

PIXEL BAR 12 / 20 / 40™

user manual

ELATION

PIXEL BAR 12 / 20 / 40™

user manual

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DOCUMENT VERSION



Please check www.elationlighting.com for the latest revision/update of this manual.

Date	Document Version	DMX Channel Modes	Notes
11/04/15	1	12* / 20* / 40*	Updated manual format, added tube lens installation section.
07/22/16	2	12* / 20* / 40*	Updated system configuration diagram.
12/22/16	2.1	12* / 20* / 40*	Added notice regarding maximum CAT5e cable length (98.4 ft / 30m MAX). Updated system configuration diagram.

*DMX Channel Modes are specific to the **PIXEL BAR™** model (12, 20, 40).

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GENERAL INFORMATION

INTRODUCTION

Congratulations, you have just purchased one of the most innovative and reliable lighting fixtures on the market today! The fixture has been designed to perform reliably for years when the guidelines in this booklet are followed. Please read and understand the instructions in this manual carefully and thoroughly before attempting to operate this unit. These instructions contain important information regarding safety during use and maintenance.

UNPACKING

Every fixture has been thoroughly tested and has been shipped in perfect operating condition. Carefully check the shipping carton for damage that may have occurred during shipping. If the carton appears to be damaged, carefully inspect your unit for damage and be sure all accessories necessary to operate the unit have arrived intact. In the event damage has been found or parts are missing, please contact our customer support team for further instructions. Please do not return this unit to your dealer without first contacting customer support at the number listed below. Please do not discard the shipping carton in the trash. Please recycle whenever possible.

BOX CONTENTS

- (1) Mounting Bracket
- Manual & Warranty Card

CUSTOMER SUPPORT

Elation Professional® provides a customer support line, to provide set up help and to answer any question should you encounter problems during your set up or initial operation. You may also visit us on the web at www.elationlighting.com for any comments or suggestions. For service related issue please contact Elation Professional®.

ELATION SERVICE USA - Monday - Friday 8:00am to 5:00pm PST

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WARRANTY REGISTRATION

Please complete and mail in the enclosed warranty card or register online: <http://www.elationlighting.com/Login.aspx> to validate your purchase. All returned service items whether under warranty or not, must be freight pre-paid and accompany a return authorization (R.A.) number. The R.A. number must be clearly written on the outside of the return package. A brief description of the problem as well as the R.A. number must also be written down on a piece of paper and included in the shipping container. If the unit is under warranty, you must provide a copy of your proof of purchase invoice. Items returned without a R.A. number clearly marked on the outside of the package will be refused and returned at customer's expense. You may obtain a R.A. number by contacting customer support.

IMPORTANT NOTICE!

There are no user serviceable parts inside this unit. Do not attempt any repairs yourself; doing so will void your manufactures warranty. Damages resulting from modifications to this fixture and/or the disregard of safety and general user instructions found in this user manual void the manufactures warranty and are not subject to any warranty claims and/or repairs.

LIMITED WARRANTY

A. Elation Professional® hereby warrants, to the original purchaser, Elation Professional® products to be free of manufacturing defects in material and workmanship for a period of two years (730 days), and Elation Professional® product rechargeable batteries to be free of manufacturing defects in material and workmanship for a period of six months (180 days), from the original date of purchase. This warranty excludes discharge lamps and all product accessories. This warranty shall be valid only if the product is purchased within the United States of America, including possessions and territories. It is the owner's responsibility to establish the date and place of purchase by acceptable evidence, at the time service is sought.

B. For warranty service, send the product only to the Elation Professional® factory. All shipping charges must be pre-paid. If the requested repairs or service (including parts replacement) are within the terms of this warranty, Elation Professional® will pay return shipping charges only to a designated point within the United States. If any product is sent, it must be shipped in its original package and packaging material. No accessories should be shipped with the product. If any accessories are shipped with the product, Elation Professional® shall have no liability what so ever for loss and/or or damage to any such accessories, nor for the safe return thereof.

C. This warranty is void if the product serial number and/or labels are altered or removed; if the product is modified in any manner which Elation Professional® concludes, after inspection, affects the reliability of the product; if the product has been repaired or serviced by anyone other than the Elation Professional® factory unless prior written authorization was issued to purchaser by Elation Professional®; if the product is damaged because not properly maintained as set forth in the product instructions, guidelines and/or user manual.

D. This is not a service contract, and this warranty does not include any maintenance, cleaning or periodic check-up. During the periods as specified above, Elation Professional® 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 Elation Professional® under this warranty shall be limited to the repair of the product, or replacement thereof, including parts, at the sole discretion of Elation Professional®. All products covered by this warranty were manufactured after January 1, 1990, and bare identifying marks to that effect.

E. Elation Professional® reserves the right to make changes in design and/or performance improvements upon its products without any obligation to include these changes in any products theretofore manufactured.

F. No warranty, whether expressed or implied, is given or made with respect to any accessory supplied with the products described above. Except to the extent prohibited by applicable law, all implied warranties made by Elation Professional® in connection with this product, including warranties of merchantability or fitness, are limited in duration to the warranty periods set forth above. And no warranties, whether expressed or implied, including warranties of merchantability or fitness, shall apply to this product after said periods have expired. The consumer's and/or dealer's sole remedy shall be such repair or replacement as is expressly provided above; and under no circumstances shall Elation Professional® be liable for any loss and/or damage, direct and/or consequential, arising out of the use of, and/or the inability to use, this product.

G. This warranty is the only written warranty applicable to Elation Professional® products and supersedes all prior warranties and written descriptions of warranty terms and conditions heretofore published.

SAFETY INSTRUCTIONS



This fixture is an extremely sophisticated piece of electronic equipment. To guarantee a smooth operation, it is important to follow the guidelines in this manual. The manufacturer of this device will not accept responsibility for damages resulting from the misuse of this fixture due to the disregard of the information printed in this manual.



This device falls under **PROTECTION CLASS 1**. It's essential this device be grounded properly. Only qualified personnel should perform all electrical connections.



I N D O O R S U S E O N L Y !
DO NOT EXPOSE FIXTURE RAIN AND MOISTURE!



UNPLUG POWER BEFORE SERVICING FIXTURE!
DO NOT PLUG FIXTURE INTO A DIMMER PACK!
NEVER TOUCH FIXTURE DURING OPERATION, AS IT MAY BE HOT!



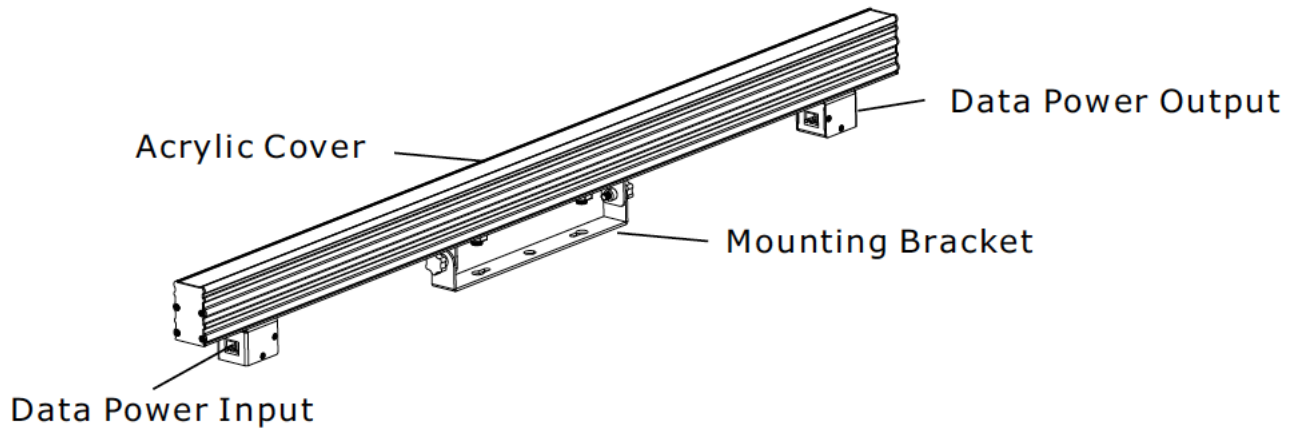
NEVER LOOK DIRECTLY INTO THE LIGHT SOURCE!
SENSITIVE PERSONS MAY SUFFER AN EPILEPTIC SHOCK!

- For proper operation, follow the **Installation** guidelines described in this manual. Only qualified and certified personnel should perform installation of this fixture and only the original rigging parts (brackets) included with this fixture should be used for installation. Any modifications will void the original manufacturer's warranty and increase the risk of damage and/or personal injury.
- Never look directly into the light source of this fixture to prevent risk of injury to your retina, which may induce blindness. Those suffering from **EPILEPSY** should avoid looking directly into the light source of this unit at all times.
- Always disconnect from main power source before performing any type of service and/or cleaning procedure.

GENERAL GUIDELINES

- **NEVER OPEN THIS FIXTURE WHILE IN USE!**
- **DO NOT CONNECT THIS DEVICE TO A DIMMER PACK!**
- This fixture is a professional lighting effect designed for **INDOOR / DRY LOCATIONS ONLY** on stage, in nightclubs, theatres, etc.
- Please make sure there are **NO FLAMMABLE MATERIALS** close to the fixture while operating, to prevent any fire hazard.
- Device must be installed in a location with adequate ventilation.
- Smoke fluid residue, dust and any excessive particle residue will degrade product performance, cause overheating and damage fixture. Damages caused by inadequate cleaning or maintenance are not covered by product warranty.
- **DO NOT** attempt installation and/or operation without knowledge how to do so.
- **DO NOT** permit operation by persons who are not qualified to operate this type of fixture. Most damages are the result of operations by nonprofessionals.
- Consistent operational breaks may ensure the fixture will function properly for many years to come.
- **DO NOT** shake fixture, avoid brute force when installing and/or operating fixture.
- Always install the fixture with an appropriate safety cable. When installing the fixture in a suspended environment, always use mounting hardware that is no less than M10 x 25 mm, also be sure the hardware is insert in the pre-arranged screw holes in the bracket of the fixture.
- Use the original packaging and materials to transport the fixture in for service.
- **DO NOT TOUCH** the housing bare-hand during its operation. Turn OFF the power and allow approximately 15 minutes for the fixture to cool down before replacing or serving.

FIXTURE OVERVIEW



FIXTURE INSTALLATION



FLAMMABLE MATERIAL WARNING

Keep fixture at least 5.0 ft. (1.5m) away from any flammable materials, decorations, pyrotechnics, etc.



ELECTRICAL CONNECTIONS

A qualified electrician should be used for all electrical connections and/or installations.



CAUTIONS

- For added protection, mount the fixture in areas outside walking paths, seating areas, or in areas where unauthorized personnel might reach the fixture.
- Ambient operating temperature range for this fixture is **32° to 104°F (0° to 40°C)**. Do not use the fixture below or above this temperature.
- Before mounting the fixture to any surface, make sure the installation area can hold a minimum point load of 10 times the weight of the fixture.
- Fixture installation must always be secured with a secondary safety attachment, such as an appropriate safety cable.
- Never stand directly below the device when mounting, removing or servicing.



DEVICE LINKING TO SINGLE PIXEL NET 4™ DEVICE

Maximum number of bars that can be power linked to a single **PIXEL NET 4™** device:

PIXEL BAR12™ - Max 52 bars (13 per each output port)

PIXEL BAR20™ - Max 32 bars (8 per each output port)

PIXEL BAR40™ - Max 16 bars (4 per each output port)

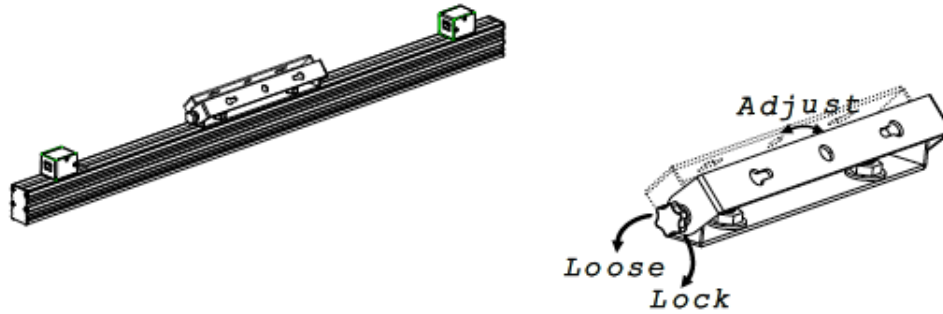
***CAT5e cable length from PIXEL NET 4 port to last PIXEL BAR unit = 98.4 ft (30m) MAX**

MOUNTING

The **PIXEL BAR™** provides an integrated rigging bracket.

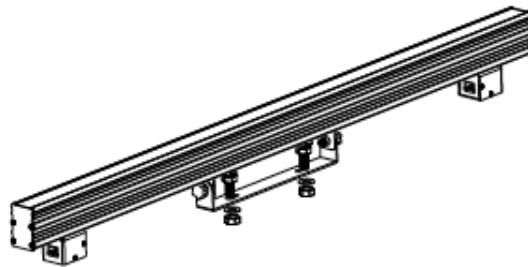
ADJUSTABLE MOUNTING BRACKET

Adjust the attached mounting bracket by loosening the thumbscrew, set the fixture to the desired position then tighten the thumbscrew to secure the fixture position.



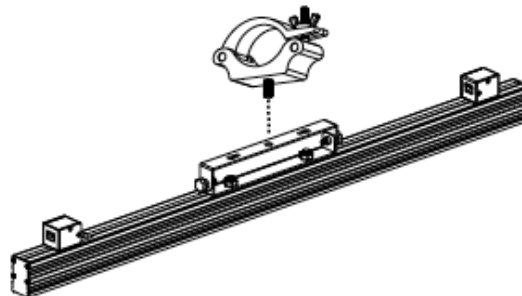
SURFACE MOUNTING

Use the attached mounting bracket to install the fixture to a desired surface.



RIGGING

Using an M10 bolt, secure an appropriately rated rigging clamp to the attached mounting bracket, to install the fixture to truss.

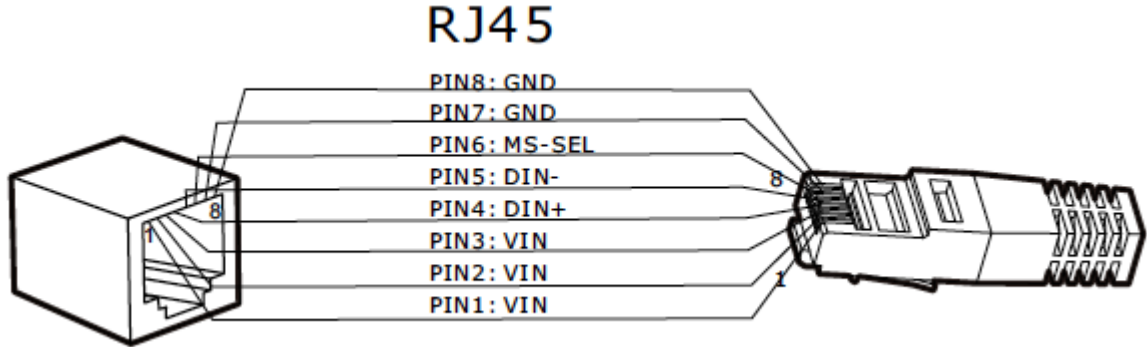


SAFETY CABLE

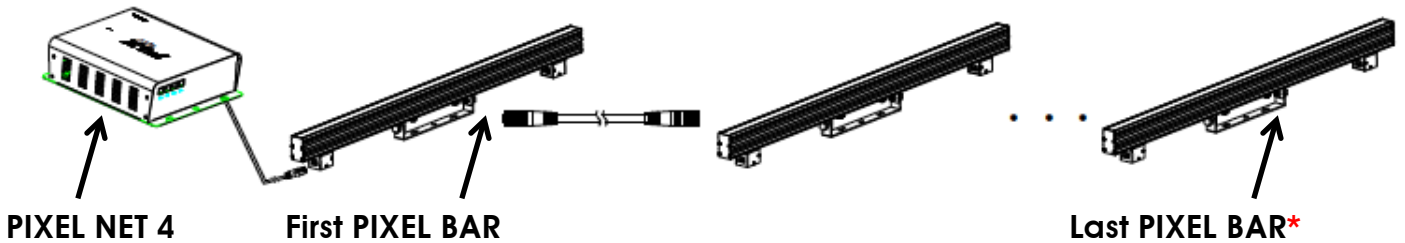
ALWAYS USE A SAFETY CABLE WHENEVER INSTALLING THIS FIXTURE IN A SUSPENDED ENVIRONMENT TO ENSURE THE FIXTURE WILL NOT DROP IF THE CLAMP FAILS.

POWER AND DATA CONNECTIONS

Power and data are supplied to the **PIXEL BARS** via the input and output RJ45 connectors and CAT5e Ethernet cable using a daisy chaining method. The following diagram indicates the pin assignment of the RJ45 connector.



Power and data are connected to the **PIXEL BAR™** via the **PIXEL NET 4™** device. (Sold separately) Connect the output of the **PIXEL NET 4™** device directly to the input of the first **PIXEL BAR™**. Connect the output of the first fixture in the chain to the input of the next fixture. Always connect one output with the input of the next fixture until all fixtures are connected. The following diagram provides an example of power and data connections.



***SEE NOTE BELOW**



POWER LINKING

Maximum number of bars that can be power linked to a single **PIXEL NET 4™** device:

PIXEL BAR12™ - Max 52 bars (13 per each output port)

PIXEL BAR20™ - Max 32 bars (8 per each output port)

PIXEL BAR40™ - Max 16 bars (4 per each output port)

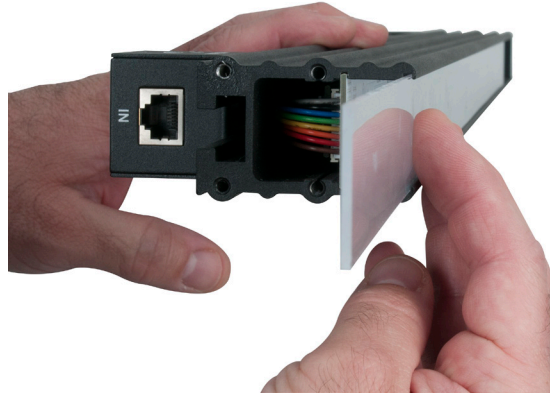
***CAT5e cable length from PIXEL NET 4 port to last PIXEL BAR unit = 98.4 ft (30m) MAX**

TUBE LENS INSTALLATION

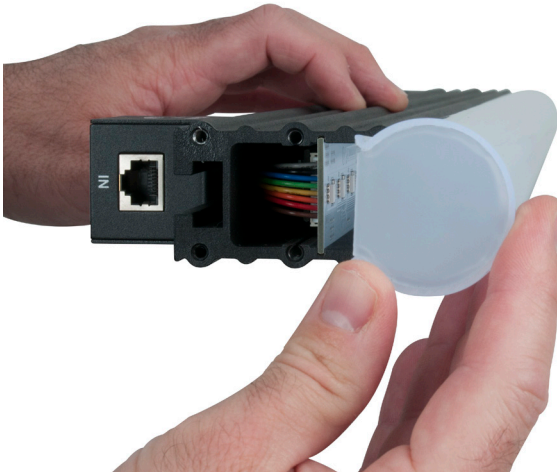
An optional frost tube lens can be installed to replace the included flat frost lens.



1. Remove End Plate (4) Screws.



2. Remove Flat Frost Lens.



3. Install Frost Tube Lens.

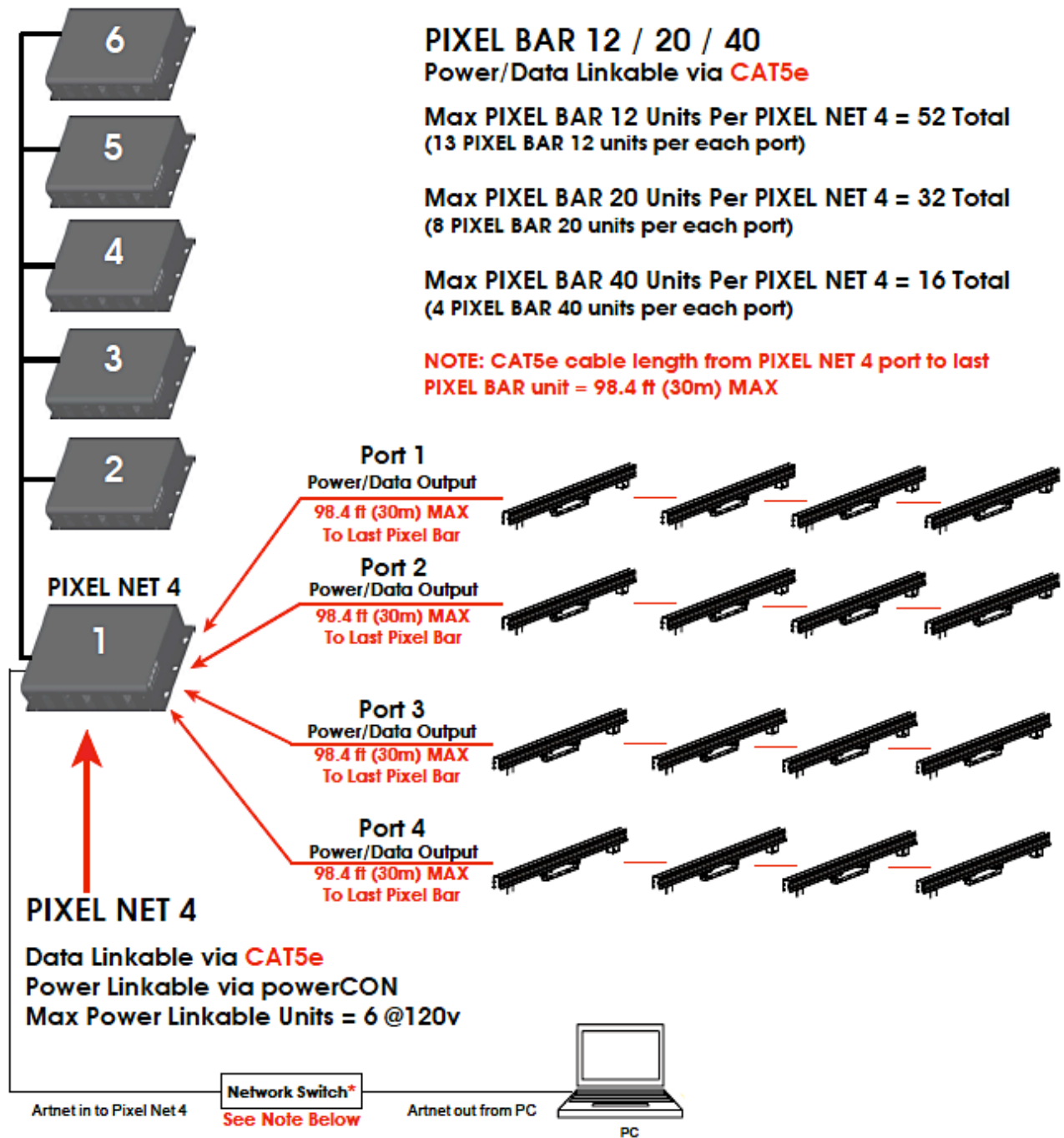


4. Make sure Tube is installed correctly.



5. Replace End Plate and Tighten (4) Screws.

SYSTEM CONFIGURATION GUIDE



*When connecting PIXEL NET 4 devices to a Network Switch that is also controlling multiple other lighting devices, a Gigabit Ethernet Switch that supports IGMP (Internet Group Management Protocol) is strongly suggested. Using a Gigabit Ethernet Switch that does not support IGMP can cause erratic behavior of all connected devices to the switch. Click link below for more information about IGMP.

https://en.wikipedia.org/wiki/Internet_Group_Management_Protocol

DMX CHANNEL FUNCTIONS AND VALUES

ELATION© PIXEL BAR 12 / 20 / 40™				
DMX Channel Values / Functions (36 / 60 / 120 DMX Channels)				
Specifications are subject to change without any prior written notice.				
PIXEL BAR 12	PIXEL BAR 20	PIXEL BAR 40	VALUE	FUNCTION
1	1	1	0-255	RED
2	2	2	0-255	GREEN
3	3	3	0-255	BLUE
4	4	4	0-255	RED
5	5	5	0-255	GREEN
6	6	6	0-255	BLUE
7	7	7	0-255	RED
8	8	8	0-255	GREEN
9	9	9	0-255	BLUE
10	10	10	0-255	RED
11	11	11	0-255	GREEN
12	12	12	0-255	BLUE
13	13	13	0-255	RED
14	14	14	0-255	GREEN
15	15	15	0-255	BLUE
16	16	16	0-255	RED
17	17	17	0-255	GREEN
18	18	18	0-255	BLUE
19	19	19	0-255	RED
20	20	20	0-255	GREEN
21	21	21	0-255	BLUE
22	22	22	0-255	RED
23	23	23	0-255	GREEN
24	24	24	0-255	BLUE
25	25	25	0-255	RED
26	26	26	0-255	GREEN
27	27	27	0-255	BLUE
28	28	28	0-255	RED
29	29	29	0-255	GREEN
30	30	30	0-255	BLUE
31	31	31	0-255	RED
32	32	32	0-255	GREEN
33	33	33	0-255	BLUE
34	34	34	0-255	RED
35	35	35	0-255	GREEN
36	36	36	0-255	BLUE
	37	37	0-255	RED
	38	38	0-255	GREEN
	39	39	0-255	BLUE
	40	40	0-255	RED
	41	41	0-255	GREEN

ELATION© PIXEL BAR 12 / 20 / 40™				
DMX Channel Values / Functions (36 / 60 / 120 DMX Channels)				
Specifications are subject to change without any prior written notice.				
PIXEL BAR 12	PIXEL BAR 20	PIXEL BAR 40	VALUE	FUNCTION
	42	42	0-255	BLUE
	43	43	0-255	RED
	44	44	0-255	GREEN
	45	45	0-255	BLUE
	46	46	0-255	RED
	47	47	0-255	GREEN
	48	48	0-255	BLUE
	49	49	0-255	RED
	50	50	0-255	GREEN
	51	51	0-255	BLUE
	52	52	0-255	RED
	53	53	0-255	GREEN
	54	54	0-255	BLUE
	55	55	0-255	RED
	56	56	0-255	GREEN
	57	57	0-255	BLUE
	58	58	0-255	RED
	59	59	0-255	GREEN
	60	60	0-255	BLUE
		61	0-255	RED
		62	0-255	GREEN
		63	0-255	BLUE
		64	0-255	RED
		65	0-255	GREEN
		66	0-255	BLUE
		67	0-255	RED
		68	0-255	GREEN
		69	0-255	BLUE
		70	0-255	RED
		71	0-255	GREEN
		72	0-255	BLUE
		73	0-255	RED
		74	0-255	GREEN
		75	0-255	BLUE
		76	0-255	RED
		77	0-255	GREEN
		78	0-255	BLUE
		79	0-255	RED
		80	0-255	GREEN
		81	0-255	BLUE
		82	0-255	RED
		83	0-255	GREEN
		84	0-255	BLUE
		85	0-255	RED
		86	0-255	GREEN
		87	0-255	BLUE
		88	0-255	RED
		89	0-255	GREEN
		90	0-255	BLUE

ELATION© PIXEL BAR 12 / 20 / 40™				
DMX Channel Values / Functions (36 / 60 / 120 DMX Channels)				
Specifications are subject to change without any prior written notice.				
PIXEL BAR 12	PIXEL BAR 20	PIXEL BAR 40	VALUE	FUNCTION
		91	0-255	RED
		92	0-255	GREEN
		93	0-255	BLUE
		94	0-255	RED
		95	0-255	GREEN
		96	0-255	BLUE
		97	0-255	RED
		98	0-255	GREEN
		99	0-255	BLUE
		100	0-255	RED
		101	0-255	GREEN
		102	0-255	BLUE
		103	0-255	RED
		104	0-255	GREEN
		105	0-255	BLUE
		106	0-255	RED
		107	0-255	GREEN
		108	0-255	BLUE
		109	0-255	RED
		110	0-255	GREEN
		111	0-255	BLUE
		112	0-255	RED
		113	0-255	GREEN
		114	0-255	BLUE
		115	0-255	RED
		116	0-255	GREEN
		117	0-255	BLUE
		118	0-255	RED
		119	0-255	GREEN
		120	0-255	BLUE

CLEANING AND MAINTENANCE



C A U T I O N

Disconnect power before cleaning or maintenance.

CLEANING

Frequent cleaning is recommended to insure proper function, optimized light output, and an extended life. The frequency of cleaning depends on the environment in which the fixture operates: damp, smoky or particularly dirty environments can cause greater accumulation of dirt on the fixture's optics.

- Clean the external lens surface at least every 20 days with a soft cloth to avoid dirt/debris accumulation.
- Never use alcohol, solvents, or ammonia based cleaners.

MAINTENANCE

Regular inspections are recommended to insure proper function and extended life. There are no user serviceable parts inside this fixture, please refer all other service issues to an authorized Elation service technician. Should you need any spare parts, please order genuine parts from your local Elation dealer.

Please refer to the following points during routine inspections:

- A detailed electric check by an approved electrical engineer every three months, to make sure the circuit contacts are in good condition and prevent overheating.
- Be sure all screws and fasteners are securely tightened at all times. Loose screws may fall out during normal operation resulting in damage or injury as larger parts could fall.
- Check for any deformations on the housing, color lenses, rigging hardware and rigging points (ceiling, suspension, trussing). Deformations in the housing could allow for dust to enter into the fixture. Damaged rigging points or unsecured rigging could cause the fixture to fall and seriously injure a person(s).
- Electric power supply cables must not show any damage, material fatigue or sediments. Never remove the ground prong from the power cable.

TECHNICAL SPECIFICATIONS

FEATURES

25mm Pixel Pitch
850 NITs / 2000Hz Refresh Rate
Extruded Aluminum Housing

SOURCE

Pixel Bar 12™ (12) 3-in-1 SMD LEDs
Pixel Bar 20™ (20) 3-in-1 SMD LEDs
Pixel Bar 40™ (40) 3-in-1 SMD LEDs

COLOR

16.7 Million Colors / 8 Bits Per Color

CONTROL / CONNECTIONS

Pixel Bar 12™ - 36 DMX Channels
Multiple Unit Linkable (52 per PIXEL NET 4™ device)
Pixel Bar 20™ - 60 DMX Channels
Multiple Unit Linkable (32 units per PIXEL NET 4™ device)
Pixel Bar 40™ - 120 DMX Channels
Multiple Unit Linkable (16 units per PIXEL NET 4™ device)
RJ45 CAT5e Input / Output (All Models)

SIZE / WEIGHT

Pixel Bar 12™
Length: 11.81" (300mm)
Width: 1.5" (38.2mm)
Vertical Height: 4.08" (103.6mm)
Weight: 2.5 lbs. (1.12kg)

Pixel Bar 20™
Length: 19.7" (500mm)
Width: 1.5" (38.2mm)
Vertical Height: 4.08" (103.6mm)
Weight: 3.6 lbs. (1.63kg)

Pixel Bar 40™
Length: 39.4" (1000mm)
Width: 1.5" (38.2mm)
Vertical Height: 4.08" (103.6mm)
Weight: 5.5 lbs. (2.5kg)

ELECTRICAL / THERMAL

Pixel Bar 12™ 6W Max Power Consumption
Pixel Bar 20™ 10W Max Power Consumption
Pixel Bar 40™ 16W Max Power Consumption

DC-24V

32°F to 104°F (0°C to 40°C)

RECOGNIZED
COMPONENT

APPROVALS / RATINGS

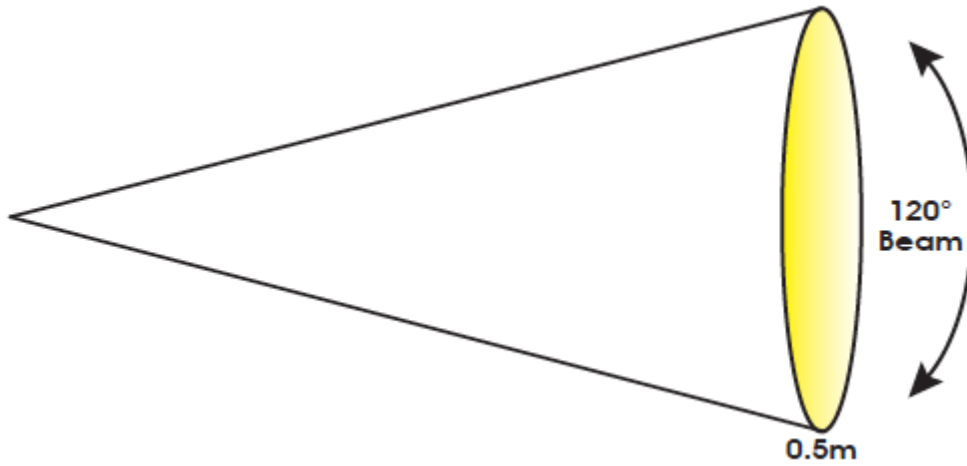
CE | cETLus | IP20



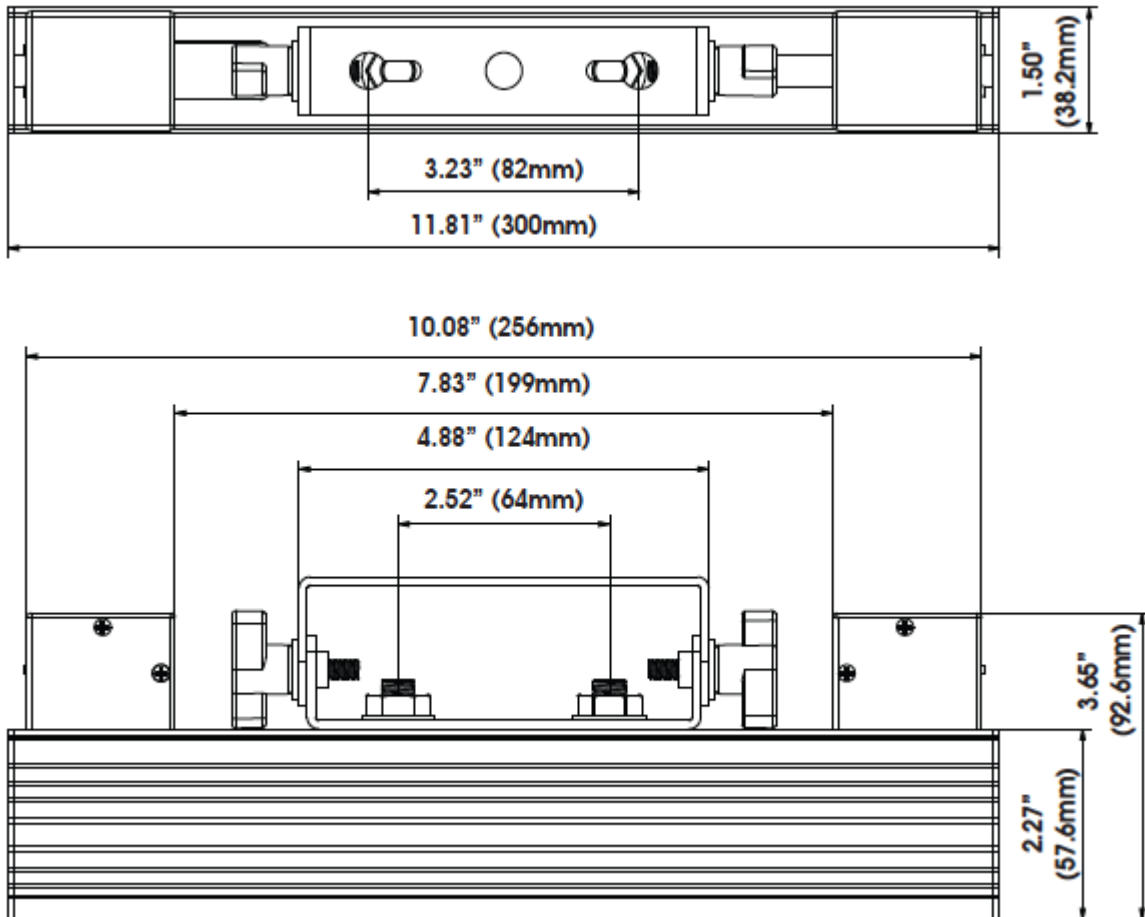
Intertek
5001034

Please Note: Specifications and improvements in the design of this unit and this manual are subject to change without any prior written notice.

BEAM ANGLE

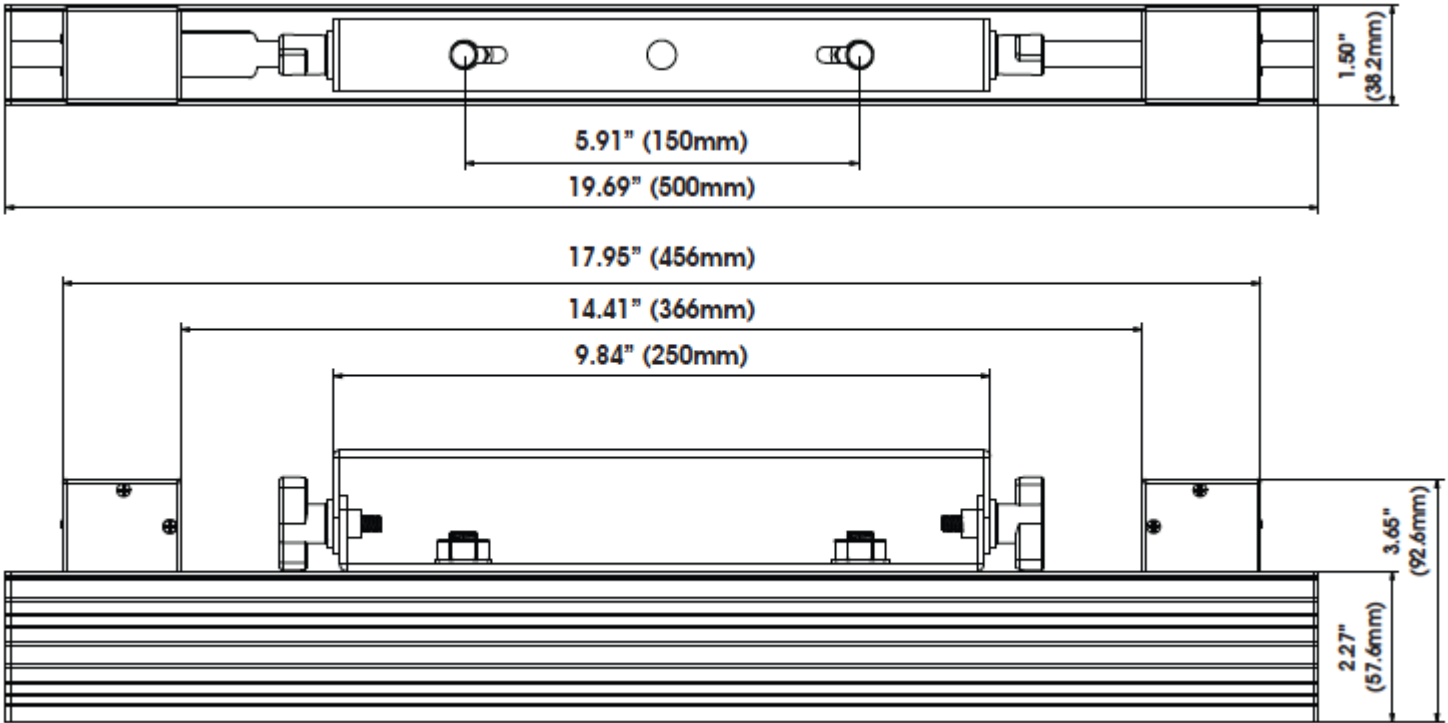


DIMENSIONAL DRAWINGS - PIXEL BAR 12

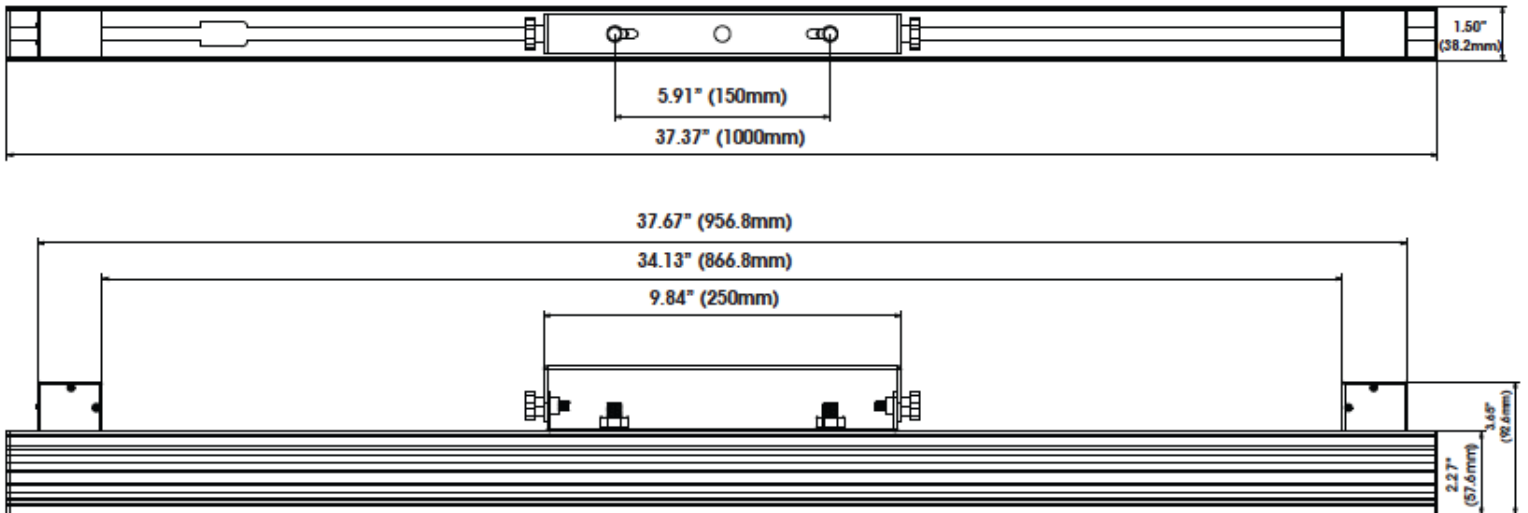


Please Note: Specifications and improvements in the design of this unit and this manual are subject to change without any prior written notice.

DIMENSIONAL DRAWINGS - PIXEL BAR 20

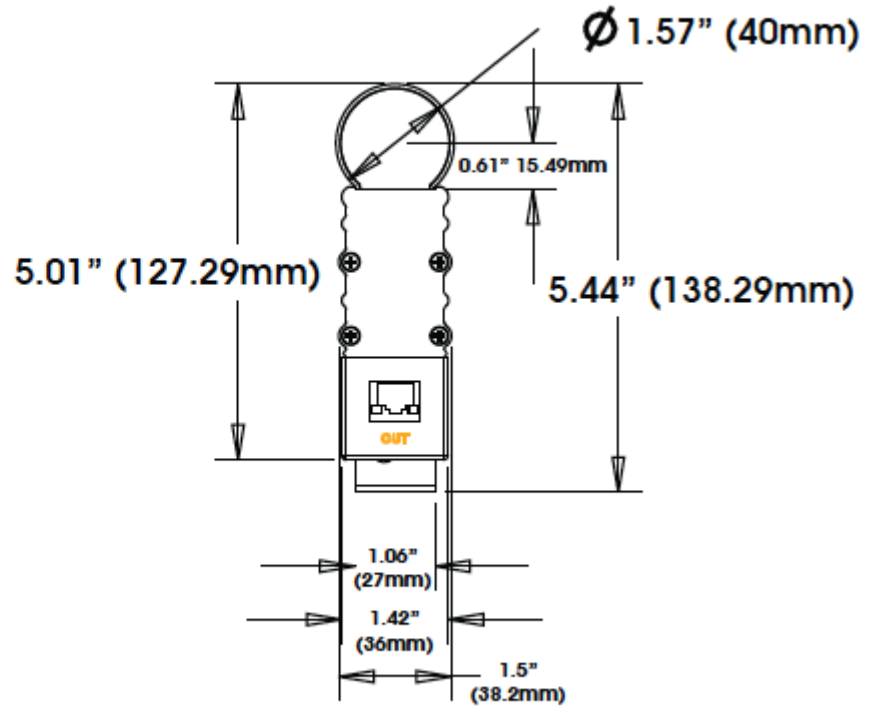
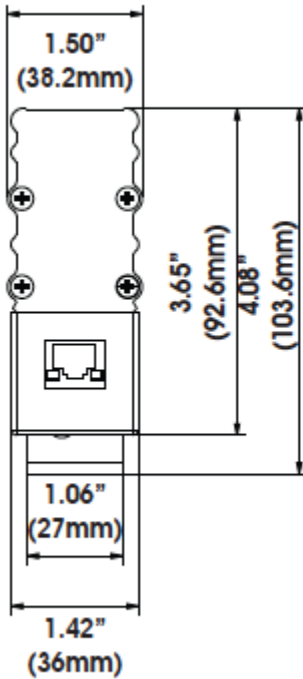


DIMENSIONAL DRAWINGS - PIXEL BAR 40



Please Note: Specifications and improvements in the design of this unit and this manual are subject to change without any prior written notice.

DIMENSIONAL DRAWINGS - Width & Vertical Height (PIXEL BAR 12 / 20 / 40)



With Optional Tube Lens Installed

Please Note: Specifications and improvements in the design of this unit and this manual are subject to change without any prior written notice.

OPTIONAL ACCESSORIES

ORDER CODE	ITEM
NARROW CLAMP	Heavy Duty 2" Wrap Around Pro Clamp
PIX037	PIXEL BAR 12™
PIX167	PIXEL BAR 12™ TUBE LENS
PIX025	PIXEL BAR 20™
PIX155	PIXEL BAR 20™ TUBE LENS
PIX001	PIXEL BAR 40™
PIX142	PIXEL BAR 40™ TUBE LENS
PIX013	Pixel Net 4™ ArtNet to DMX Driver

