-10V multiple channel converter   [ZDM 6]
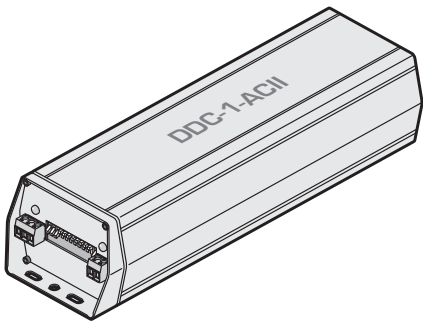
DALI multiple channel converter
[DDC 1 AC]

Test and configuration tool kit
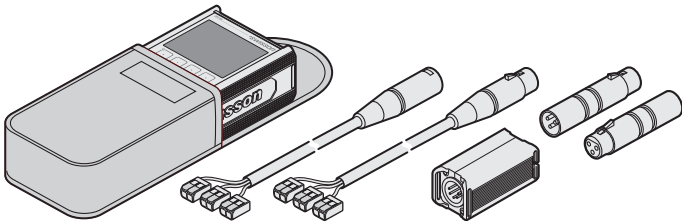
XMT-500
DMX/RDM, ArtNet and sACN test/configuration tool with cable dongle,
3/5-pin converters, bare cable connectors and pouch

[XMT-500]

Installation

AL Dots are primarily designed to be mounted within surfaces that are no greater than 0.71" (18mm) in thickness. A hole of diameter 1.81 to 1.89" (46 to 48mm) is required.

To mount an AL Dot

1 Unscrew and remove the first (rear) locking ring from the AL Dot body.

2 Carefully slide the locking ring along the AL Dot's cable and T-piece so that it is completely detached.

3 Feed the AL Dot's cable and T-piece through the pre-prepared mounting hole and insert the body of the AL Dot into the hole.


Locking rings

Threaded section 1.24" (31.5mm) in length

Mounting surface maximum thickness 0.71" (18mm)

Mounting hole Ø1.81 to 1.89" (Ø46 to 48mm)
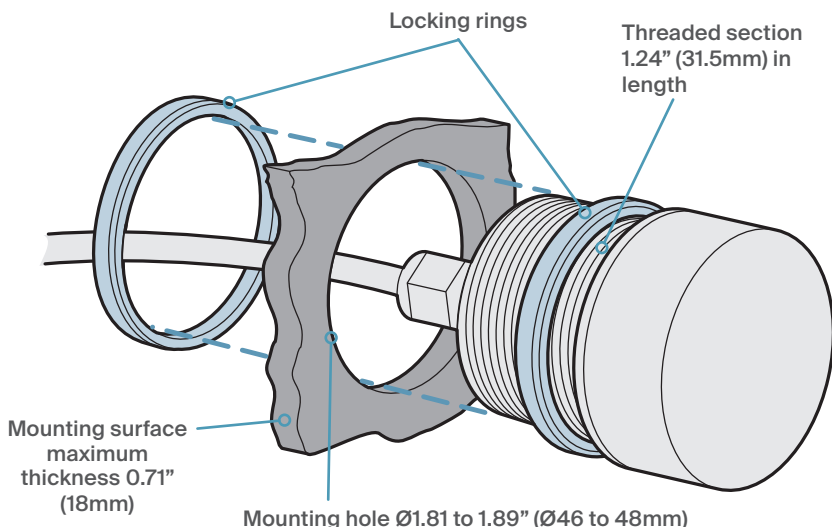
4 Use the front locking ring to determine how deep into the mounting surface the AL Dot should sit.

5 Feed the removed locking ring back onto the cable/T-piece and screw it back onto the body of the AL Dot to tighten it within the mounting surface.

6 Connect the AL Dot to your power and control source (see page 6).

Power and control wiring

AL Dot fixtures use Chogori™ Standard (22) series IP67 5-pin connectors for their combined power/control inputs and outputs. AL Dot fixtures can be either daisy chained directly to each other or via intermediary link cables, depending on distances between fixtures.

AL Dot fixtures require both a regulated 24VDC power input as well as DMX control. The final fixture in the line should have a 120Ω terminating resistor connected between the DMX + and DMX – lines.

Due to the limited current carrying capacity of the internal power buses, runs of AL Dot fixtures must not exceed 100 feet (30m). See page 8 if longer runs are needed.

The required feed cables (available as separate purchase) also include (male plus matching female) pluggable terminal sockets (5.08mm pitch) at the external end for rapid connections. The cable designations are as follows:
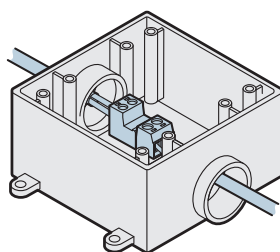
Connections to feed cables are best protected within junction boxes with suitable IP ratings

Note: Acclaim requires Belden 9842 or approved equivalent for all DMX wiring applications.

**AL Dot
3' (10m)
feed-in cable**
24VDC and DMX
[Part #: ADOFC10]

Black (28AWG / 0.08mm²)
White (28AWG / 0.08mm²)
Red (28AWG / 0.08mm²)

White (18AWG / 0.75mm²)
Black (18AWG / 0.75mm²)

GND
DMX–
DMX+

24VDC
GND

*Chogori™
22 series
5-pin*
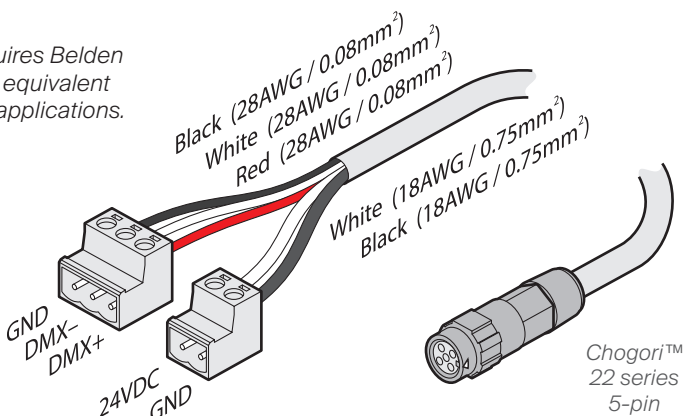
IMPORTANT: These connectors are not rated for live connection or disconnection. Check that power is isolated before making or breaking any links. Ensure the connectors have locked and are seated correctly before applying power.

Power Ground

Signal Ground

DMX–

DMX+

24VDC

Female connector pin-out
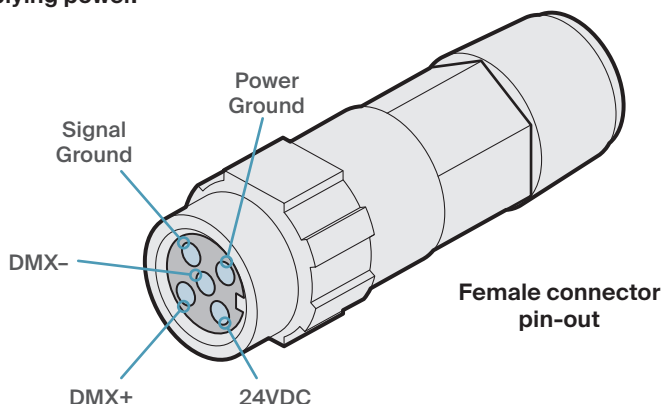
Maximum cable lengths / number of fixtures

The maximum number of fixtures that can be connected in a single series run is 50 when they are directly connected to each other (which will result in their total cable length being 100 feet (30m)):

50 fixtures / 100 feet (30m) of total cable length

Where greater distances are required between AL Dots, you can use extra link cables. However, the total number of AL Dot fixtures must be reduced accordingly so that the total cable run does not exceed 100 feet (30m).

For instance, if 1' (30cm) link cables were used between each of the AL Dot fixtures, the total number of fixtures would need to be reduced to 33:

33 fixtures / 100 feet (30m) of total cable length
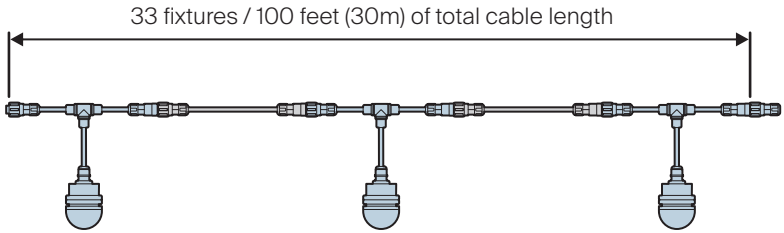
See page 8 if longer runs are needed.

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

Extending AL Dot runs

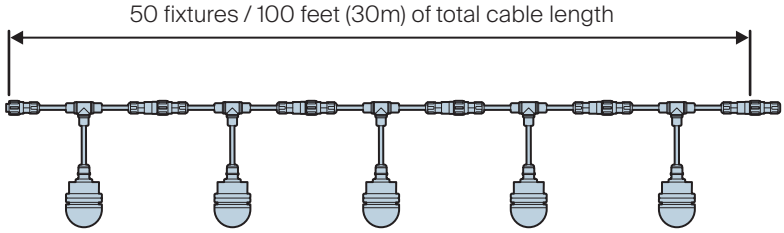Due to the limited current carrying capacity of the internal power buses, runs of AL Dot fixtures must not exceed 100 feet / 50 units when they are directly connected to each other (less when link cables are also used - see page 7). Where more AL Dots / longe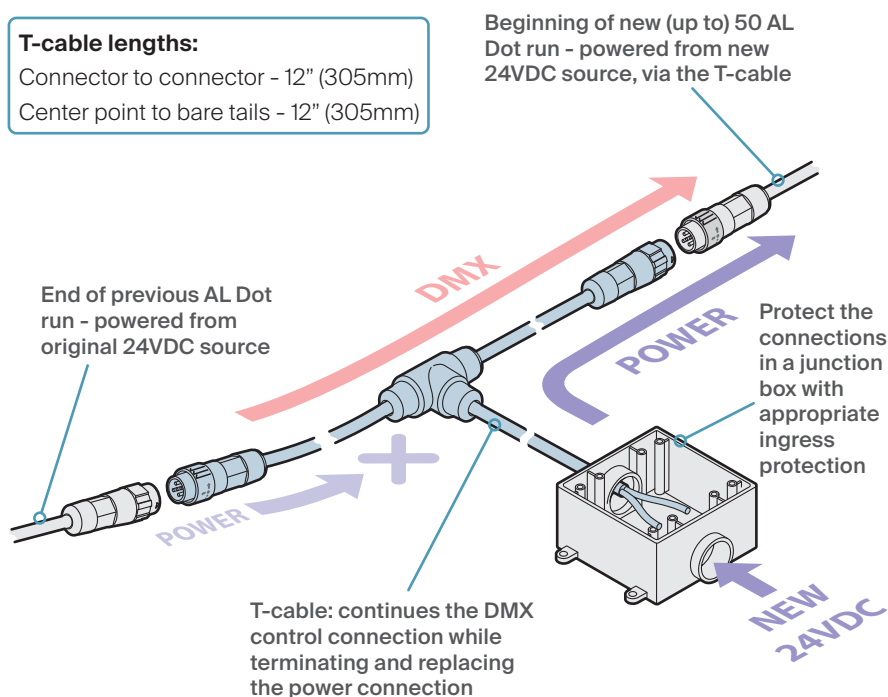r runs are required, you can either arrange separate parallel runs of fixtures, or use the optional T-cable [AGDT1] from Acclaim Lighting. The T-cable can be applied between separate 100 feet (or less) runs; its job is to continue the DMX control connections while terminating and replacing the power input with a new source.

Note: The preferred method is to use separate parallel runs as the reliable limits of DMX operation may be exceeded if too many fixtures are connected to a single, unbuffered control line.

T-cable lengths:

Connector to connector - 12" (305mm)

Center point to bare tails - 12" (305mm)

Beginning of new (up to) 50 AL Dot run - powered from new 24VDC source, via the T-cable

End of previous AL Dot run - powered from original 24VDC source

DMX

POWER

POWER

Protect the connections in a junction box with appropriate ingress protection

NEW 24VDC

T-cable: continues the DMX control connection while terminating and replacing the power connection

Where the T-cable body needs to be secured, we recommend the use of a standard 3/4" pipe strap:

3/4" pipe strap (not supplied)
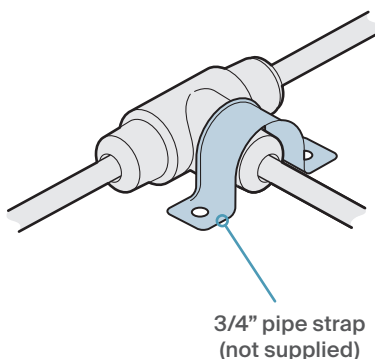
DMX channel designations

The various AL Dot variants apply their LED emitters to DMX channels in different ways, as summarized in the table below.

DMX	3000K	4000K	RGB	Spectrum RGBW
1	White	White	Red	Red
2			Green	Green
3			Blue	Blue
4				White (3000K)

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.
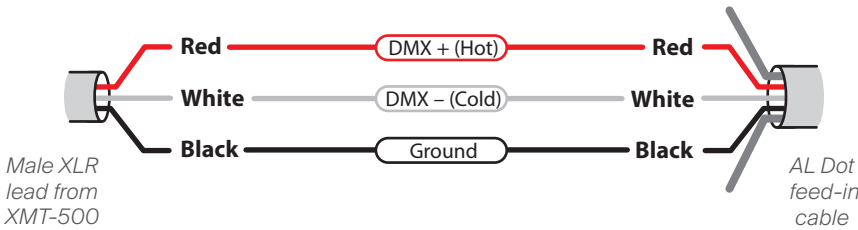
Making a temporary control link

Each XMT-500 DMX/RDM tool is supplied with a 5-pin male XLR lead that can be used to make a temporary control input link with the AL Dot feed-in cable. Use a 3-pin terminal block, wire nuts, conn blocks or Wago® connectors to temporarily join the two cables:

Red — DMX + (Hot) — Red

White — DMX – (Cold) — White

Black — Ground — Black

Male XLR lead from XMT-500

AL Dot feed-in cable

Alternative control inputs

AL Dot fixtures use DMX as their native control method, however, it is possible to use other common control protocols when required, such as 0-10V (source or sink) or DALI.

Control inputs via converters

- DMX - connect a DMX input directly into the feed cable.
- 0-10V - use an Acclaim Lighting ZDM 6 (or similar) to convert one or more analog control feeds into a combined DMX feed[1].
- DALI - use an Acclaim Lighting DDC-1-AC (or similar) to convert one or more DALI channels into a combined DMX feed[1].
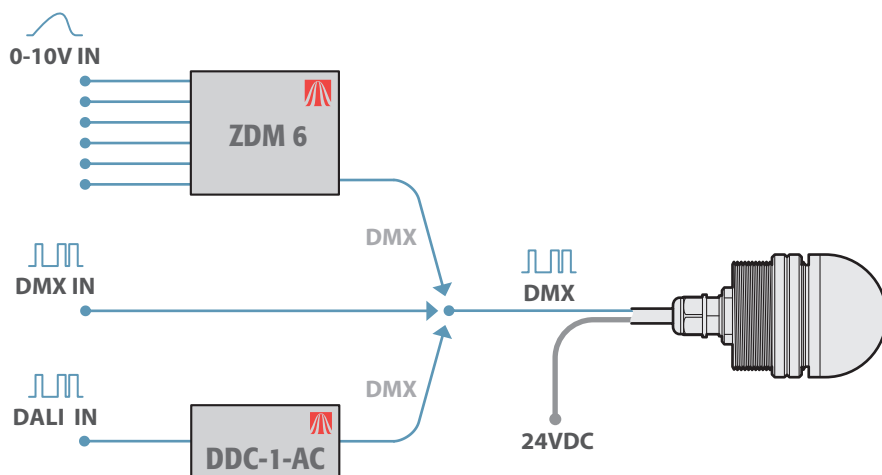
Notes:

[1] When using Acclaim Lighting ZDM 6 or DDC-1-AC modules it is possible to convert multiple inputs into separate DMX channels within a consolidated feed. The ZDM 6 can convert up to six 0-10V inputs into DMX channels, whereas the DDC-1-AC can convert a maximum of 64 DALI channels (although large numbers of channels are not recommended due to the timing limitations of the DALI standard).

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Operation

AL Dot 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.
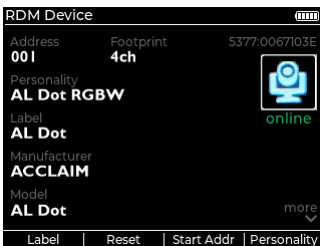
Addressing fixtures

To configure the DMX address using the XMT-500

1 Connect the XMT-500 to the DMX input line of the AL Dot installation.

2 On the XMT-500 main menu, highlight the RDM app and press ☑ – the XMT-500 will search for RDM devices and after a short while it will display a list of all located fixtures:
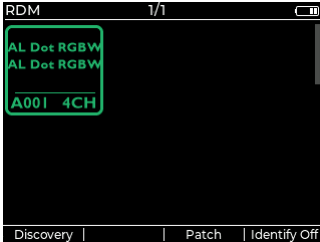
3 Highlight the AL Dot fixture and press ☑ to view the fixture details:

4 Press the [•] **[Start Addr]** softkey to set the address:

- Use the arrow buttons to move the red highlight between digits.
- Press ☑ to enter a digit into the address box.
- Use the [•] **[◀✕]** softkey to delete a digit.

5 When the address is complete, either long press ☑ or highlight **OK** and press ☑.

6 Press ↩ to return to the RDM app.

Testing emitter output

After you have addressed each fixture we recommend that you also test each one. This can be achieved using an RDM (Remote Device Management) tool; we recommend the XMT-500 for this task.

To test emitter output using the XMT-500

1 Connect the XMT-500 to the DMX input line of the installation.

2 On the XMT-500 main menu, highlight the Send app and press ☑:
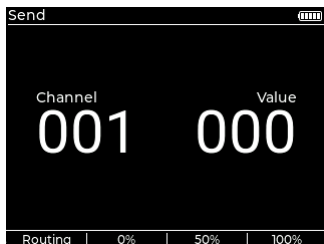
3 Use the XMT-500 buttons to determine the values sent out to the fixture(s):

- Choose DMX channel: CH+ CH−

- Change the value: △ ▽

- Use preset values: • [0%] [50%] [100%]

- View the Settings page: ⚙

*Note: If you wish to send DMX values to all addresses simultaneously (rather than cycling through them individually), when the XMT-500 is showing address 001, press the left button once to change to **ALL CHANNELS**. Now when you set the level it will affect all emitters equally.*

Further information
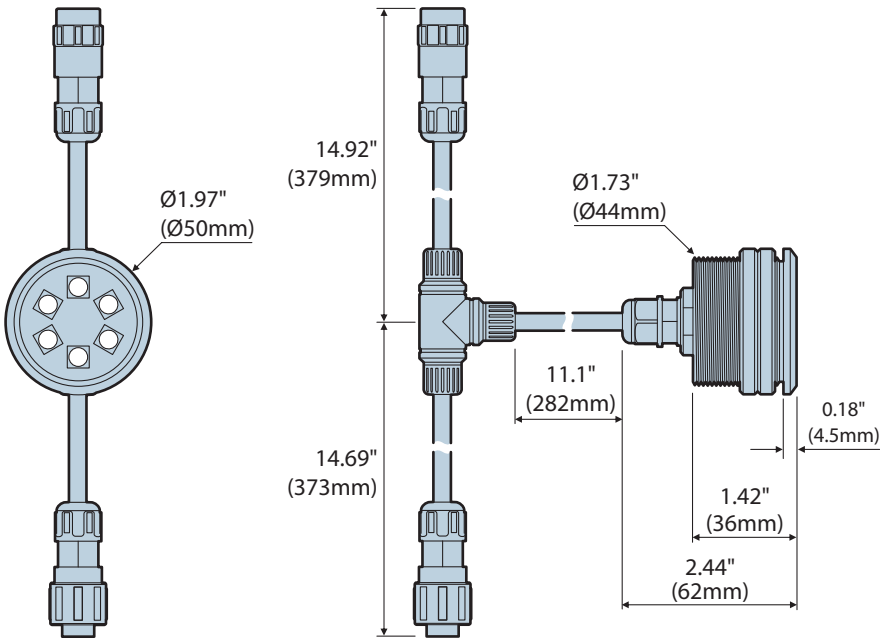
Troubleshooting

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.
- (DMX models) Use an RDM tool (such as the Swisson XMT-500) to check the settings and internal temperature of the fixture.
- (DMX models) Using an RDM tool, check that the DMX address set within the fixture matches that being output by the controlling source device.
- (DMX models) Check that the DMX + (hot) and DMX – (cold) lines on the incoming control link have not been crossed.

Specifications

Color models	3000K white, 4000K white, RGB or Spectrum RGBW (W=3000K)
Beam angle	120°
Output	Up to 98.2 lumens (4000K full on, clear flat lens option)
Lumen maintenance (L_{70})	150,000 hours
Control	DMX512-A (+ RDM configuration)
Ingress protection	IP66, wet location
Fixture connectors	Chogori™ Standard (22) series, IP67 rated 5-pin combined DC power & control
Maximum daisy chain	50 units
Power input	24VDC
Power consumption	3W
Housing	Anodized brushed aluminum with polycarbonate lens
Finish	Silver
Mounting	Pendant or hole mounted
Operating temperature	-10°F to 123°F (-23°C to 50°C)
Weight	0.77 lbs/350 g
Certifications	

Release 3.0a

Dimensions

Clear flat lens model

Ø1.97"
(Ø50mm)

14.92"
(379mm)

Ø1.73"
(Ø44mm)

11.1"
(282mm)

0.18"
(4.5mm)

14.69"
(373mm)

1.42"
(36mm)

2.44"
(62mm)

Diffused flat and domed lens models

Ø1.97"
(Ø50mm)

14.92"
(379mm)

Ø1.73"
(Ø44mm)

1.24"
(31.5mm)

2.48"
(63mm)

11.1"
(282mm)

1.24"
(31.5mm)

14.69"
(373mm)

2.48"
(63mm)

3.43"
(87mm)
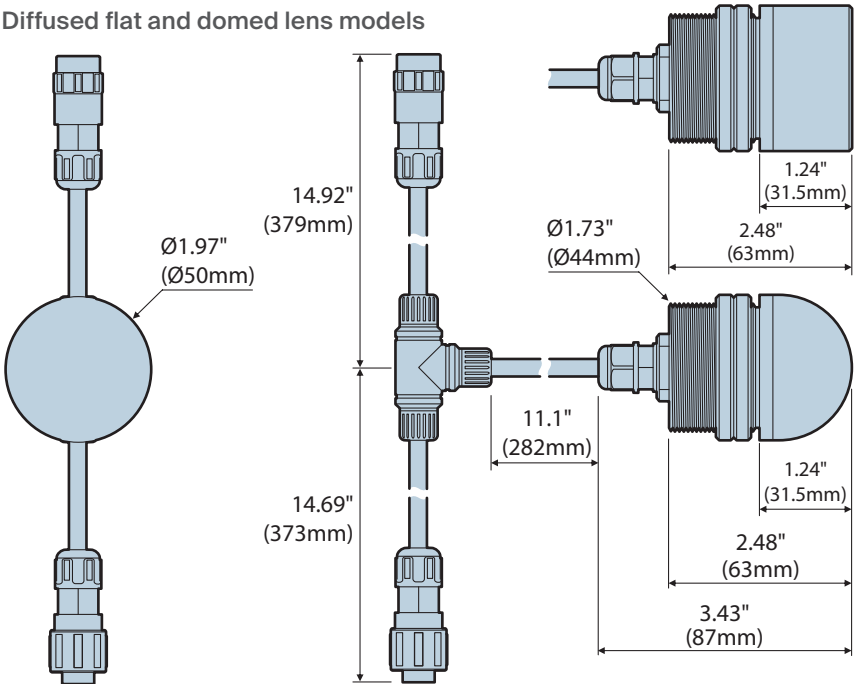
Acclaim™

Limited product warranty

A. Acclaim Lighting™ hereby warrants, to the original purchaser, Acclaim Lighting 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.
- Drivers, power supplies and accessories: 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 Acclaim factory. All shipping charges must be pre-paid. If the requested repairs or service (including parts replacement) are within the terms of this warranty, Acclaim Lighting will pay return shipping charges only to a designated point within the United States. 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, Acclaim Lighting shall have no liability whatsoever for loss of or damage to any such accessories, nor for the safe return there of. Acclaim 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 Acclaim concludes, after inspection, affects the reliability of the product; if the product has been repaired or serviced by anyone other than the Acclaim Lighting factory unless prior written authorization was issued to purchaser by Acclaim Lighting; 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 manufactures by Acclaim lighting. During the period specified above, Acclaim Lighting will replace defective parts at its expense, and will absorb all expenses for warranty service and repair labor by reason of defects in material or workmanship. The sole responsibility of Acclaim Lighting under this warranty shall be limited to the repair of the product, or replacement thereof, including parts, at the sole discretion of Acclaim Lighting. At no time will installation or re-installation or products labor or liability costs will be assumed by Acclaim Lighting. All products covered by this warranty were manufactured after January 1, 2012, and bear identifying serial number marks to that effect.

E. Acclaim Lighting 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 Acclaim Lighting 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 Acclaim lighting products are subject to a 2 year limited warranty and Acclaim 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 Acclaim Lighting 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 Acclaim Lighting products and supersedes all prior warranties and written descriptions of warranty terms and conditions heretofore published.