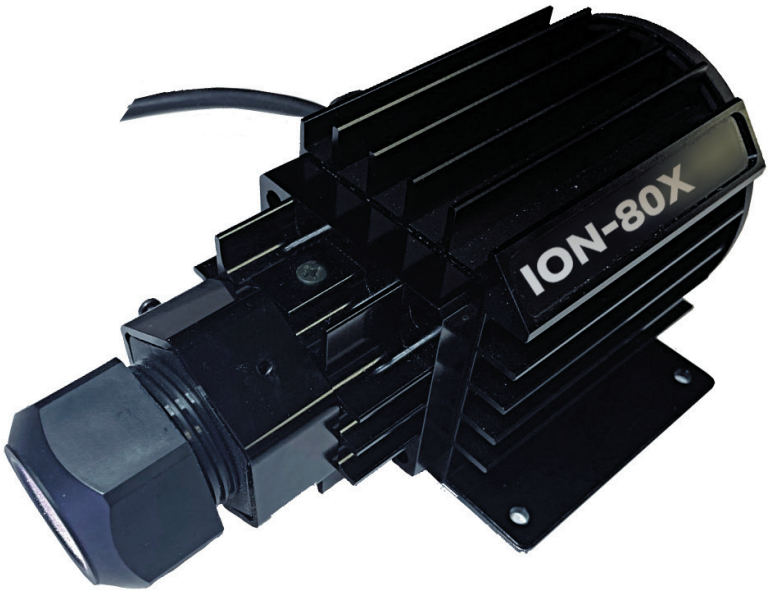
INSTALLATION MANUAL

ION-80X Series

FIBER OPTIC ILLUMINATOR
IP67 OUTDOOR RATED



MADE IN USA

c UL us
LISTED
CLASS 2
E359853

CE

IMPACT LIGHTING

032024

INDEX

PRODUCT OVERVIEW

The **ION-80X** series LED Fiber Optic Light Source is a multi-controllable and configurable fiber optic illuminator for the architectural and commercial lighting, sign and pool & spa markets. It can be configured with white light or RGBW LEDs with a *stand-alone program, DMX, RS232 Serial or RF. LED options include RGBW. Cool White and Warm White. Discreet colors upon special order, contact the factory for availability.

The ION-80X features no serviceable or moving parts.

The fan-less SynJet® Cooler provides for quiet and efficient heat sink cooling with a frictionless oscillating diaphragm.

A 100W/24VDC power supply rated for 100-240VAC and 277VAC for North America only, is included for RGBW.

A 100W/36VDC Power Supply rated for 100-240VAC and 277 VAC for North America only, is included for WHITE.

Optional dimming transformer is available.

*Stand-alone program / SB - Smart Board option:

Advance through the color programs by toggling the ON/OFF switch.

Blue / White / Cyan / Green / Magenta / Red / Gold / Smooth Color Cycle Through All Colors.

Includes: 100W/24VDC power supply rated for 100-240VAC or 277VAC for North America only, is included for RGBW.

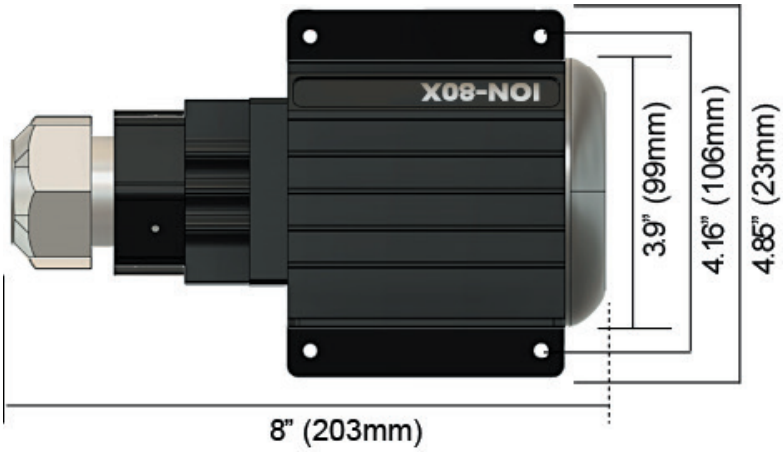
A 100W/36VDC Power Supply rated for 100-240VAC and 277 VAC for North America only, is included for WHITE.
Standard 6ft. Cable to Power Supply
(Longer lengths available. Contact factory)

MANUAL - Stand Alone: (smart board) 2 Wire

DMX: 5 Wire for RGBW

RS232: 5 wire for RGBW

RF: 5 wire for RGBW



SPECIFICATIONS

PARAMETER	RGBW	WHITE
Input Voltage	100-240VAC /277VAC	100-240VAC /277VAC
Amps	4 Amps	1 Amp
Wattage	100 W Max	40 W Max
Power Supply	24 VDC Class 2	36 VDC Class 2
Hz	50/60	50/60
Fiber Capacity	1000	1000
Operating Temp.	-10*c to 80* C	-10*c to 80* C
Weight	7 lbs.	7 lbs.
Outdoor Rating	IP67	IP67
Housing	Aluminum	Aluminum
Dimensions	W: 4.85"(23mm) H: 3.9"(99mm) L: 8"(203mm)	

** Thermal cut-off protection 70°C*

PRO-TIP ▶

You will find Pro-Tips throughout this manual that are helpful hints and practical advice from lighting professionals.

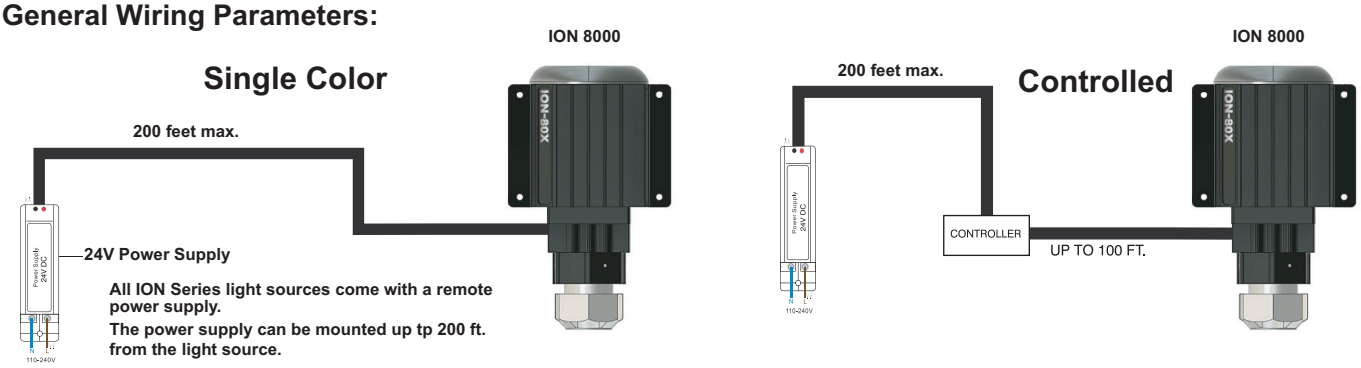
PHOTOMETRICS

LED	LUMENS @ 700ma
WW	4248 lm
CW	6453 lm
RGBW	3465 lm (R=765 G=920 B=230 W=1550)

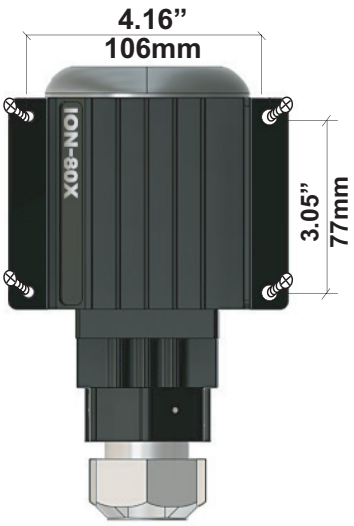
2 MOUNTING

NOTE: This light source is not serviceable and has no internal servicable parts. Please contact the manufacturer with service related issues.

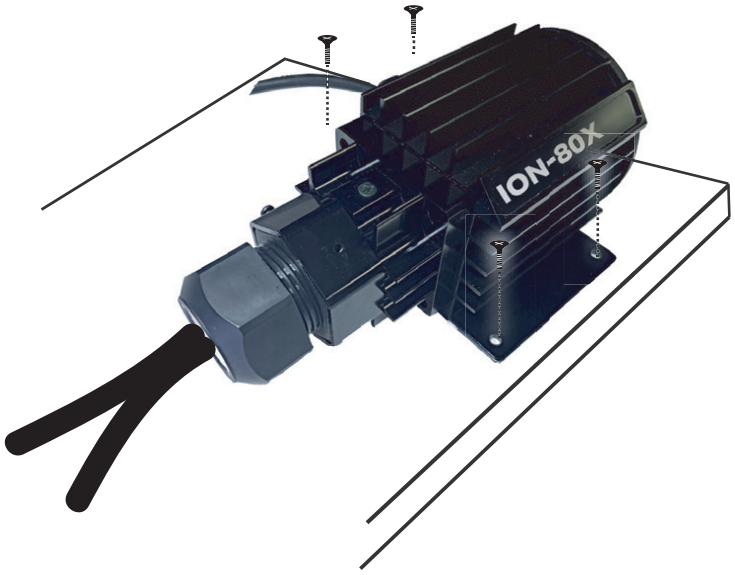
General Wiring Parameters:



Mounting Hole Template

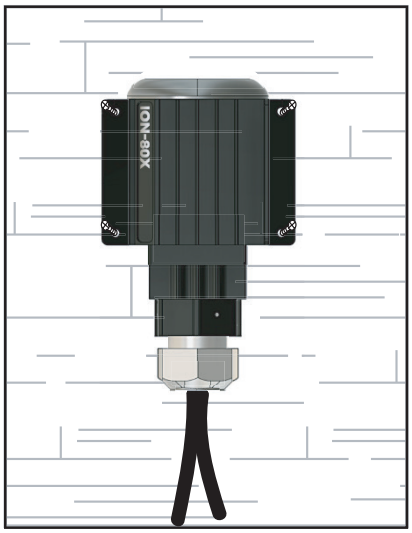


Horizontal Mounting

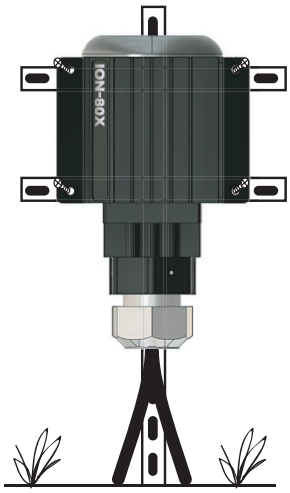


Vertical Mounting

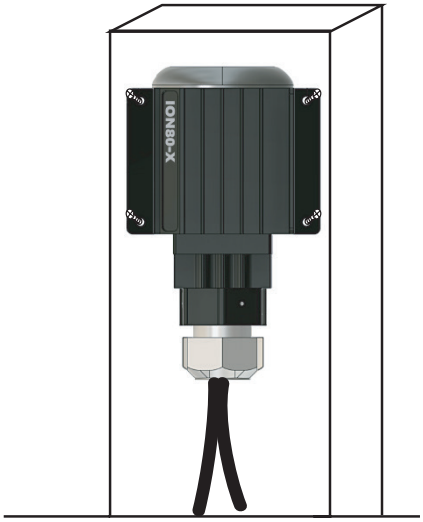
Wall Mount



Uni-Strut Mount



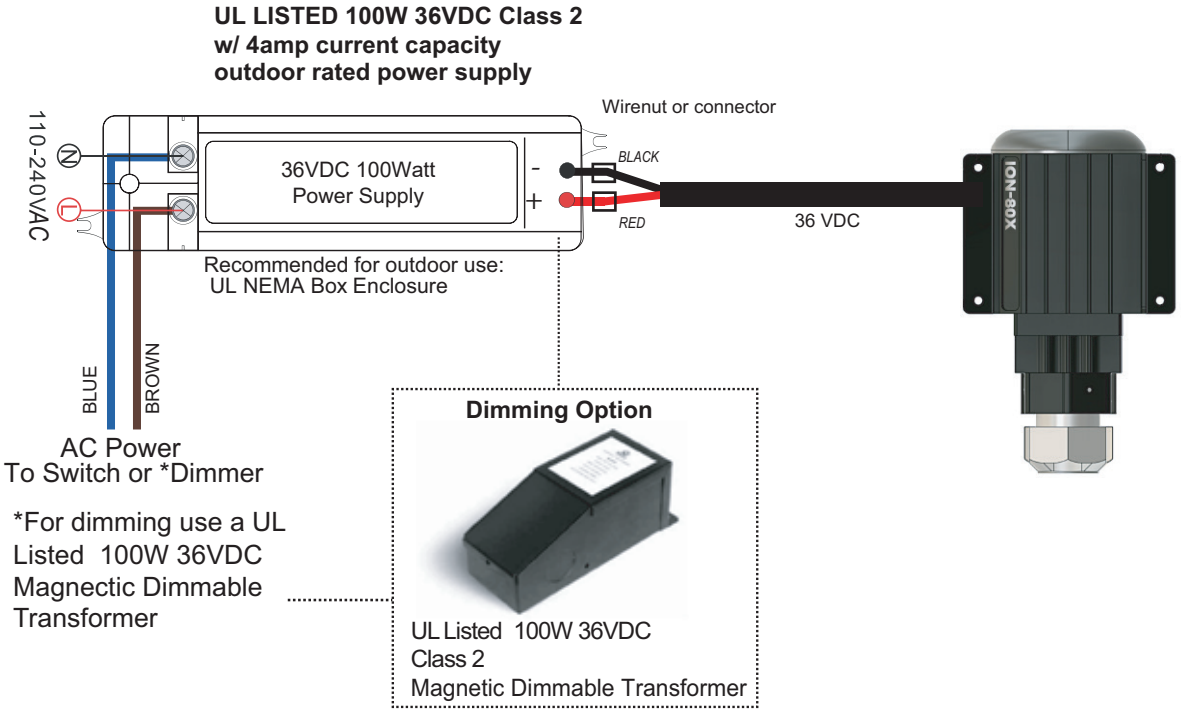
Post Mount



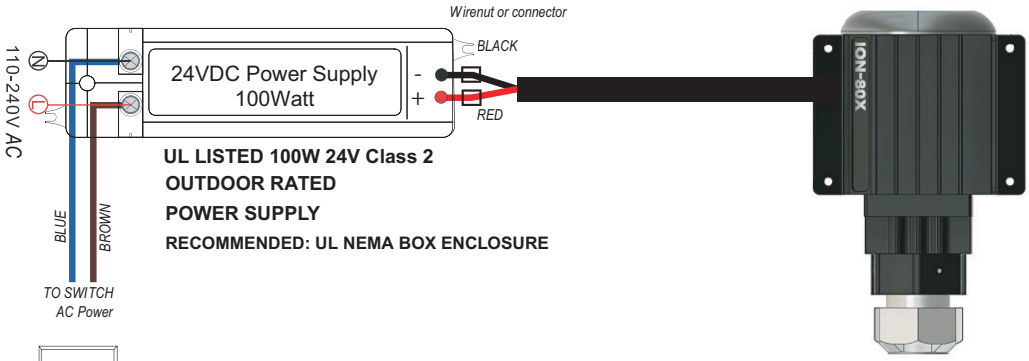
WIRING (Stand Alone)

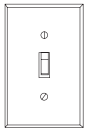
SINGLE COLOR STAND ALONE SYSTEM (smart board) MANUAL OPERATION

NOTE: Only a licensed electrician should install this product.



RGBW STAND ALONE SYSTEM MANUAL OPERATION





TOGGLE SWITCH

A toggle switch is to be wired to the AC input. This switch is used to scroll through all the modes on the Illuminator.

1. MODE: Advance to next color by toggleing switch 1-2 seconds OFF then ON.

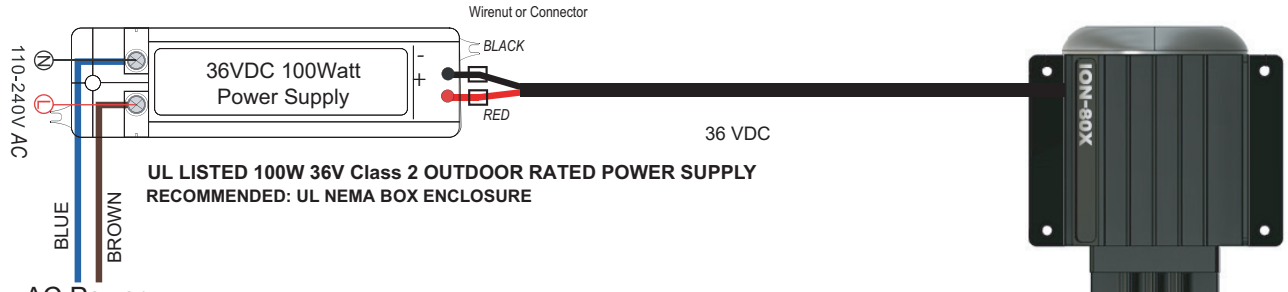
   MODE COLOR ORDER:
   Blue / White / Cyan / Green / Magenta / Red / Gold / Slow color change / Party mode

2. RESET MODE: Toggle OFF 5-7 seconds then ON. This will reset all light sources back to blue.
   Memory will be save after 8 seconds.

WIRING

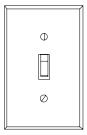
WW-CW STAND ALONE SYSTEM MANUAL OPERATION

ION-80X WW-CW



UL LISTED 100W 36V Class 2 OUTDOOR RATED POWER SUPPLY
RECOMMENDED: UL NEMA BOX ENCLOSURE

AC Power
To Switch or *Dimmer



TOGGLE SWITCH
A toggle switch is to be wired to the AC input. This switch is used to scroll through all the modes on the Illuminator.

1. **MODE:** Advance to next color by toggling switch 1-2 seconds OFF then ON.

MODE COLOR ORDER:
Cool White 5000K / Neutral White 4000K / Warm White 3000K

2. **RESET MODE:** Toggle OFF 5-7 seconds then ON. This will reset all light sources back to blue. Memory will be save after 8 seconds.

RF SYSTEM WIRING

ION-80X RGBW-DMX


1 ZONE

OR

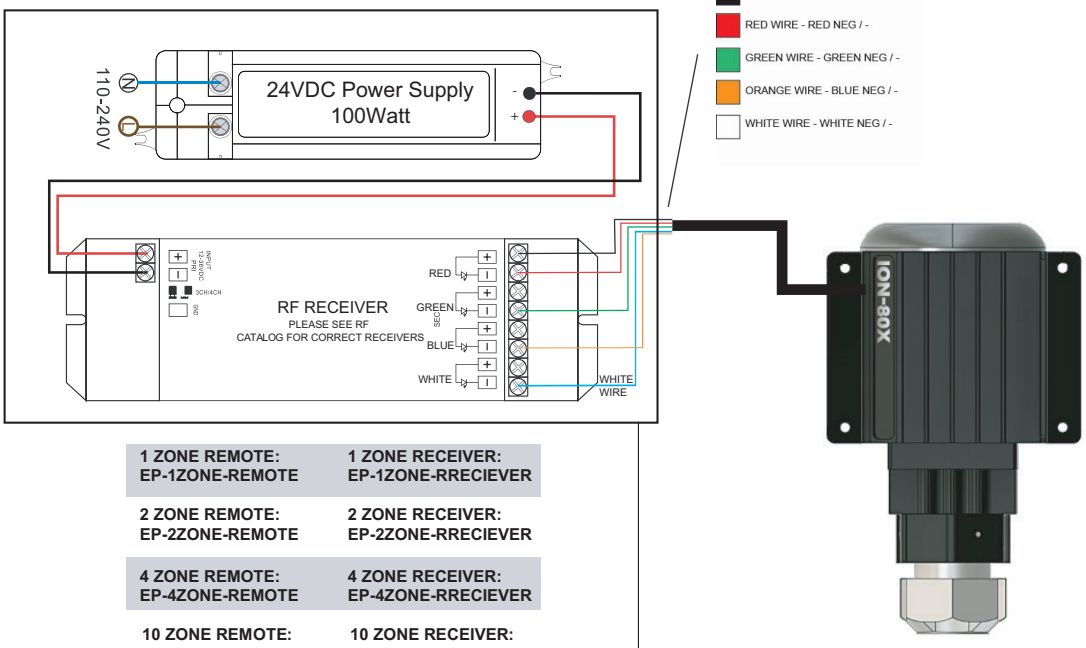

2 ZONE

OR


4 ZONE

OR

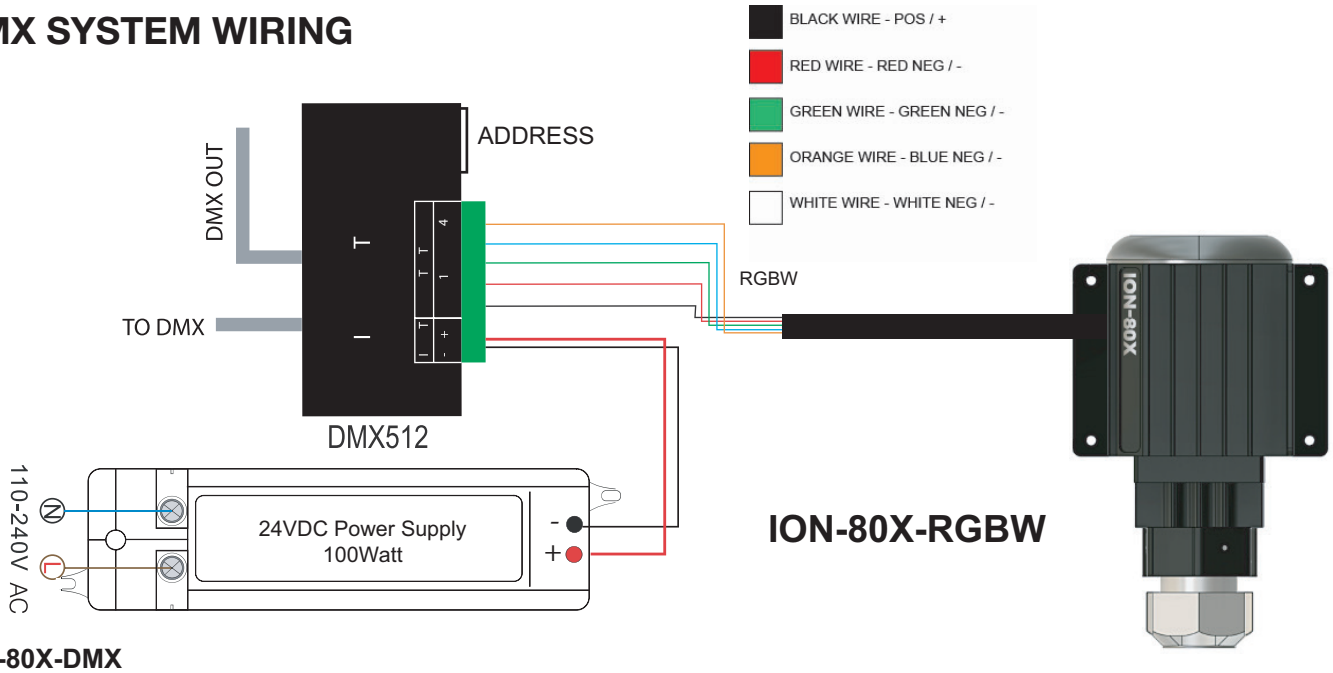

10 ZONE



1 ZONE REMOTE: EP-1ZONE-REMOTE	**1 ZONE RECEIVER: EP-1ZONE-RRECIEVER**
2 ZONE REMOTE: EP-2ZONE-REMOTE	**2 ZONE RECEIVER: EP-2ZONE-RRECIEVER**
4 ZONE REMOTE: EP-4ZONE-REMOTE	**4 ZONE RECEIVER: EP-4ZONE-RRECIEVER**
10 ZONE REMOTE: EP-10ZONE-REMOT	**10 ZONE RECEIVER: EP-10ZONE-RRECIEVE**

RECOMMENDED OUTDOOR RATED ENCLOSURE

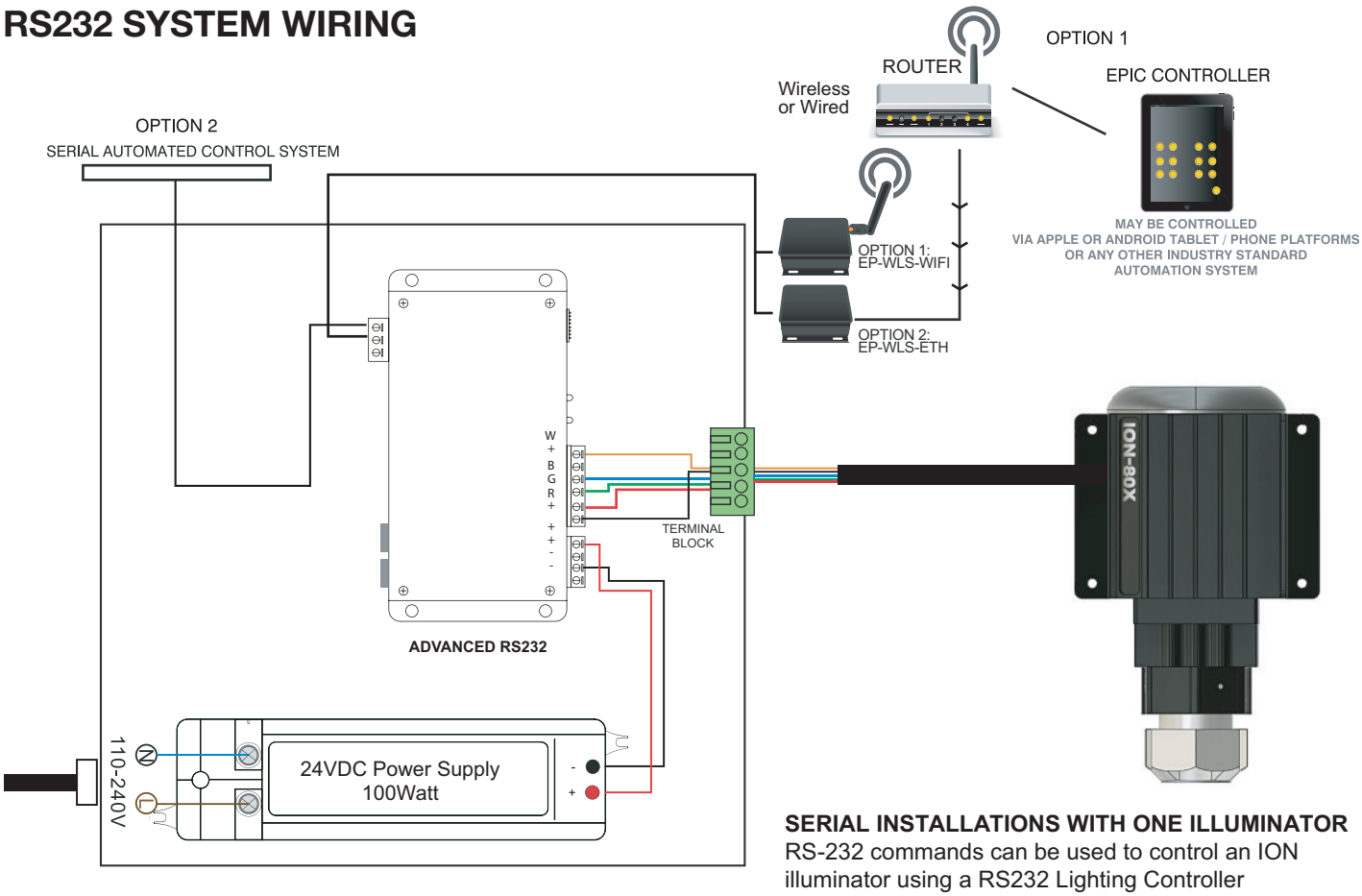
DMX SYSTEM WIRING



ION-80X-DMX

DMX is an industry standard abbreviation for “digital multiplex”. It is an RS-485 based protocol that has become the industry standard for digital lighting control interfaces. DMX allows users to synchronize fixtures to a centralized lighting controller. It supplies a constant flow of data to the fixture so that the unit knows what it should be doing at all times.

RS232 SYSTEM WIRING

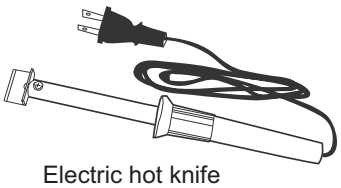


SERIAL INSTALLATIONS WITH ONE ILLUMINATOR

RS-232 commands can be used to control an ION illuminator using a RS232 Lighting Controller

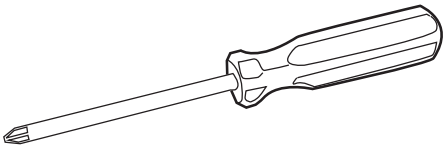
6 FIBER HEAD PREPARATION

TOOLS REQUIRED



Electric hot knife
Also see PRO TIP #4

Razor knife

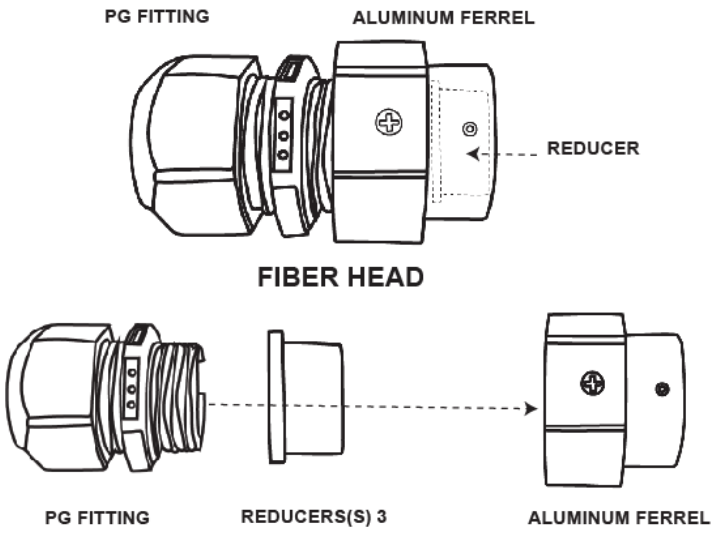


Philips screwdriver

CAUTION:
DO NOT USE ELECTRICAL TAPE TO BIND THE FIBERS OR CABLE TOGETHER NEAR THE FIBERHEAD. ADHESIVE FROM THE TAPE HAS A LOW MELTING TEMPERATURE AND CAN INDUCE THE FIBER TO MELT.

FIBERHEAD COMPONETS

FIBER CAPCITY: 1000 .075mm fiber
WITH NO CENTERING GUIDE REDUCER

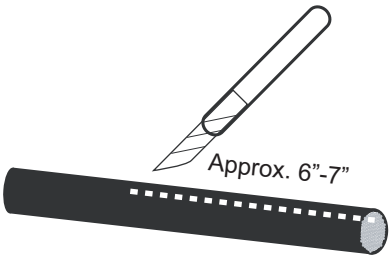


** Exploded View **

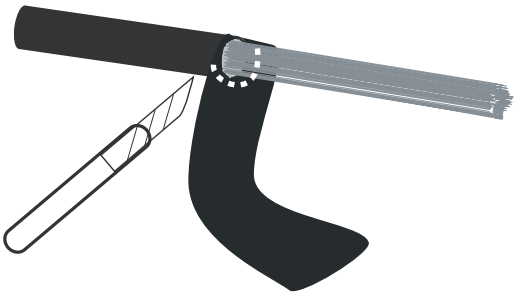
PRO-TIP 1 ▶

Preparation of the fiberhead is one of the most important elements in achieving maximum performance from your ION Series Fiber Optic Light Source. Solidly packed, clean cut fibers allow the light emitted from the light source to enter the ends of the fiber at an optimum angle for superior performance and reduced fiberhead maintenance. It is advisable to provide a service loop or extra length of fiber at the light source should re-cutting of the fiber be necessary. A 12” to 18” service loop is recommended.

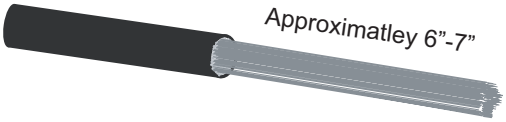
STEP 1
Remove the PVC jacket from the cable



1a. Slice through the jacket, careful not to cut any fibers.



1b. Remove the excess jacket with a knife or scissors.

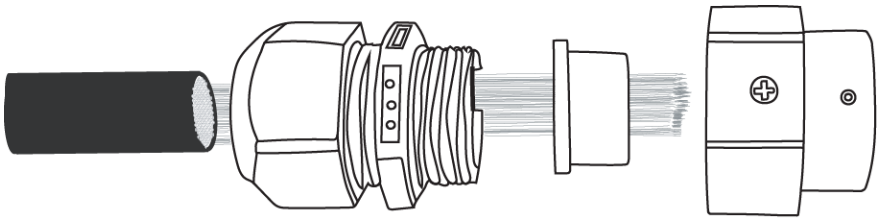


The cut fiber cable should look like this.

Visit our YOUTube Channel for fiberhead instructions:
IMPACTLIGHTINGINC
http://youtu.be/Ph9LmnFvAy8

FIBER HEAD PREPARATION

STEP 2
INSERT FIBER INTO FIBERHEAD

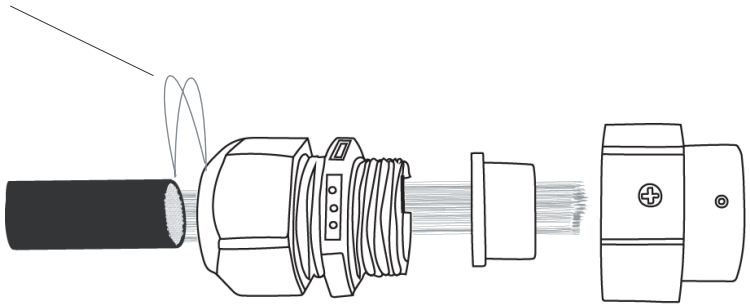


2a. Centering Reducers are used when the aluminum ferrel is not completly filled with fiber.
Fiber must be tightly pack at the end of the ferrel. For optimum performance a centering device is used in combination with “dead” (see step **2e**) fibers to acheive this.

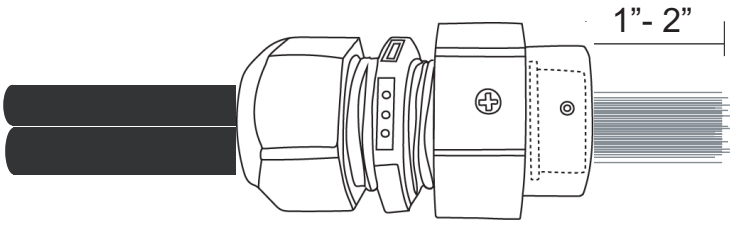
PRO-TIP 2 ▶

Many Pro installers prefer to disassemble the fiberhead components then insert the fiber through each component, before re-attaching each component back together.

2b. Pull any “jamed” fibers completely out and re-insert individually or in small groups while leaving the other fibers in place.



2c. Tighten the Aluminum Ferrel to the PG

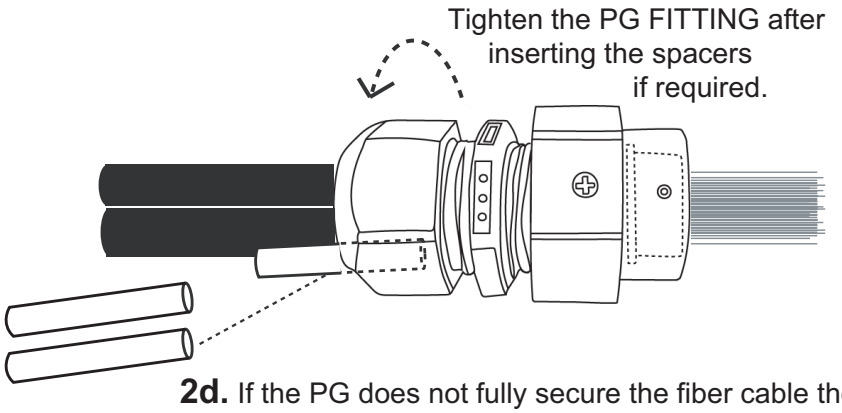


All fibers should extend 1”- 2” prior to cutting.

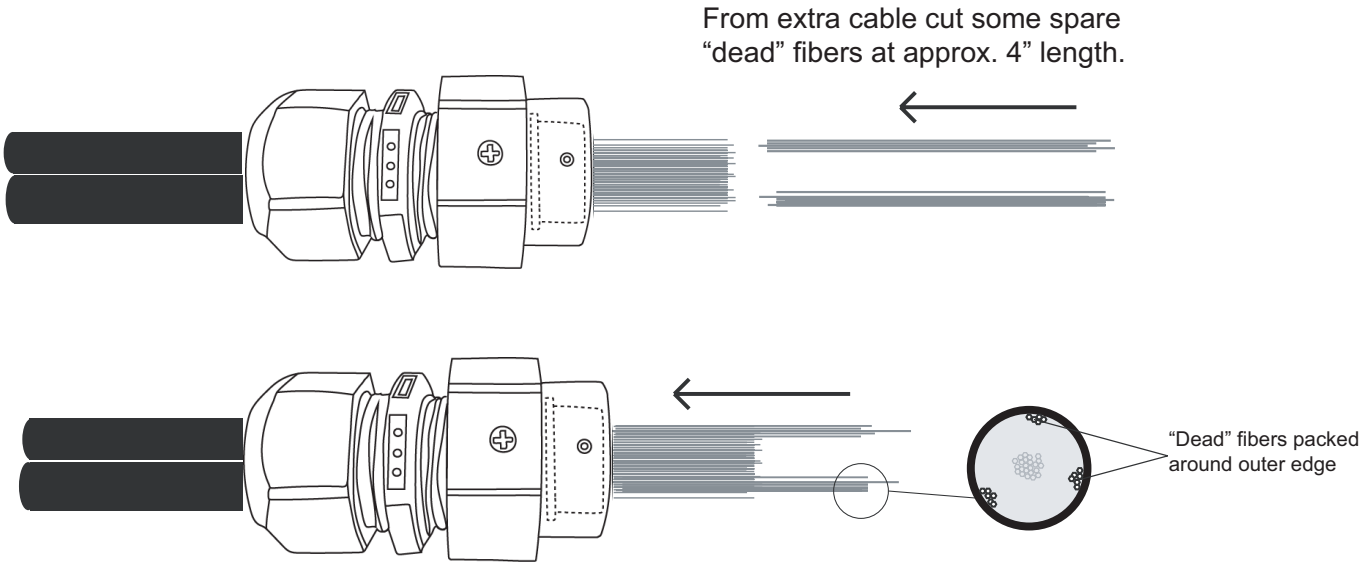
CONT. >

FIBER HEAD PREPARATION

STEP 2
INSERT FIBER INTO FIBERHEAD (CONT.)



2d. If the PG does not fully secure the fiber cable then insert spacers into the back of the PG fittin and then tighten the PG securely on the cable.



2e. Insert “dead” fibers into end of aluminum ferrel tip.

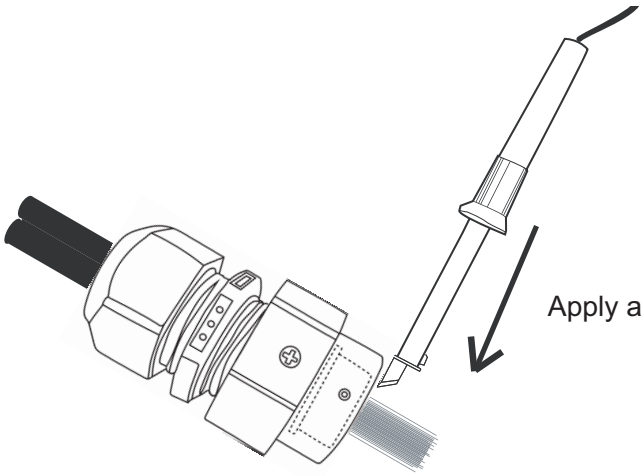
PRO-TIP 3 ▶

Inserting “dead” fibers into the end of the fiber head around the outer edge of the fiber head will help to pack all the fibers tightly together so the light will enter at the optimal angle and help to eliminate air pockets where excess heat can build up.

Pack as tightly as possible!

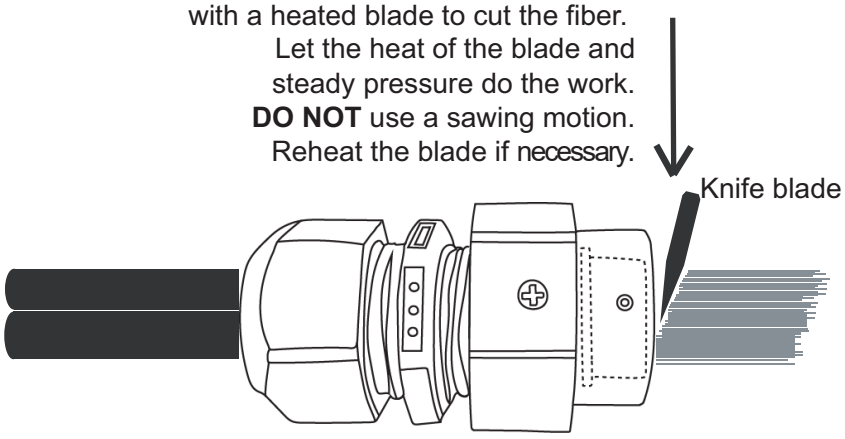
FIBER HEAD PREPARATION

STEP 3
CUTTING THE FIBER

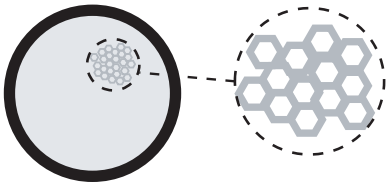


Apply a steady downward pressure

2f. Use a steady downward pressure with a heated blade to cut the fiber. Let the heat of the blade and steady pressure do the work. **DO NOT** use a sawing motion. Reheat the blade if necessary.



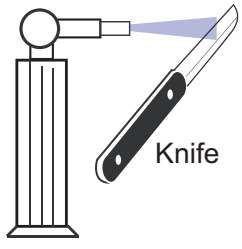
The result should be a smooth cut with the fibers densely packed together.



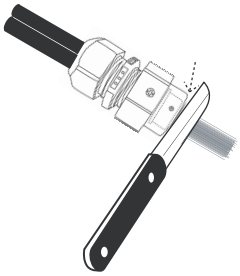
End View of fiberhead.

PRO-TIP 4 ▶

For Experienced Professionals ONLY! You may experience difficulty cutting fibers if the extension cord to the knife is too long, it can result in low knife tip temperature, or if electrical service is not available or if working in cold temperatures. An alternate method is to use a butane torch to heat a knife blade. It might be necessary to re-heat the knife during the cutting. Use the same method as the electric knife - no sawing, downward pressure letting the heat do the cutting.



Butane Tourch



Cutting fiber with “heated” straight knife

PRO-TIP 5 ▶

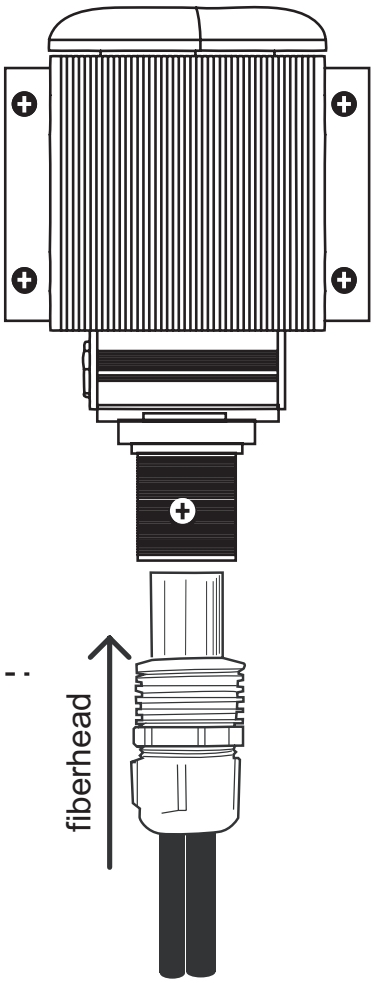
A very fine sandpaper 1000 Grit can be used to polish the end then finish with a plastic polish.

FIBER HEAD PREPARATION

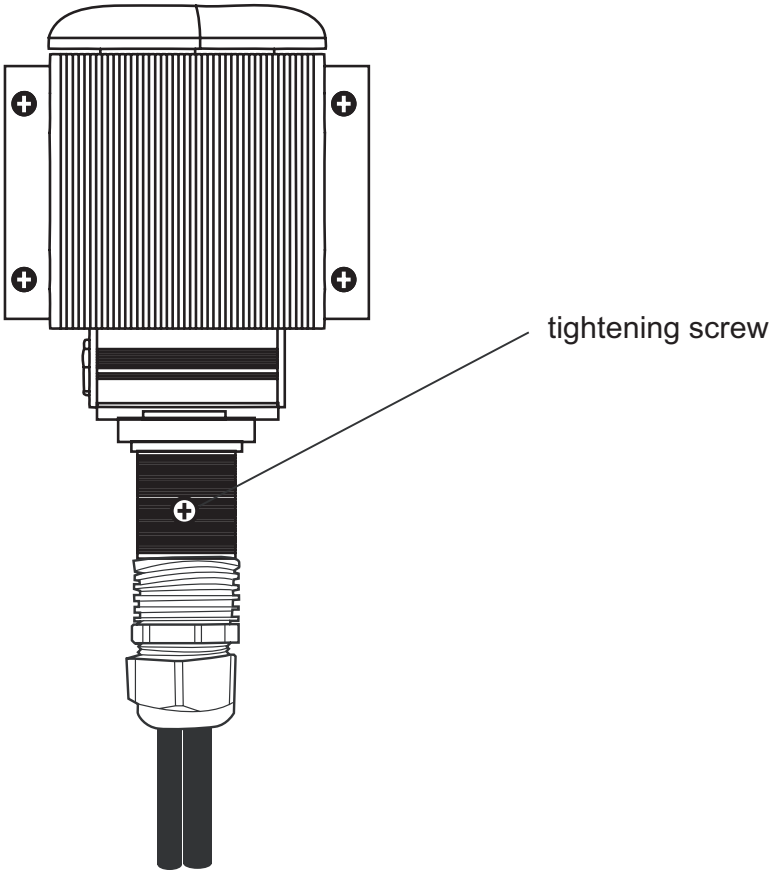
STEP 3
INSERT FIBERHEAD TO LIGHT SOURCE

NOTE: The Light Source should be mounted before you install the fiber head

3a. Slide the fiberhead into the lightsource fiber port.



3b. Secure the fiberhead in the light source with the tightening screw.



TROUBLESHOOTING

NOTE: This light source is not serviceable and has no internal serviceable parts. Please contact the manufacturer with service related issues.

Problem: Low light levels in fiber

Possible Cause: Melted fibers in fiber head are overheating.

Solution: Re-cut the fiber head. Loosen the ferrule and push the fibers 1/2” past the fiber head. Follow steps 2-3.

Problem: Light source is not turning on

Possible Cause: No power or improper wiring

Solution: Check that the main power to the unit. If the main power is on and t the unit still does not turn on, check to see if there is power at the low voltage side of the power supply. If there is power on the low voltage side of the power supply, check your control system and make sure it is wired properly. *(check wiring diagrams that correspond to your application)*