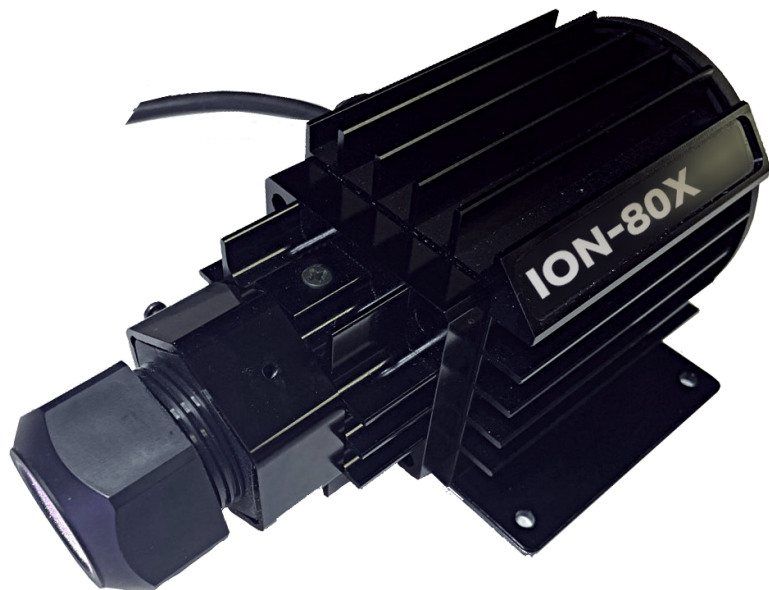


INSTALLATION MANUAL

L80X Series

FIBER OPTIC ILLUMINATOR
IP67 OUTDOOR RATED



 **US**
LISTED
CLASS 2
E359853



06/2021

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PRODUCT OVERVIEW

The **ION-80X** series LED Fiber Optic Light Source is an 80 watt 24V 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 fanless SynJet® Cooler provides for quiet and efficient heat sink cooling with a frictionless oscillating diaphragm.

A 120W/24V power supply rated for 100-240VAC and 277VAC for North America only is included.

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 Power Supply 100-240VAC /24VDC (8.5" x 2.75" x 1.5")

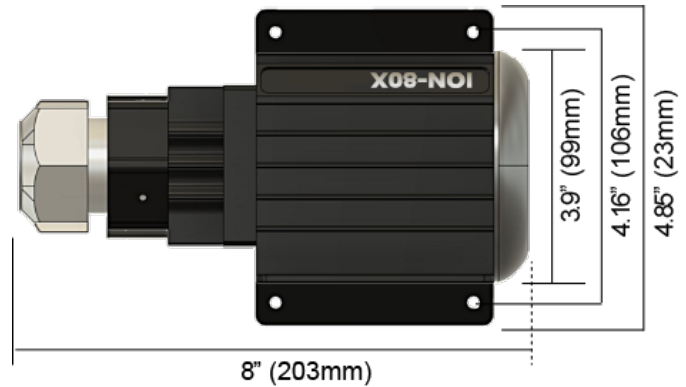
Standard 6ft. 24VDC Cable to Power Supply (Longer lengths available. Contact factory)

MANUAL - Stand Alone: (smart board) 2 Wire

DMX: (smart board) 5 Wire for RGBW

RS232: 5 wire for RGBW

RF: 5 wire for RGBW



SPECIFICATIONS

PARAMETER	MAX RATING
Input Voltage	100-240VAC / 277VAC
Amps	4Amps
Wattage	100W Max
Power Supply	24V DC Class 2
HZ	50/60
Fiber capacity	1000
Operating Temperature	-10°C to 80° C
Weight	7lbs.
Outdoor Rating	IP67
Housing	Powder Coated Aluminum
Dimensions	W: 4.85"(23mm) H:3.9"(99mm) L: 8"(203mm)

* Thermal cut-off protection 70°C

PHOTOMETRICS

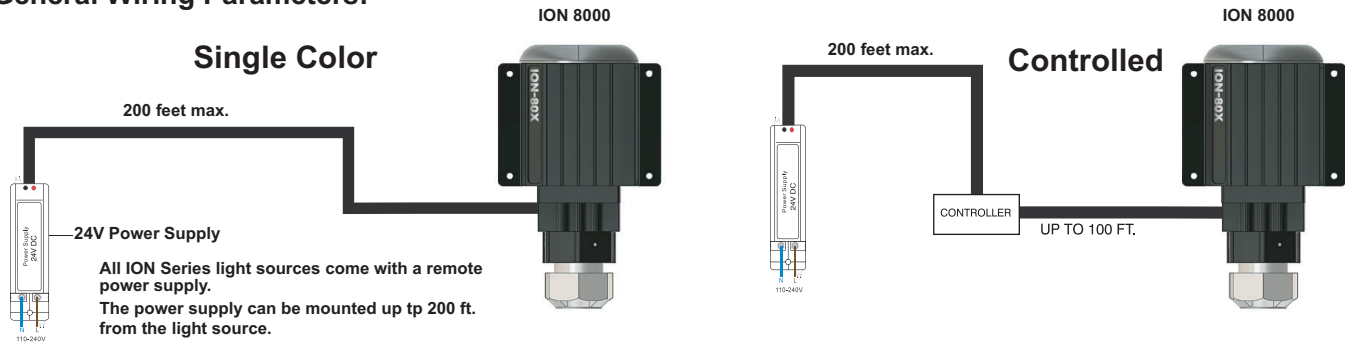
LED	LUMENS @ 700ma
WW	4248 lm
CW	6453 lm
RGBW	3465 lm (R=765 G=920 B=230 W=1550)

PRO-TIP ►

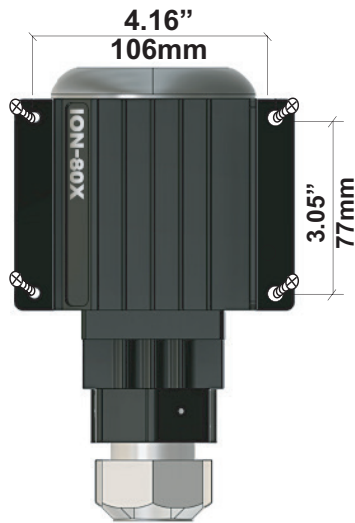
You will find Pro-Tips throughout this manual that are helpful hints and practical advice from lighting professionals.

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

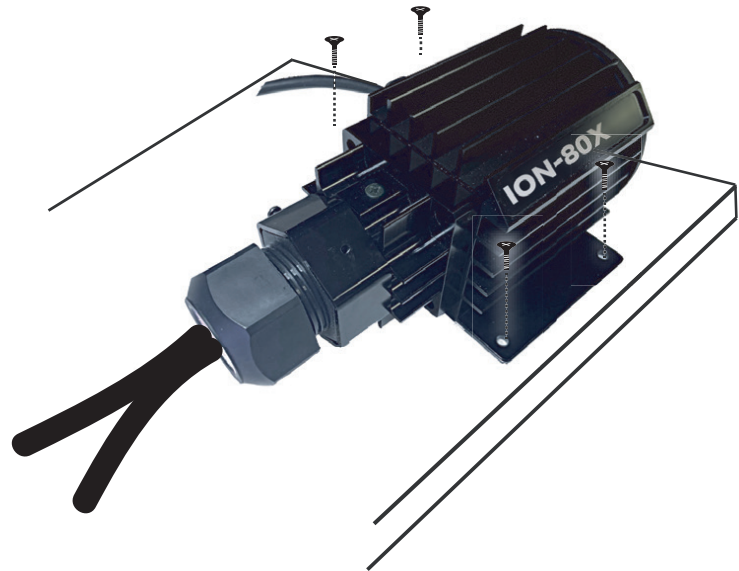
General Wiring Parameters:



Mounting Hole Template

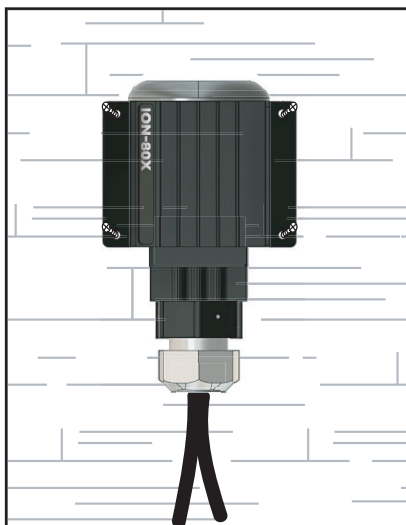


Horizontal Mounting

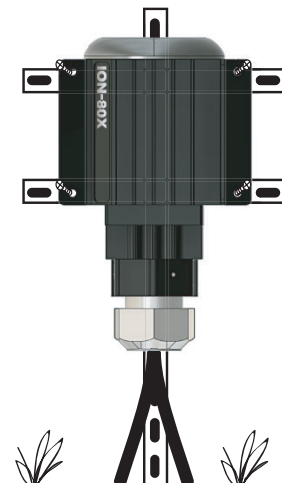


Vertical Mounting

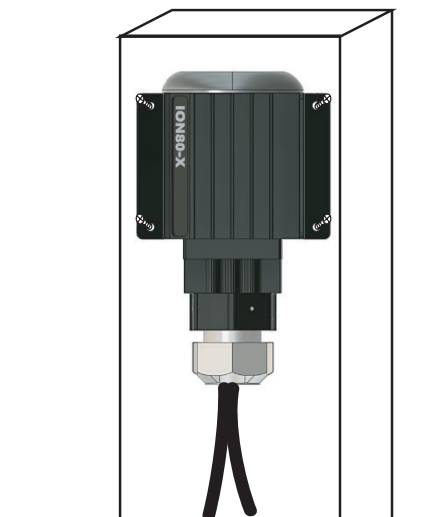
Wall Mount



Uni-Strut Mount

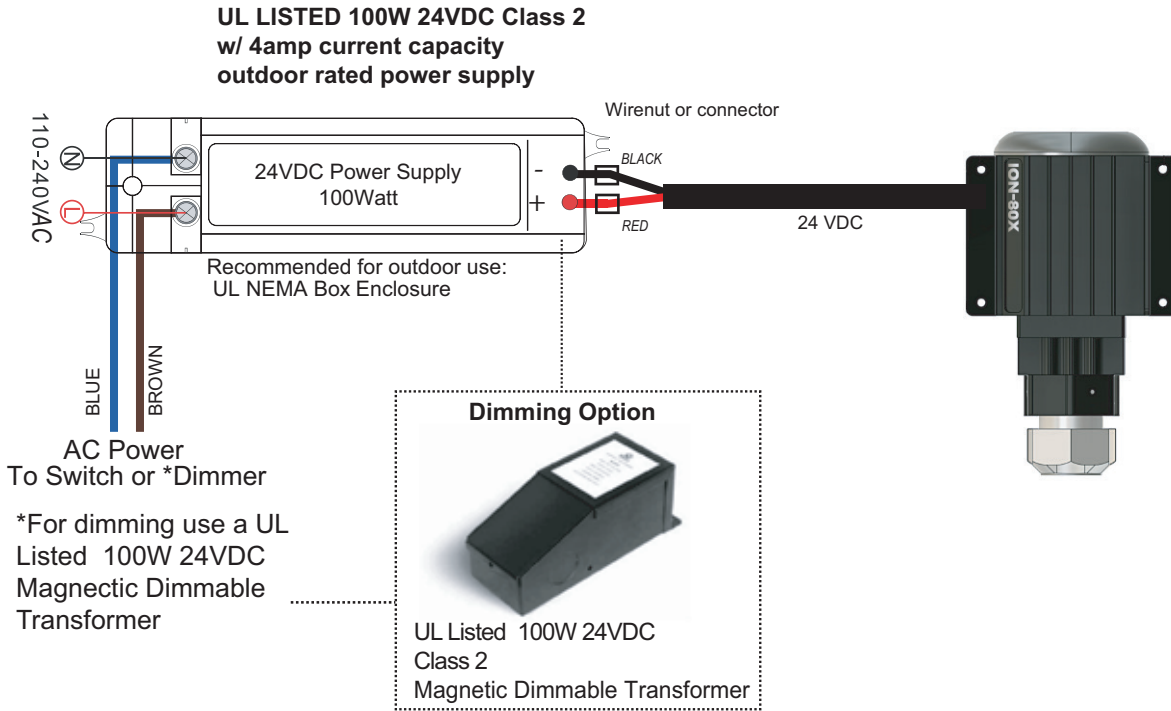


Post Mount

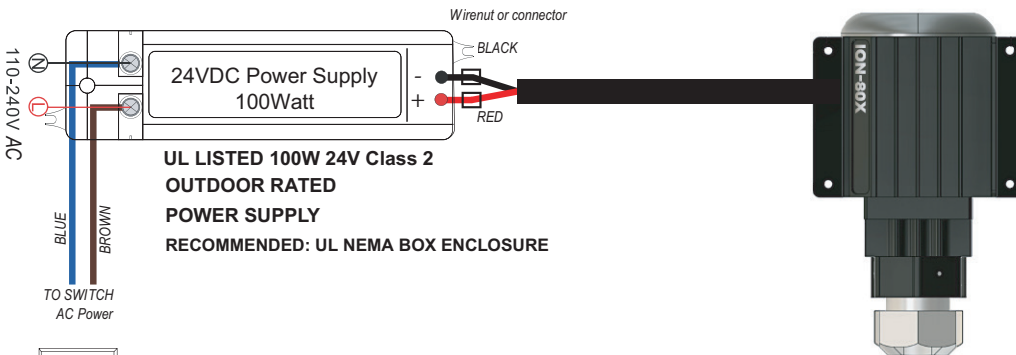


SINGLE COLOR STAND ALONE SYSTEM (smart board) MANUAL OPERATION

NOTE: Only a licensed electrician should install this product.



RGB / RGBW STAND ALONE SYSTEM MANUAL OPERATION



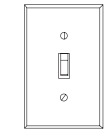
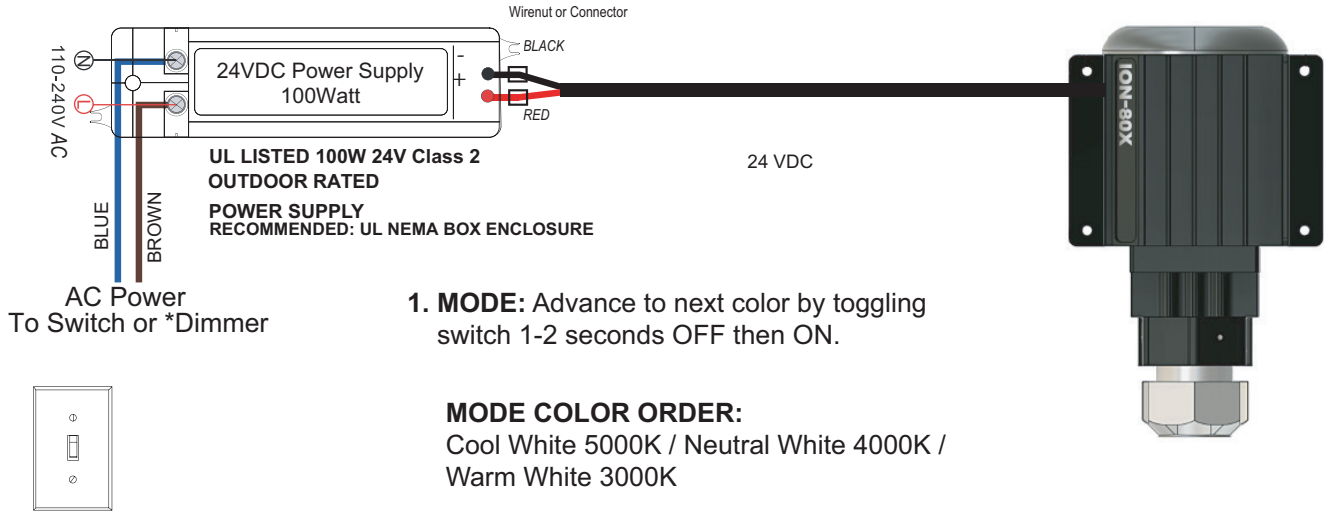
TOGGLE SWITCH

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

1. **MODE:** Advance to next color by toggling 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

WW-CW STAND ALONE SYSTEM MANUAL OPERATION

ION-80X WW-CW



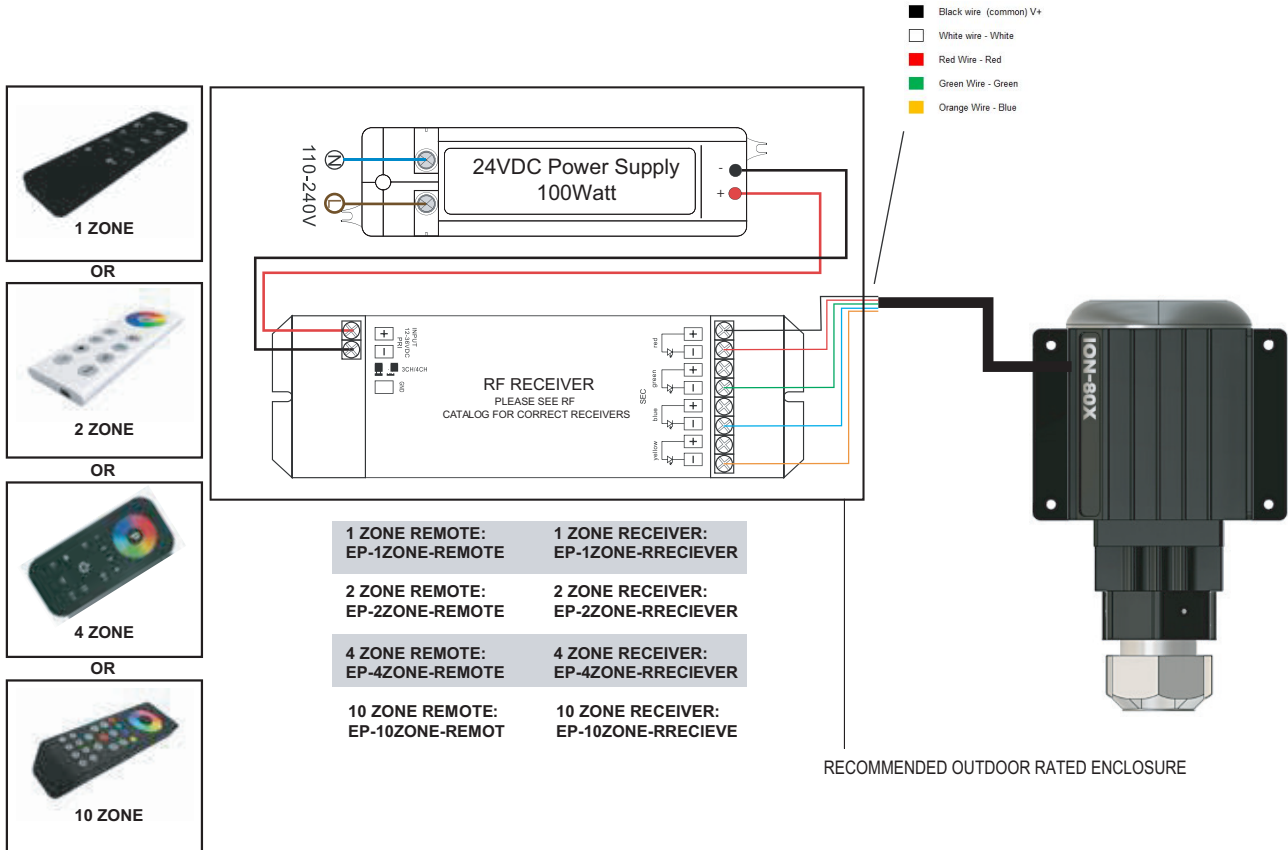
TOGGLE SWITCH

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

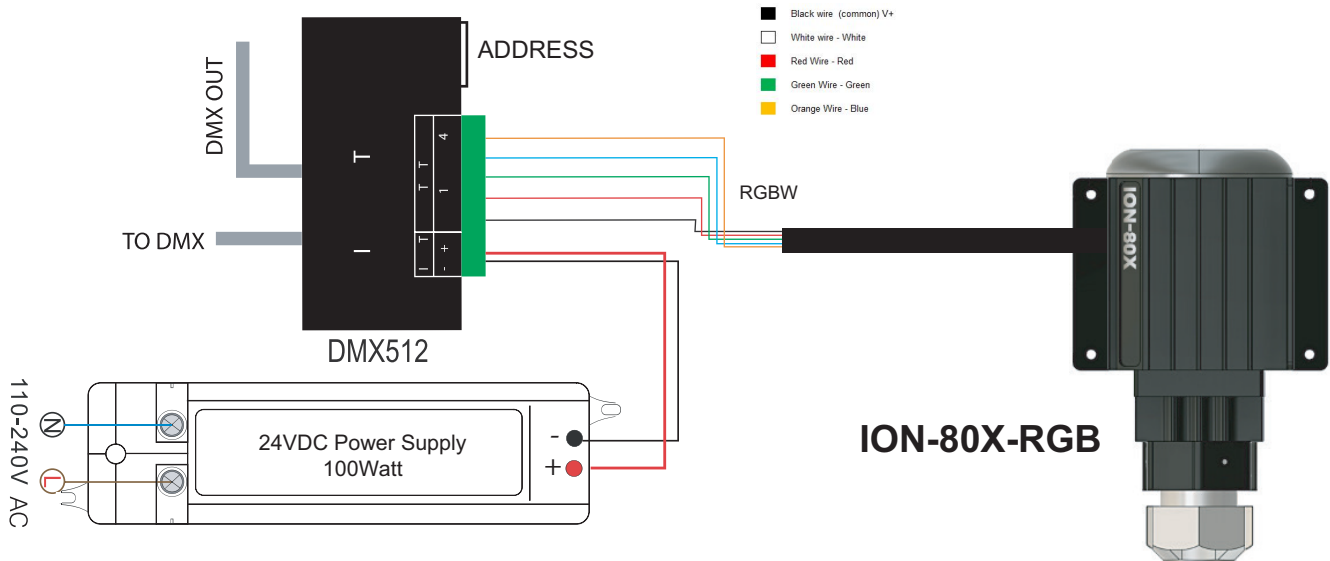
- 2. RESET MODE:** Toggle OFF 5-7 seconds then ON. This will reset all light sources back to blue. Memory will be save after 8 seconds.

RF SYSTEM WIRING

ION-80X RGB-DMX
ION-80X RGBW-DMX



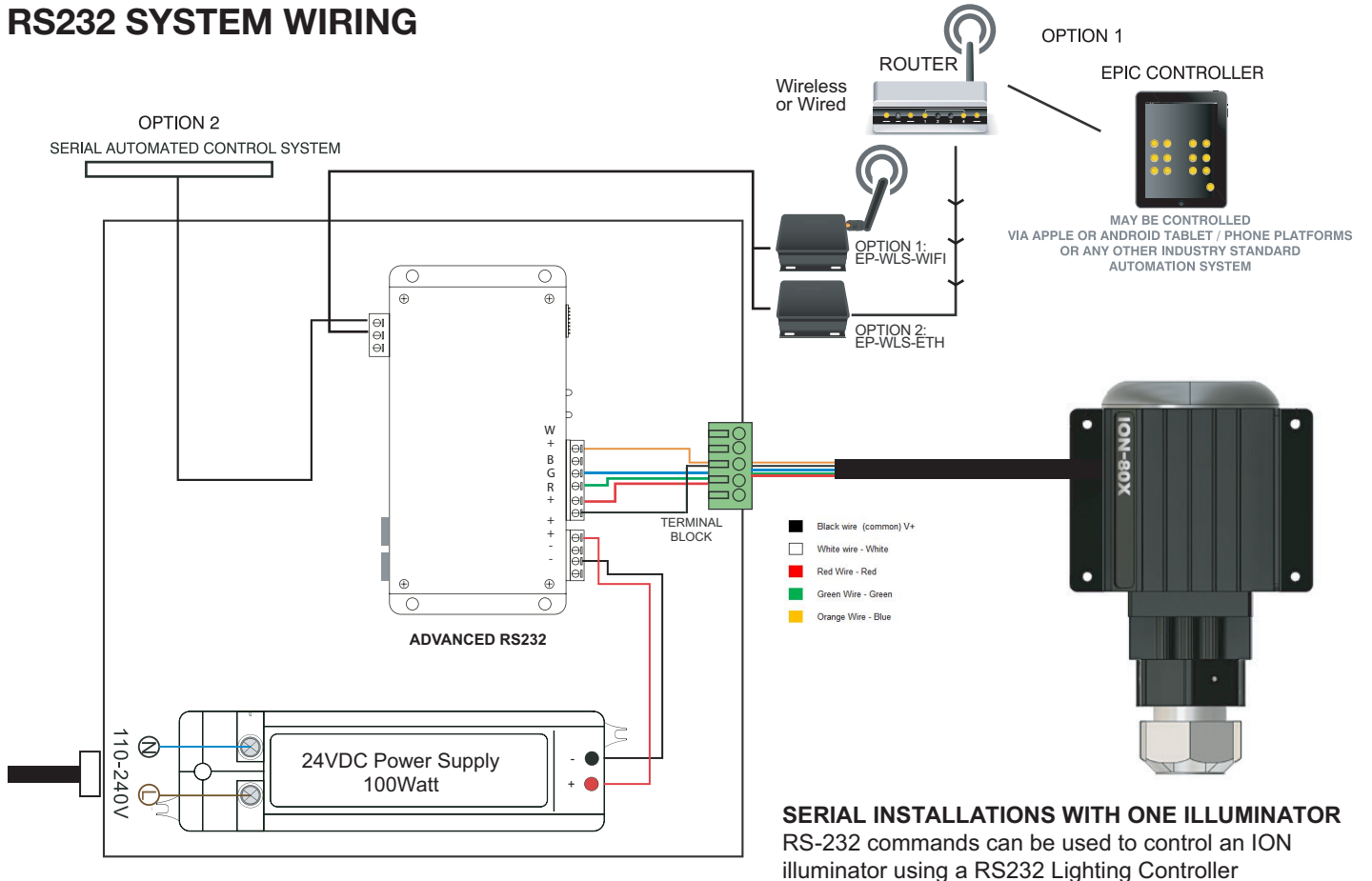
DMX SYSTEM WIRING



ION-80X-DMX

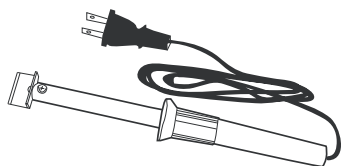
DMX is an industry standard abbreviation for “digital multiplex”. It is an RS-485 based protocol that has become the industry standard for digital lighting control interfaces. DMX allows users to synchronize fixtures to a centralized lighting controller. It supplies a constant flow of data to the fixture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

RS232 SYSTEM WIRING

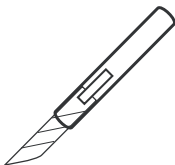


FIBER HEAD PREPARATION

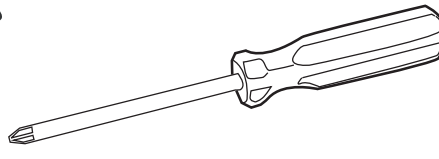
TOOLS REQUIRED



Electric hot knife
Also see PRO TIP #4



Razor knife

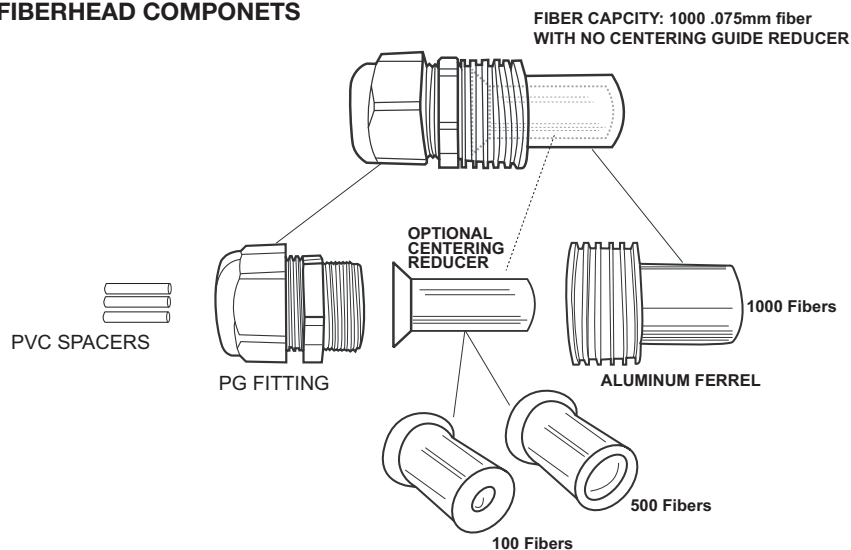


Philips screwdriver



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 COMPONENTS

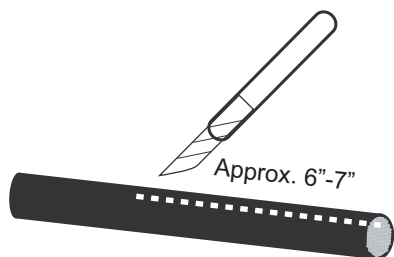


PRO-TIP 1 ▶

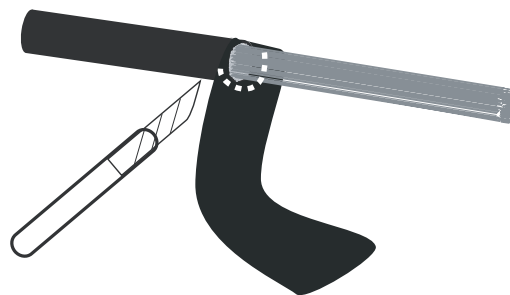
Preparation of the fiberhead is one of the most important elements in achieving maximum performance from your ION Series Fiber Optic Light Source. Solidly packed, clean cut fibers allow the light emitted from the light source to enter the ends of the fiber at an optimum angle for superior performance 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

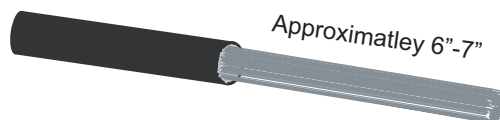
Remove the PVC jacket from the cable



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

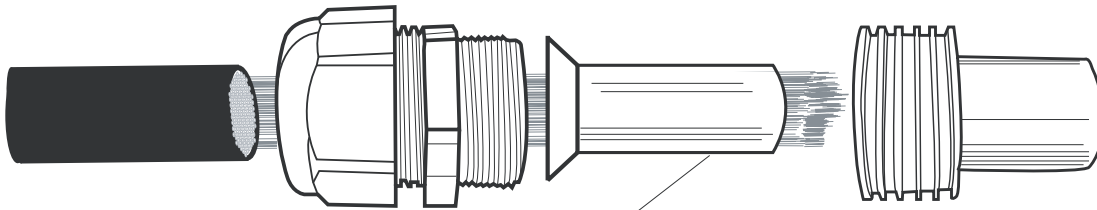


1b. Remove the excess jacket with a knife or scissors.



The cut fiber cable should look like this.

STEP 2 INSERT FIBER INTO FIBERHEAD

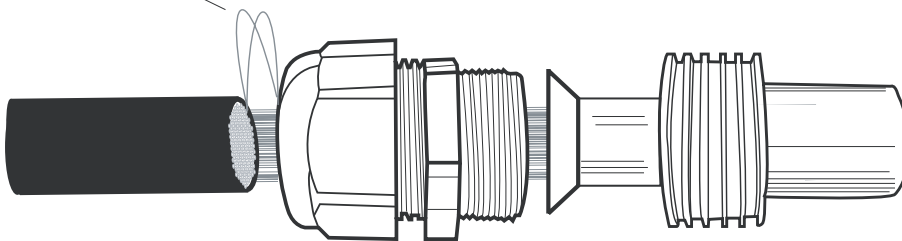


2a. Centering Reducers are used when the aluminum ferrule is not completely filled with fiber. Fiber must be tightly packed at the end of the ferrule. For optimum performance a centering device is used in combination with “dead” (see step **2e**) fibers to achieve this.

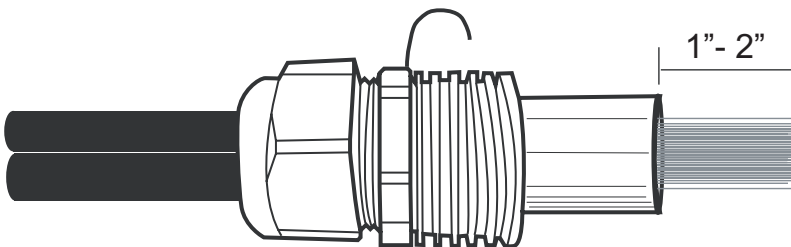
PRO-TIP 2 ▶

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 “jammed” fibers completely out and re-insert individually or in small groups while leaving the other fibers in place.



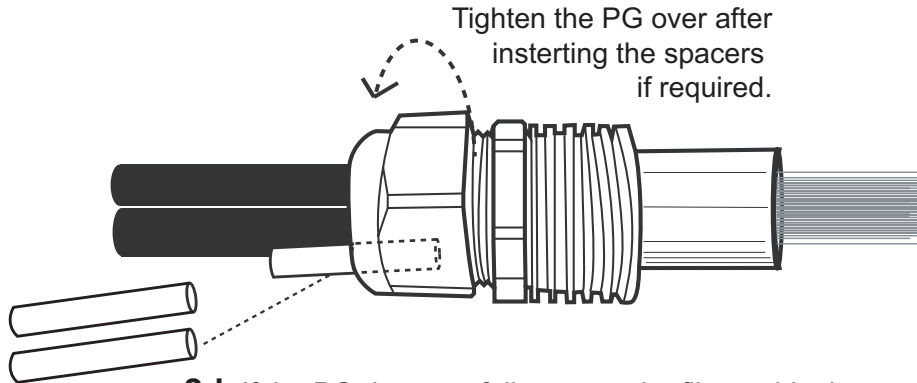
2c. Tighten the Aluminum Ferrule to the PG



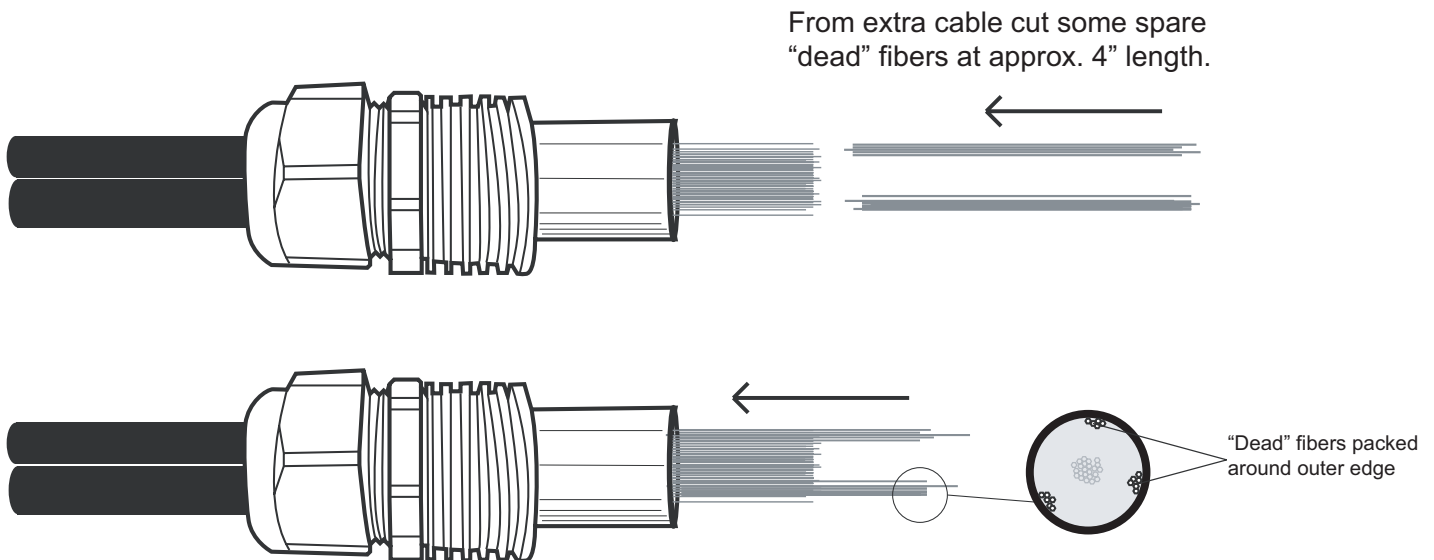
All fibers should extend 1”- 2” prior to cutting.

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 fitting and then tighten the PG securely on the cable.



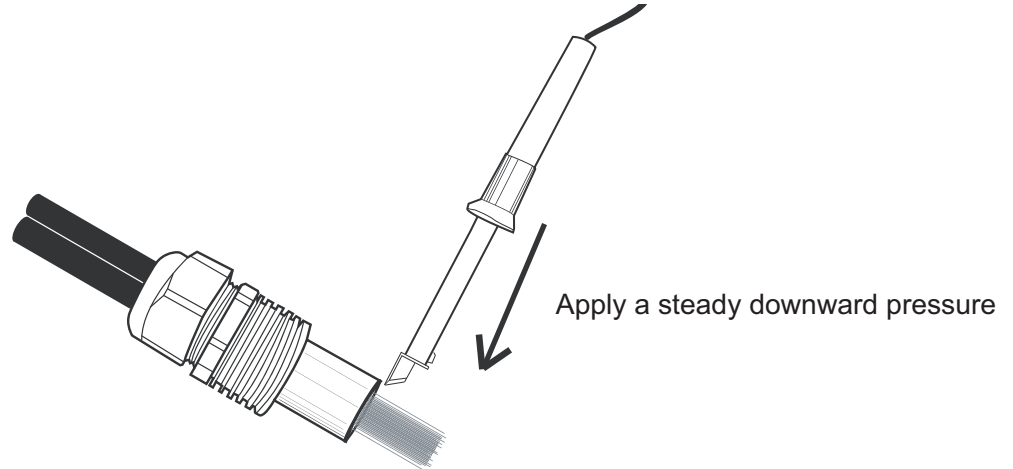
2e. Insert "dead" fibers into end of aluminum ferrule tip.

PRO-TIP 3 ▶

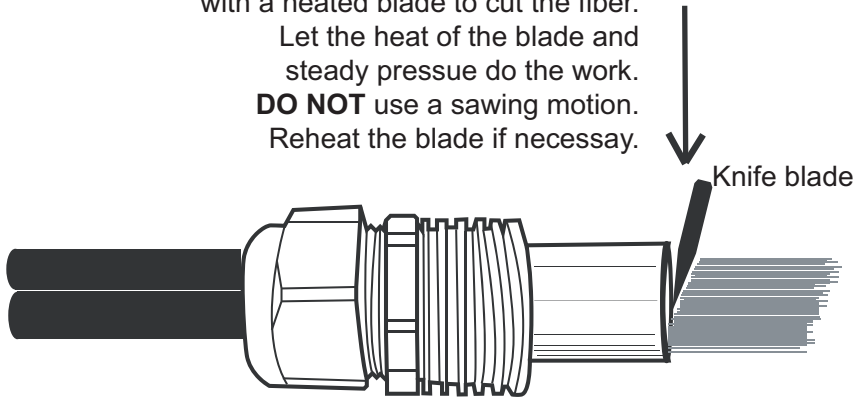
Inserting "dead" fibers into the end of the fiber head around the outer edge of the fiber head will help to pack all the fibers tightly together so the light will enter at the optimal angle and help to eliminate air pockets where excess heat can build up.

Pack as tightly as possible!

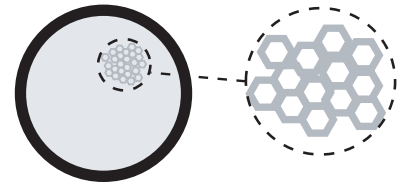
STEP 3 CUTTING THE FIBER



- 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.



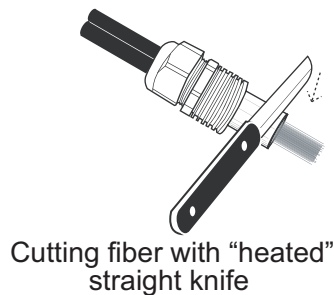
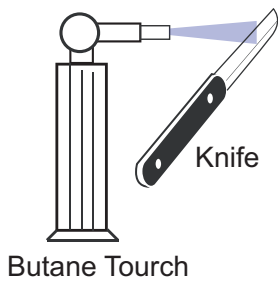
The result should be a smooth cut with the fibers densely packed together.



End View of fiberhead.

PRO-TIP 4 ▶

For Experienced Professionals ONLY! You may experience difficulty cutting fibers when you have too long an extension cord to the knife, resulting in low knife tip temperature, or when there is no electrical service available or 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.



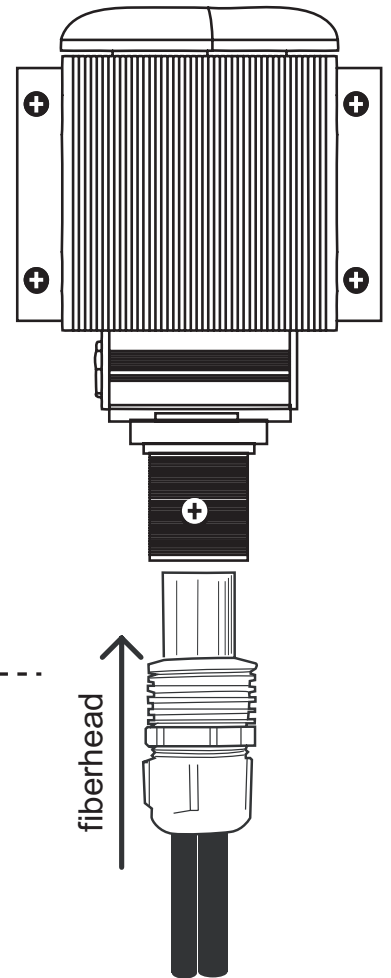
PRO-TIP 5 ▶

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

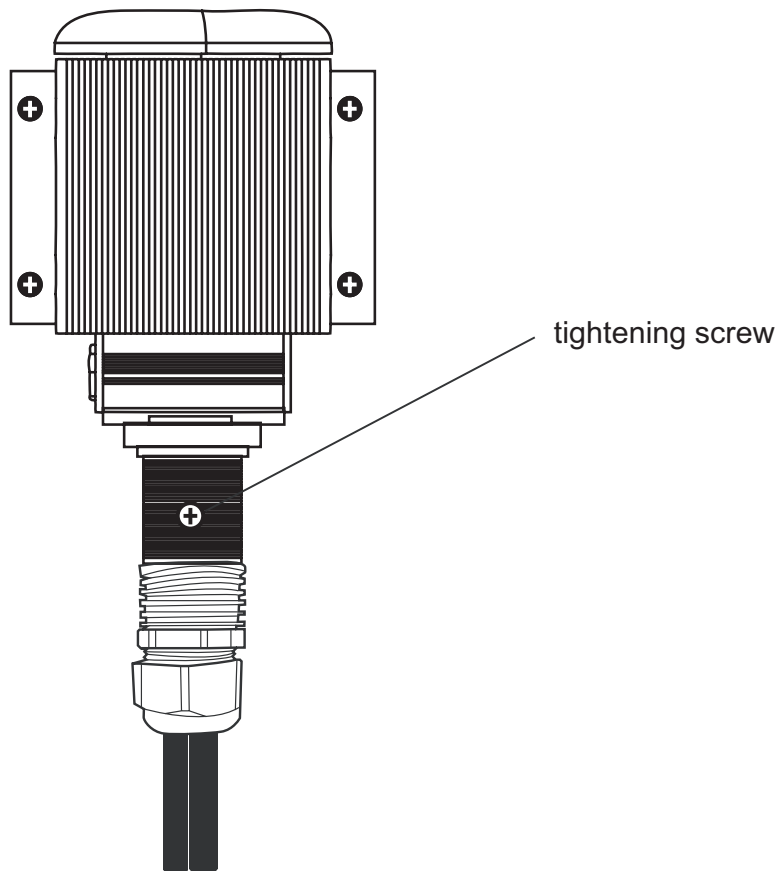
STEP 3 INSERT FIBERHEAD TO LIGHT SOURCE

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.



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 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)*