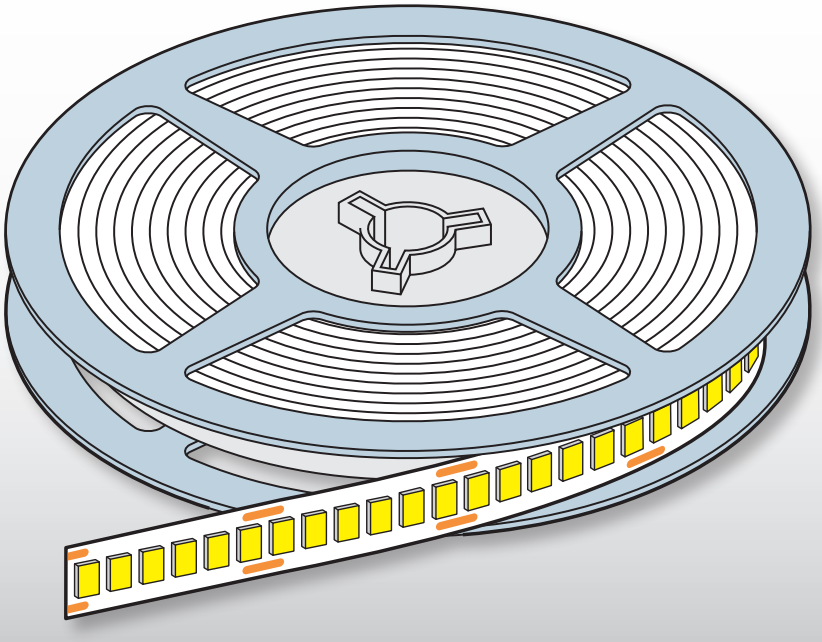
Acclaim™



Flex One Interior™

User guide

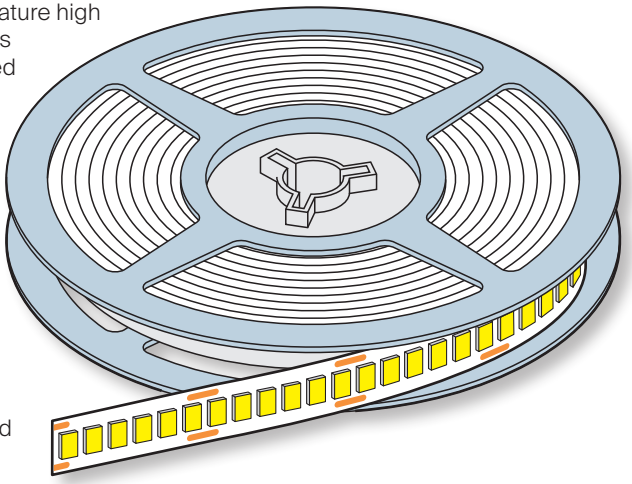
Contents

Introduction

Welcome

Welcome to the Flex One Interior range from Acclaim Lighting. These high output single color LED tapes, together with a wide range of mounting channels (see opposite page), suit many installation situations.

Flex One Interior tapes feature high concentrations of emitters with a choice of Correlated Color Temperature (CCT) options ranging from 2400K to 4000K. At each color temperature, options of Standard Output (SO) operating at 40W per spool and High Output (HO) operating at 90W per spool are provided.



Flex One Interior tapes require a 24VDC supply and dimming is supported using Pulse Width Modulation (PWM) by various optional driver units - see page 10.

Thanks to the careful design and high production standards applied to all Flex One tapes, they have been awarded an ETL Sanitation Mark (ANSI/NSF 2:2015), making them suitable for use in restricted hygiene/food preparation areas.

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.

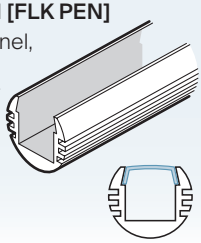
Channel types

A variety of different aluminum channels are available for mounting Flex tapes. For specification sheets and installation guides please refer to the Acclaim Lighting website:

SCAN FOR PRODUCT PAGE

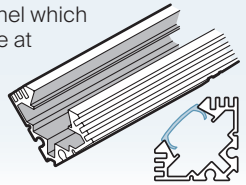
Flex pendant channel [FLK PEN]

A neatly rounded channel, designed to be suspended by wires or rods - with the option of power delivery via the suspension wires/ rods.



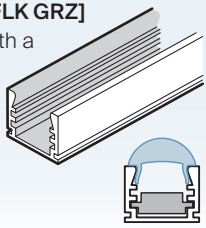
Flex 45 degree channel [FLX 45D]

A low profile channel which holds the Flex tape at 45 degrees to the mounting surface.



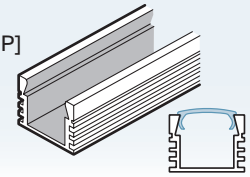
Flex graze channel [FLK GRZ]

Low profile channel with a movable mounting rail and rounded lens to produce a range of beam angles suitable for grazing surfaces.



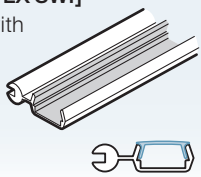
Flex mini square channel [FLX MSP]

A low profile channel with a choice of lenses.



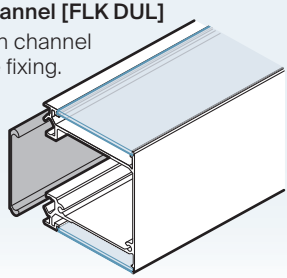
Flex swivel channel [FLX SWI]

A low profile channel with swivel mounts to allow positioning at any angle. Choice of lenses.



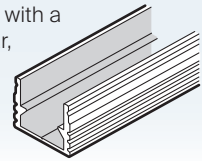
Flex dual channel [FLK DUL]

A box section channel with invisible fixing. The upper and lower surfaces each hold multiple runs of Flex tape.



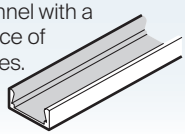
Flex channel tall profile [FLX888]

A tall sided channel to limit light spill, with a choice of clear, frosted or opal lenses.



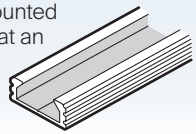
Flex mini channel [FLX MIN]

A very low profile channel with a choice of lenses.



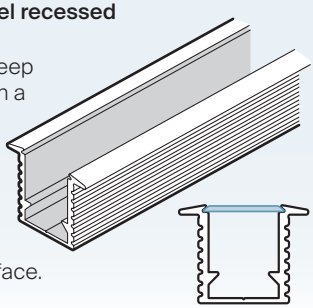
Flex channel low profile [FLX444]

A low profile channel to be mounted flat or at an angle.



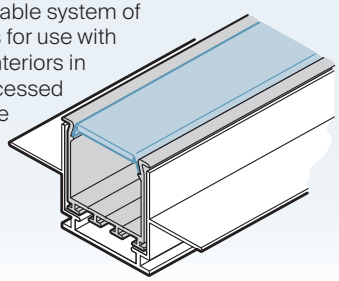
Flex channel recessed [FLX777]

A flanged deep channel with a choice of lenses to provide a neat finish when recessed within a surface.



Flex dry wall channel [FLK DWM]

An adaptable system of channels for use with drywall interiors in either recessed or surface mount config- urations.



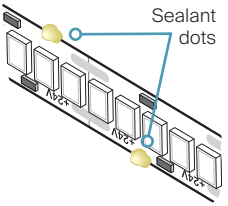
Installation

Mounting

Flex One Interior tapes are supplied with 3M™ VHB acrylic adhesive backing, protected by a peel-off paper liner. To ensure that good adhesion is achieved, ensure the mounting surface is free of grease, moisture and any contaminates.

When mounting on the sides or undersides of surfaces

We recommend that you add small dots of silicone sealant along both sides of the Flex tape (to overlap the tape edge and mounting surface) using Dow Corning® 799, 1199 or equivalent. This will provide additional stability and help to prevent any separation of the tape from the mounting surface over time. The silicone dots are best applied once the tape is fixed in place; then the whole installation should not be disturbed until it the sealant has fully cured.



Cleaning and preparing the mounting surface

Most substrates are best prepared by cleaning with a 50:50 mixture of isopropyl alcohol (IPA) and water* prior to applying the tape. Exceptions to this general procedure that may require additional surface preparation include:

Heavy oils

A degreaser or solvent-based cleaner* (such as 3M™ Prep Solvent 70, 3M™ Citrus Base Cleaner, mineral spirits, naphtha or similar, subject to suitability for the surface material) may be required to remove heavy oil or grease from a surface and should be followed by cleaning with IPA/water*.

Other contamination or oxidation

Abrading a surface, followed by cleaning with IPA/water*, can remove heavy dirt or oxidation (e.g. galvanized steel) and can increase surface area to improve adhesion. Abrasion often also helps adhesion to paints and plastics. Very small scratches in the surface, generated with circular motion rather than straight-line motion, are most desirable.

* *Note: These cleaner solutions contain greater than 250 g/l of volatile organic compounds (VOC). Please consult your local Air Quality Regulations to be sure the cleaner is compliant. When using solvents, be sure to follow the manufacturer's precautions and directions for use when handling such materials.*

Mounting surface advice

The 3M™ VHB adhesive applied to the back of Flex One tapes provides adhesion to a wide variety of surfaces. Advice for the preparation of certain surfaces is given below.

Wood, particle board and cement surfaces

Rough, porous or fibered materials such as wood, particleboard, cement, etc., have an open surface and require sealing to provide a unified surface for tape bonding. Common sealing materials include paint, varnish or other hard surface coatings. Fast drying 3M™ Rubber and Vinyl Spray 80 can also be used to unify the surface and improve the tape bond.

Glass, stone, ceramic and rubber surfaces

Glass, stone, ceramic or other siliceous materials are hydrophilic (water-loving) by nature. Normally, the hydrophilic nature makes pressure sensitive adhesive bond durability susceptible to change under high humidity or exposure to moisture. In basic terms, water vapor can undercut the tape bond and interfere with the normal adhesion forces. Silane coupling agents, added to the IPA/water cleaning solution, can help reduce the “water-loving” tendency of these surfaces and enhance the tape bond in high moisture environments.

Copper, brass and bronze surfaces

Copper, brass, and bronze are prone to oxidation even after the tape is applied. To prevent a weakening of the bond, a lacquer or varnish should be applied to these surfaces. Be sure to test the tape bond to the sealer on a metal surface to verify good adhesion.

PVC and rubber surfaces

Flexible PVC (vinyl) contains plasticizers that can migrate into the tape and affect adhesion. 3M™ Scotch-Grip™ Plastic Adhesive 2262, thinned, can serve as a barrier to migration. Rubber materials (e.g. EPDM, neoprene) can have low surface energy and may also contain plasticizers and oils. These require the use of an adhesion promoter for stable bond strength. Test for compatibility with flexible PVC and rubber materials by aging bonded samples for a week at 150°F (66°C) and check for softening of the adhesive, discoloration or reduction in bond strength.

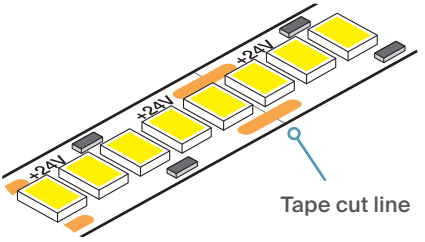
Cutting and connecting the tape

Flex One tapes are supplied with a fixed 3.28' (1m) feed cable (with bare tails). If cut to size, new tape connections can be made by soldering.

To cut the tape

Flex One tapes are marked with a cut line every 0.98" (25mm) - every six LED emitters.

IMPORTANT: Do not cut the tape at any location other than the cut line as this will prevent correct operation and also void your warranty. Ensure the cut is made cleanly along the line.



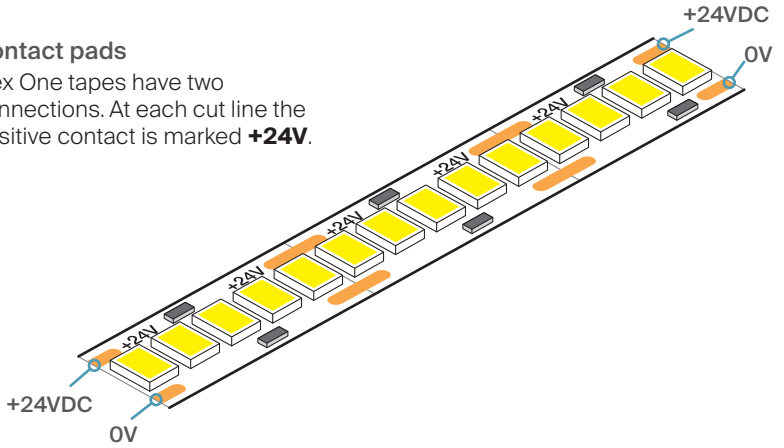
To solder the tape

Once cuts are made to a Flex One tape, connections need to be made to the new sections. Either side of each cut line are bare copper contact pads where you can make solder connections.

Note: When soldering, minimize the time spent heating the tape to avoid damage to the nearby components.

Contact pads

Flex One tapes have two connections. At each cut line the positive contact is marked **+24V**.



Powering Flex One tapes

Power requirements

Flex One tapes are run at 24VDC and consume power as shown below. *Note: The average power consumption per foot decreases as the length increases due to increased voltage drops on longer lengths.*

	Flex One SO		**Flex One HO**	
	Power consumption		Power consumption	
Length	*Total*	*(Average per foot)*	*Total*	*(Average per foot)*
1' (30cm)	3W	(3W)	13W	(13W)
2' (60cm)	6W	(3W)	14W	(7W)
3' (91cm)	9W	(3W)	20W	(6.66W)
4' (1.2m)	12W	(3W)	26W	(6.5W)
5' (1.5m)	14W	(2.8W)	32W	(6.4W)
6' (1.8m)	16W	(2.66W)	38W	(6.33W)
7' (2.1m)	18W	(2.57W)	43W	(6.14W)
8' (2.4m)	20W	(2.5W)	48W	(6W)
9' (2.7m)	22W	(2.44W)	54W	(6W)
10' (3m)	24W	(2.4W)	59W	(5.9W)
11' (3.3m)	26W	(2.36W)	64W	(5.81W)
12' (3.6m)	28W	(2.33W)	69W	(5.75W)
13' (3.9m)	30W	(2.3W)	73W	(5.61W)
14' (4.2m)	32W	(2.28W)	78W	(5.57W)
15' (4.5m)	34W	(2.26W)	82W	(5.4W)
16.4' (5m)	40W	(2.43W)	90W	(5.5W)

Note: The maximum overall tape length per run is 16.4' (5 meters). This is limited by the current capacity of the power buses within each tape.

Connection cables

The connection cables (not supplied) used to link Flex One tapes to the power/driver unit should follow these guidelines:

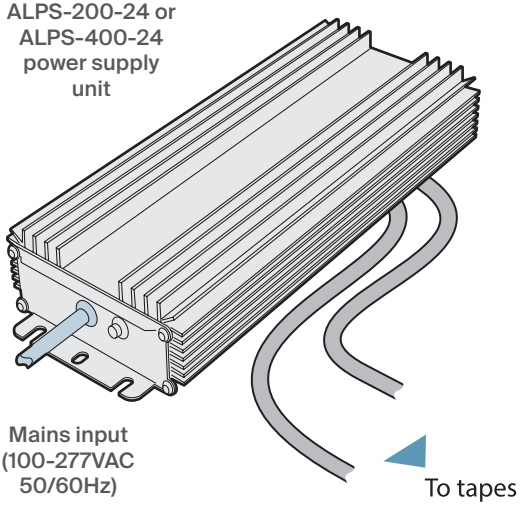
Cable cross section	Flex One **SO**	Flex One **HO**
18 AWG (0.823mm^2)	Up to 80 feet (24m)	Up to 40 feet (12m)
14 AWG (2.081mm^2)	Up to 200 feet (60m)	Up to 100 feet (30m)
12 AWG (3.309mm^2)	Up to 300 feet (91m)	Up to 180 feet (54m)

In all cases, ensure the voltage drop at the fixture end of the link cable is no greater than 8% (1.92V) of the original 24VDC supply.

Connecting and controlling

Non-Dim

Use Acclaim Lighting ALPS-96-24, ALPS-200-24 or ALPS-400-24 power supplies.



ALPS-96-24:
SO: 2 spools HO: 1 spool

ALPS-200-24:
SO: 5 spools HO: 2 spools

ALPS-400-24:
SO: 10 spools HO: 4 spools

Link cables require 2 cores.
See cable recommendations on page 7.

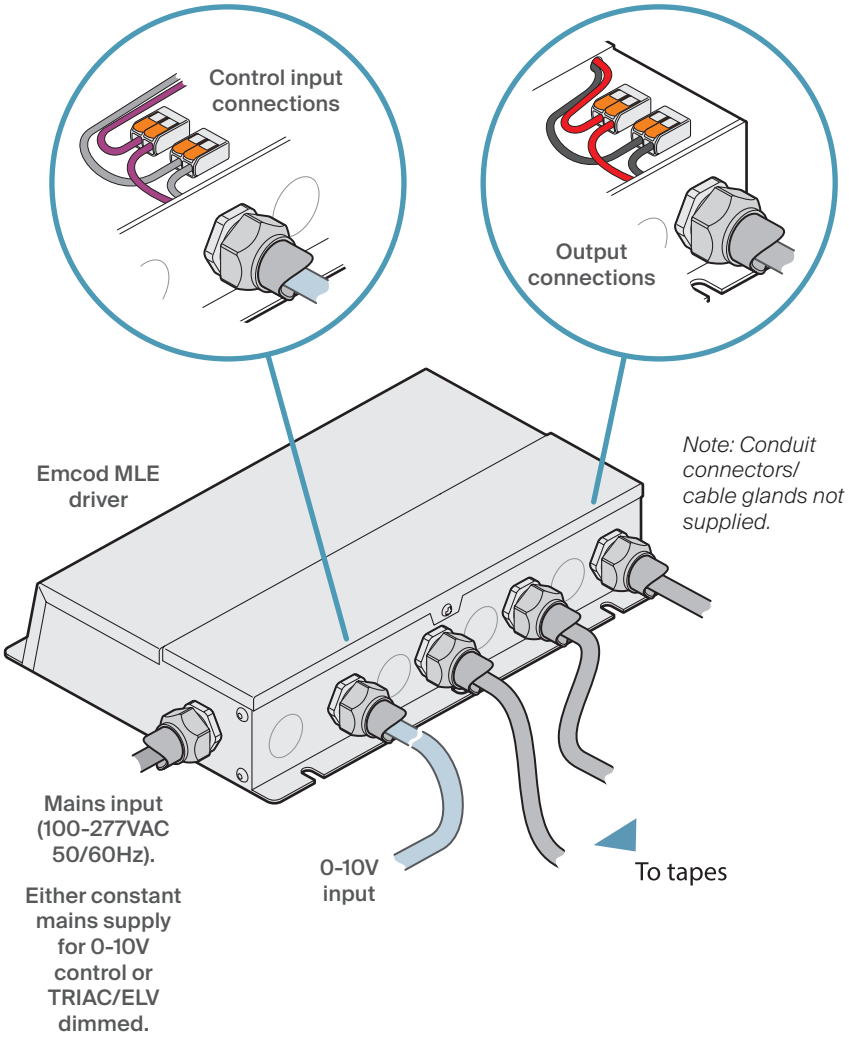
Dimmed (0-10V or TRIAC/ELV control)

These drivers provide 24VDC constant voltage PWM output in response to either a low voltage control input or dimmed mains source:

- A 0-10V (source or sink) analog dimming control input plus a constant mains supply, or
- A TRIAC (forward phase) or ELV (reverse phase) dimmed mains feed.

Link cables require 2 cores. See cable recommendations on page 7.

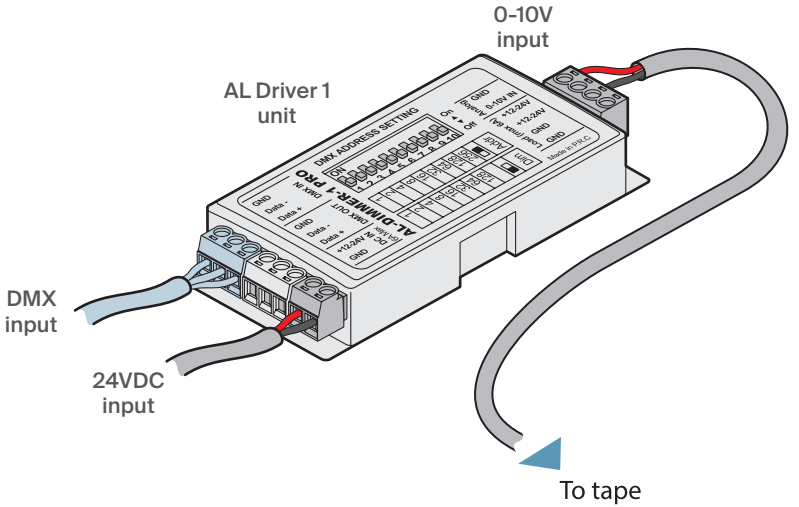
- MLE96 *[part #: MLE96-24DC-UD]* SO: 2 spools HO: 1 spool maximum
- MLE192 *[part #: MLE192-24DC-UD]* SO: 4 spools HO: 2 spools maximum
- MLE288 *[part #: MLE288-24DC-UD]* SO: 6 spools HO: 3 spools maximum



Dimmed (0-10V or DMX control)

Use Acclaim Lighting AL Driver 1 [part #: ALD001] + ALPS-96-24 power supply.

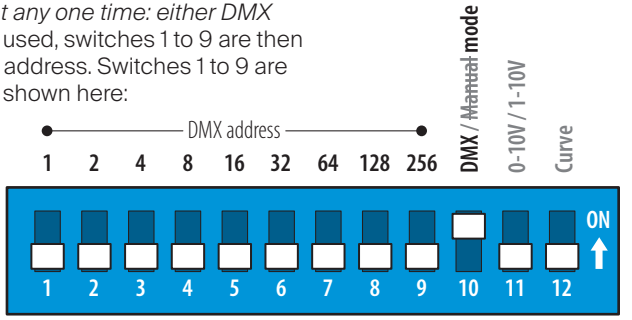
The AL Driver 1 module controls one spool of Flex One HO (or up to two spools of paired Flex One SO), either using an external DMX digital signal, an external 0-10V/1-10V analog signal or using standalone intensity mixes. The AL Driver 1 is a constant voltage device and needs to operate from a 24VDC power supply (5A maximum).



External dimming control

To select external control, ensure that switch 10 is ON. *Note: The DMX and analog (0-10V/1-10V) inputs are both active in this mode, so it is important that only one set of inputs are connected at any one time: either DMX **OR** analog.* When DMX is used, switches 1 to 9 are then used to set the DMX start address. Switches 1 to 9 are 'weighted' with a value as shown here:

Note: Numerous apps are available to assist you with configuring the correct switch combinations for a given DMX address.



0-10V / 1-10V selection

Using switch 11, you can choose between 0-10V current source (active) [sw11-OFF] or 1-10V current sink (passive) [sw11-ON] control inputs. The primary difference between the two schemes lies with where the control voltage should be generated: ***Current source*** requires the controlling device to provide (source) the control voltage; whereas ***Current sink*** mandates that the controlled fixture must provide the voltage.

Optional curve smoothing

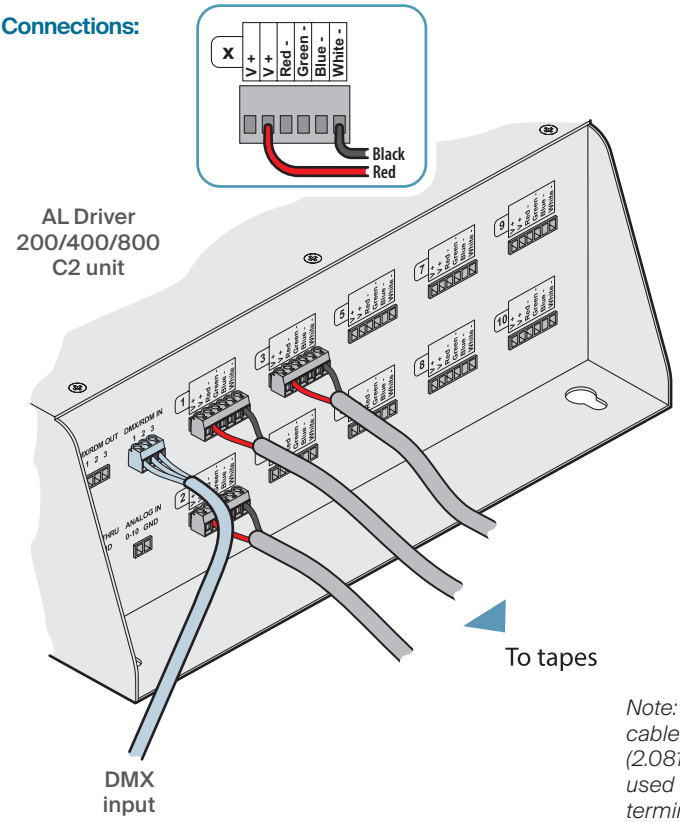
When switch 12 is set to ON, additional intermediate steps are added to the response curve to help eradicate any visible stepping between the usual 256 (8-bit) dimming levels.

Dimmed (0-10V, DALI or DMX control)

Four ports: [part #: AL Driver 200 C2]
Six ports: [part #: AL Driver 400 C2] or
Ten ports: [part #: AL Driver 800 C2].

The full size AL Drivers provide multi-channel dimming control for Flex tapes. All three models are connected and configured in similar ways; it is the number of ports and total overall current capacity that varies.

Connections:



Note: A maximum cable size of 14 AWG (2.081mm²) can be used directly within the terminal block contacts.

On all models, each port can support a maximum of **6.6A**, however, the maximum overall load across all ports must not exceed the following:

	AL Driver 200 C2	AL Driver 400 C2	AL Driver 800 C2
Maximum overall current	8A	16.5A	33A
Flex One SO	4 spools	9 spools	18 spools
Flex One HO	2 spools	4 spools	8 spools

Further information

Troubleshooting

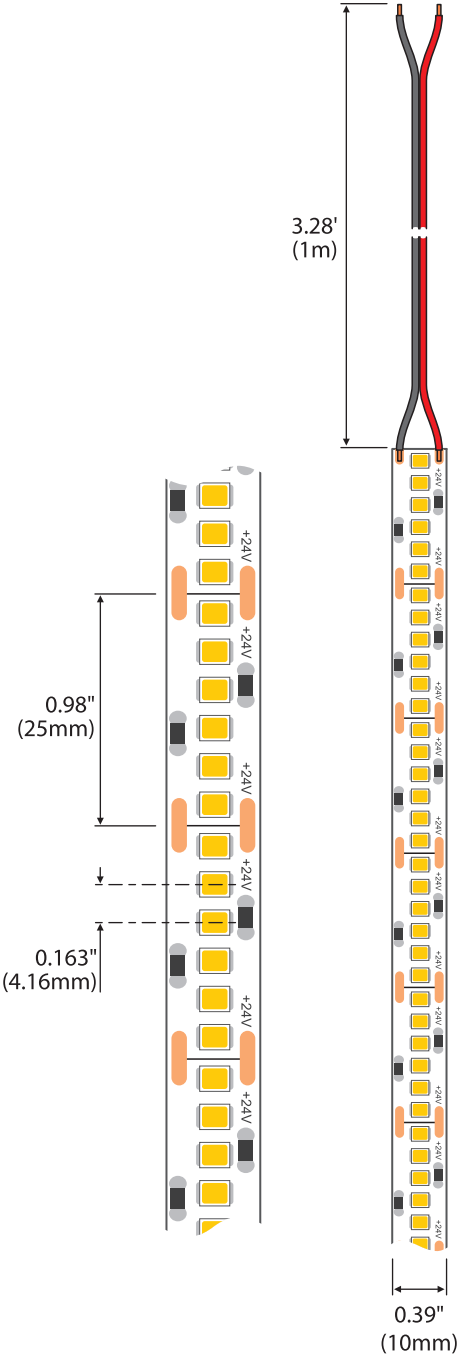
No light output is visible when expected.

- Check that power is correctly applied to the fixture and that there is no damage to the power input cord.
- Check that the connections to the feed cable have the correct polarity.
- Check that the DMX address set within the driver module matches that being output by the controlling source device.

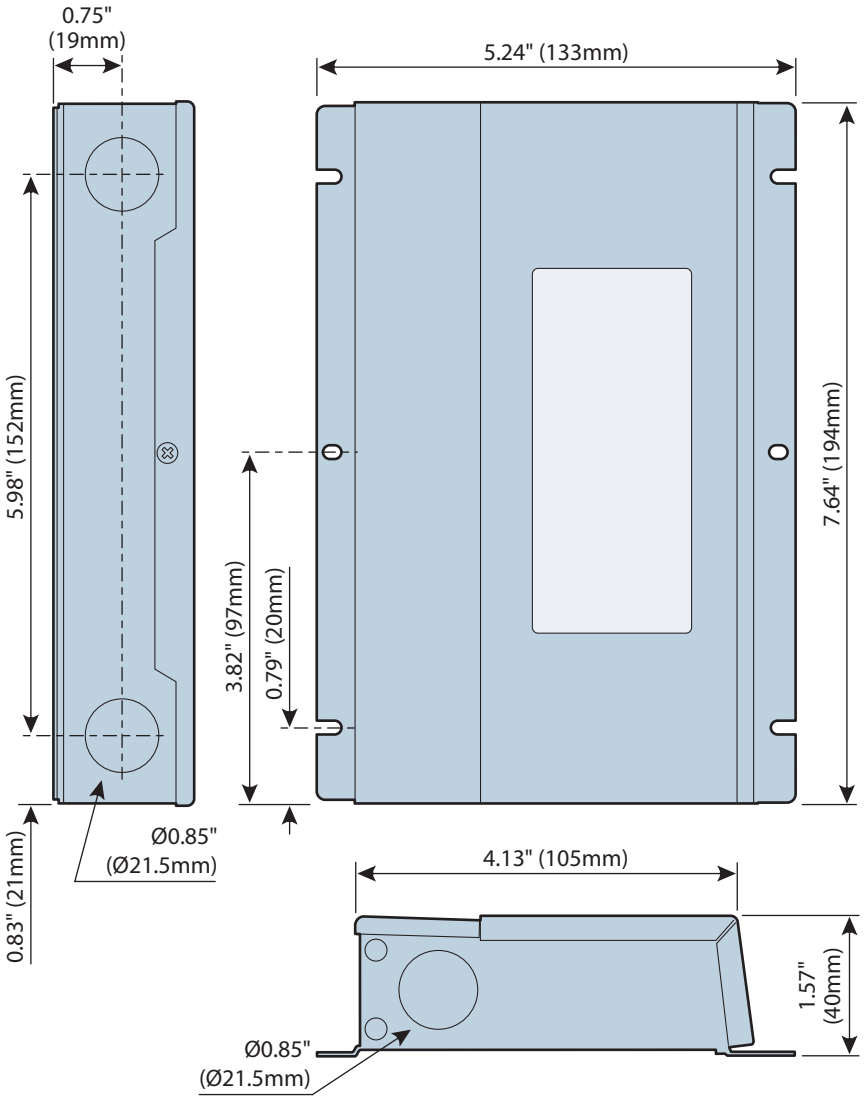
Specifications

Beam angle	116°
Color temperature (CCT)	2400K, 2700K, 3000K, 3500K or 4000K
Lumens	Flex One **SO**: Up to 235 @ 4000K (1' section) Flex One **HO**: Up to 566 @ 3000K (1' section)
Efficacy (lm/W)	Flex One **SO**: Up to 96.7 @ 4000K Flex One **HO**: Up to 102.9 @ 3000K
Color Rendering Index (CRI)	Flex One **SO**: 97.3 @ 3000K Flex One **HO**: 96.5 @ 3000K
Lumen maintenance (L_{70})	50,000 hours (25°C max)
Operating voltage	24VDC
Power consumption	See "Power requirements" on page 7
Dimming control	Pulse width modulation
Maximum overall length	16.4' (5m)
Cut points	Every 0.98" (25mm)
Ingress protection	IP20 (dry location)
Impact protection	IK00 (not protected)
Dimensions (L x W x H)	16.4' x 0.39" x 0.07" 5000 x 10 x 1.8mm
Operating temperature	32°F to 104°F 0°C to 40°C
Housing	Copper strip, white coating 3M™ VHB™ adhesive backing
Certifications	

Dimensions - Flex One Interior

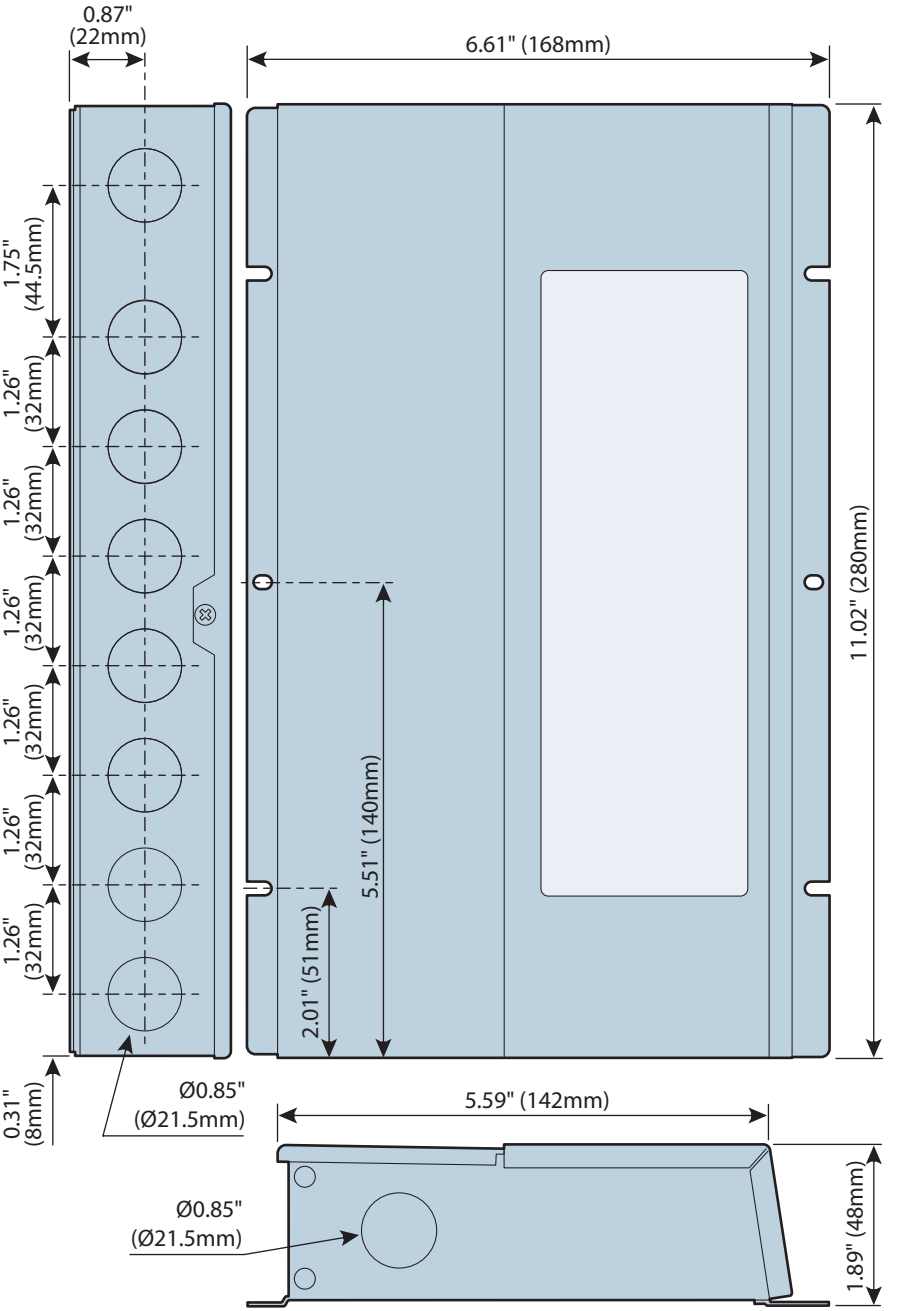


Dimensions - MLE Driver 96



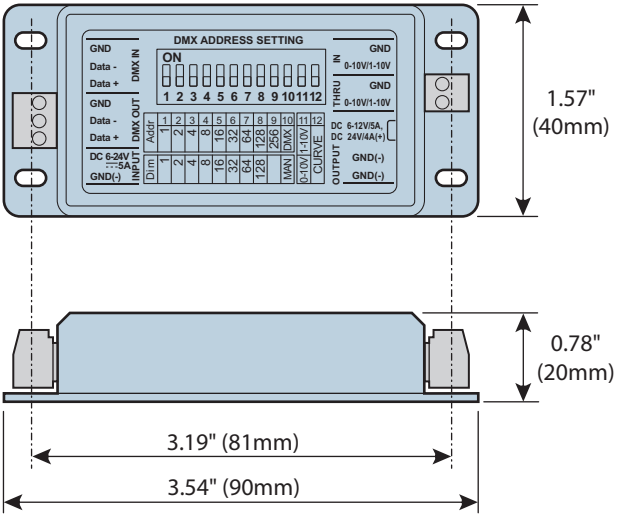
Weight: 3.1 lbs (1.4kg)

Dimensions - MLE Drivers 192 and 288



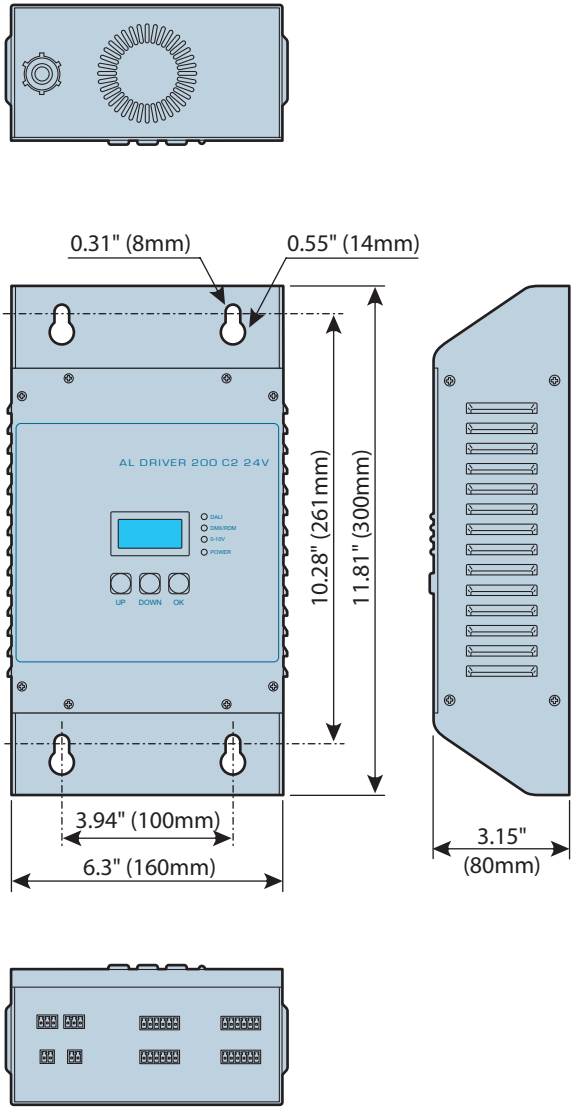
Weight (192): 5.5 lbs (2.5kg)
Weight (288): 5.7 lbs (2.6kg)

Dimensions - AL Driver 1



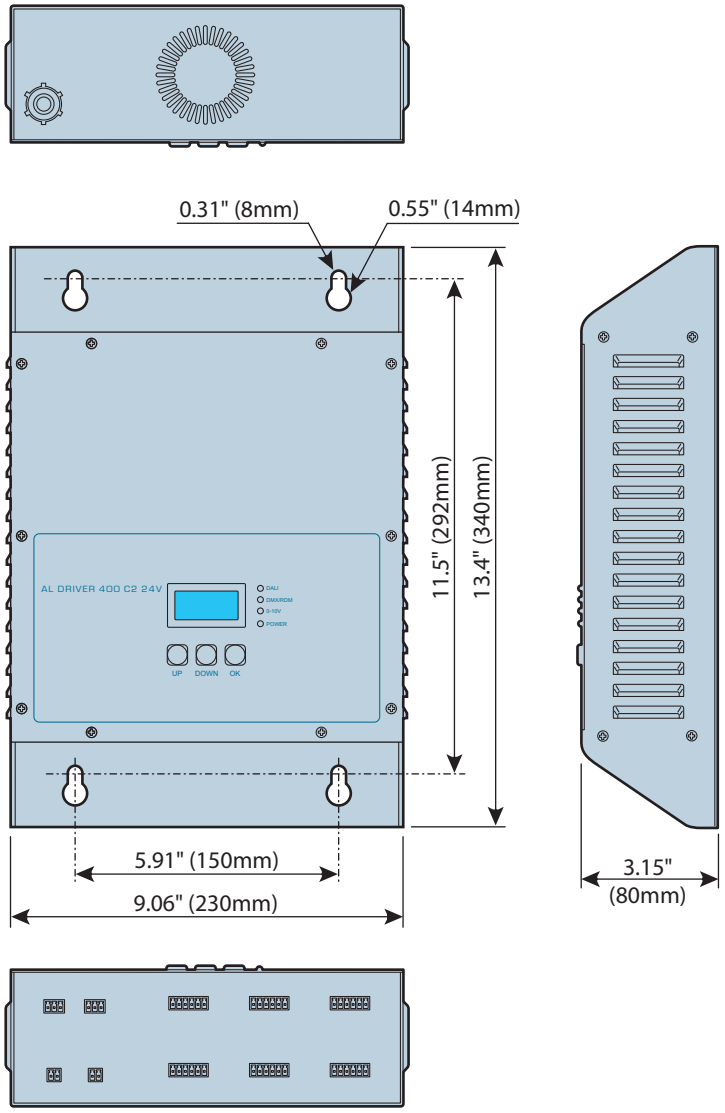
Weight: 0.1 lbs (45g)

Dimensions - AL Driver 200 C2



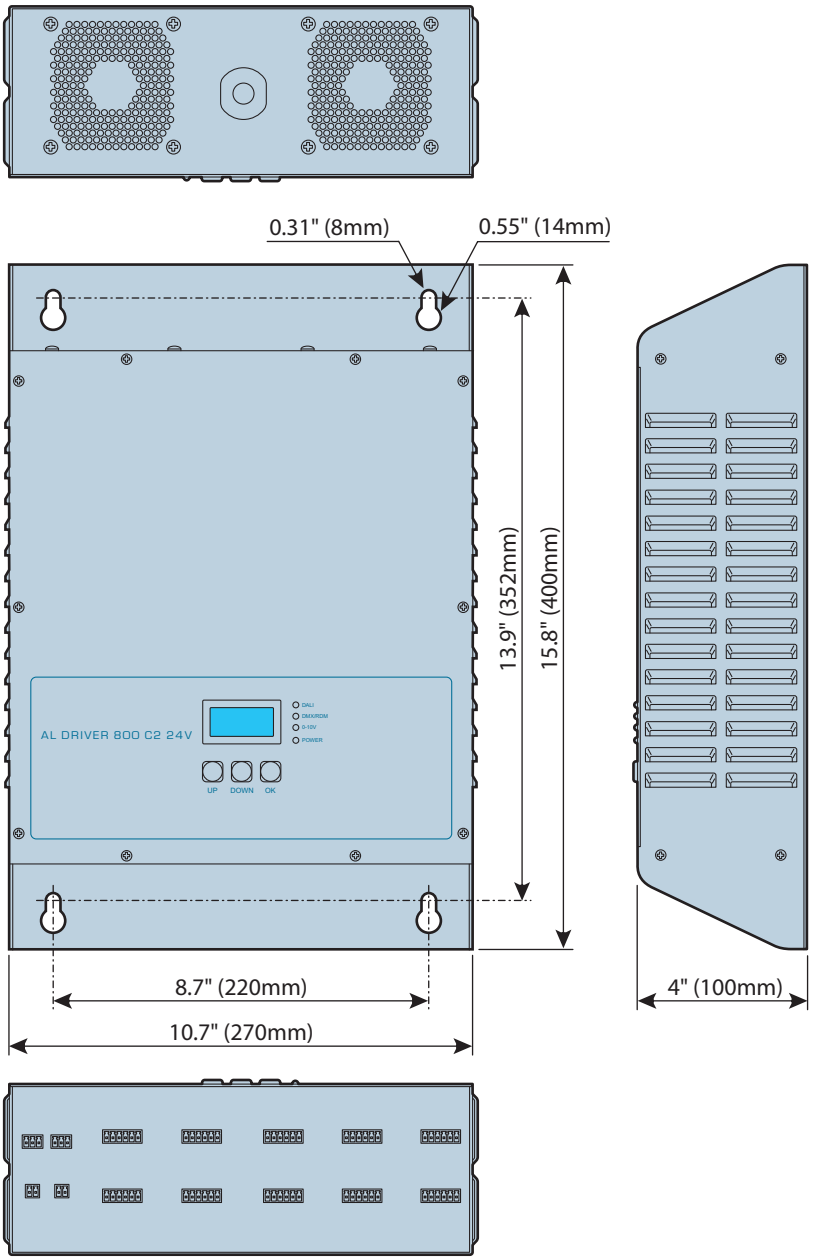
Weight: 5.29 lbs (2.4kg)

Dimensions - AL Driver 400 C2



Weight: 8.4 lbs (3.8kg)

Dimensions - AL Driver 800 C2



Weight: 12.1 lbs (5.5kg)

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:

- Flex Graze: 10 years (3,652 days) from the date of purchase.
- 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.
- 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.

www.acclaimlighting.com