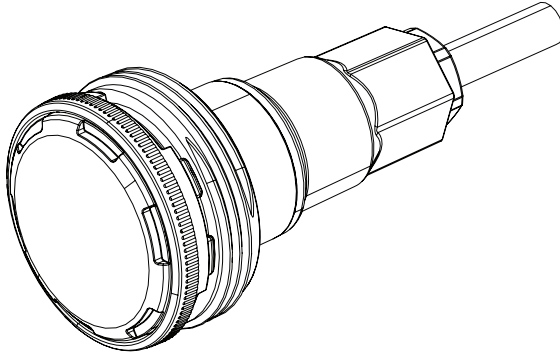




# INTELLIVIBE™ MICRO

## LED LIGHT



## INSTALLATION AND USER'S GUIDE

IMPORTANT SAFETY INSTRUCTIONS  
READ AND FOLLOW ALL INSTRUCTIONS  
SAVE THESE INSTRUCTIONS

Digital copies of all IntelliVibe Micro manuals can be found at [www.pentair.com](http://www.pentair.com), or by scanning the provided QR code.

Se pueden encontrar copias digitales de todos los manuales de IntelliVibe Micro en [www.pentair.com](http://www.pentair.com), o escaneando el código QR proporcionado.

Des copies numériques de tous les manuels IntelliVibe Micro peuvent être trouvées sur [www.pentair.com](http://www.pentair.com), ou en scannant le code QR fourni.



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<p><b>READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL</b></p>
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## IMPORTANT WARNING AND SAFETY INSTRUCTIONS



**SERIOUS BODILY INJURY OR DEATH CAN RESULT IF THIS LIGHT IS NOT INSTALLED AND USED CORRECTLY.**



**INSTALLERS, POOL OPERATORS AND POOL OWNERS MUST READ THESE WARNINGS AND ALL INSTRUCTIONS BEFORE USING THE POOL AND/OR SPA LIGHT.**



Most states and local codes regulate the construction, installation, and operation of public pools and spas, and the construction of residential pools and spas. It is important to comply with these codes, many of which directly regulate the installation and use of this product. Consult your local building and health codes for more information.



**IMPORTANT NOTICE - Attention Installer:** This Installation and User's Guide ("Guide") contains important information about the installation, operation and safe use of this underwater pool and spa light. This Guide should be given to the owner and/or operator of this equipment.



Before installing this product, read and follow all warning notices and instructions in this Guide. Failure to follow warnings and instructions can result in severe injury, death, or property damage.

Call (800) 831-7133 for additional free copies of these instructions. Please refer to [www.pentair.com](http://www.pentair.com) for more information related to this products.



**RISK OF ELECTRICAL SHOCK OR ELECTROCUTION: UNDERWATER POOL LIGHTS REQUIRE HIGH VOLTAGE WHICH CAN SHOCK, BURN, OR CAUSE DEATH.**



**Before working or servicing pool lights, always disconnect power to the pool and/or spa lights at the source circuit breaker. Failure to do so could result in death or serious injury to service person, pool users or others due to electric shock. When installing and using this electrical equipment, basic safety precautions should always be followed.**

This product must be installed by a licensed or certified electrician or a qualified pool professional in accordance with the current National Electrical Code (NEC), NFPA 70 or the Canadian Electrical Code (CEC), CSA C22.1. All applicable local installation codes and ordinances must also be adhered to. Improper installation will create an electrical hazard which could result in death or serious injury to pool users, installers or others due to electrical shock, and may also cause damage to power source. Always disconnect the power to the pool light at the circuit breaker before installing or removing the light. Failure to do so could result in death or serious injury to service person, pool users or others due to electrical shock.

## IMPORTANT WARNING AND SAFETY INSTRUCTIONS



**WARNING** For countries in compliance with International Electrotechnical Commission (IEC) regulatory standards: The light fixture must be installed by a licensed or certified electrician or a qualified pool service person, in accordance with current IEC 364-7-702 and all applicable local codes and ordinance. Improper installation will create an electrical hazard, which could result in death or serious injury to pool user, installer or other due to electrical shock and may also cause damage to the property.

### INSTALLERS AND INSPECTORS

**THE LIGHT AND WALL FITTING FORM A COMPLETE NON-METALLIC LOW VOLTAGE LIGHTING SYSTEM. THIS CONFIGURATION DOES NOT REQUIRE BONDING OR GROUNDING WHEN POWERED BY A POOL RATED 300 WATT ISOLATION TRANSFORMER AND INSTALLED IN COMPLIANCE WITH THE CURRENT NATIONAL ELECTRIC CODE (NEC).**

**NOTICE:** The light power cord has three conductors. The black and white conductors are for power. The green conductor is a communication wire and is not intended for grounding. All three conductors must be connected to the IntelliVibe controller directly or via a junction box.

**UNBONDED LIGHTING NEC PROVISIONS:** When the non-metallic low voltage lights are used, the current NEC provides an exception to luminaire bonding and grounding in Article 680.6 and 680.23.

**POOL WATER BONDING NEC PROVISIONS:** For Pool Water Bonding required by NEC Article 680.26C, concrete pools are considered conductive (refer to 680.26 (b)(1) due to the porosity of concrete and the bonding of rebar. No additional bonding is required.

**POOL AND SPA FIXED LUMINAIRES:** Follow these guidelines when installing or replacing Pentair fixed luminaires:

**FOR LIGHT OPERATION, ONLY USE A SAFETY ISOLATION TRANSFORMER.**

**FIXED POOL AND SPA CONTROLLER SPECIFICATION: 14 VAC 50/60 Hz.**

IntelliVibe Micro Lights are approved to be installed in a vertical position (facing up). Vertical light installation must be installed minimum 4 inches below water level.

Vertical light installations are recommended only in non-occupant areas of the pool (e.g. up-lighting a vanishing edge overspill).

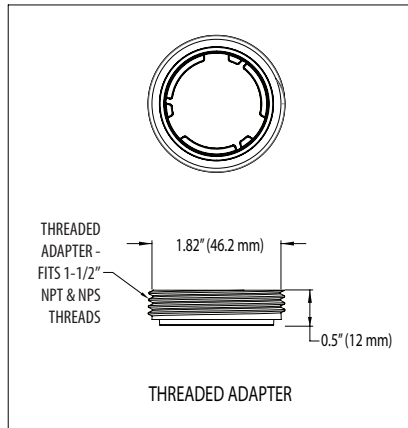
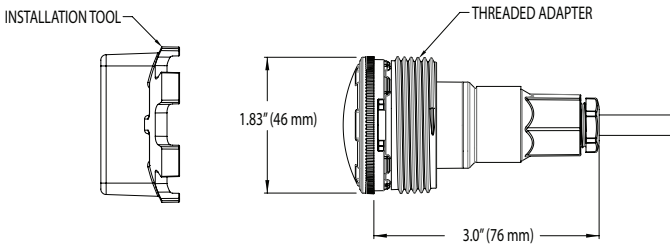
# INSTALLATION

## OUTPUT LIGHTING TABLE

- IntelliVibe Controller Maximum: 200 W
- Individual Output Maximum: 100 W
- IntelliVibe Micro Output: 12 W

IF USING PS300 300 VOLT-AMP TRANSFORMER	
Maximum Number of Lights per 100 W OUTPUT:	
IntelliVibe Micro	8
Maximum Number of Lights per CONTROLLER (sum of all outputs):	
IntelliVibe Micro	16

## LIGHT DIMENSIONS



## LIGHT INSTALLATION IN 1.5" WALL FITTING (USA)

The following describes how to install the light in a 1-1/2" wall fitting.

**Note:** IntelliVibe Micro lights are approved for horizontal and vertical installation.

**BEFORE STARTING:** The following information describes the tasks that must be completed by the electrician *before* the light wall fitting is installed. See Figure 1.



**WARNING** Be sure that the pool or spa meets the requirements of the current National Electrical Code (N.E.C.) Article 680-22 and all local codes and ordinances. A licensed or certified electrician must install the electrical system to meet or exceed those requirements before the underwater light is installed. Some of the requirements of the National Electrical Code which the pool's electrical system must meet are as follows:

- The Junction Box, PS300, and the IntelliVibe controller are located at least 4 inches (10.2 cm) above ground level or 8 inches (20.3 cm) above maximum water level, whichever is higher. The Junction Box, PS300, and the IntelliVibe controller must be at least 4 feet (1.2 m) from the edge of the pool. See Figure 1.
- To be certain that the pool or spa electrical system meets all applicable requirements, the electrician should also consult the local building department.

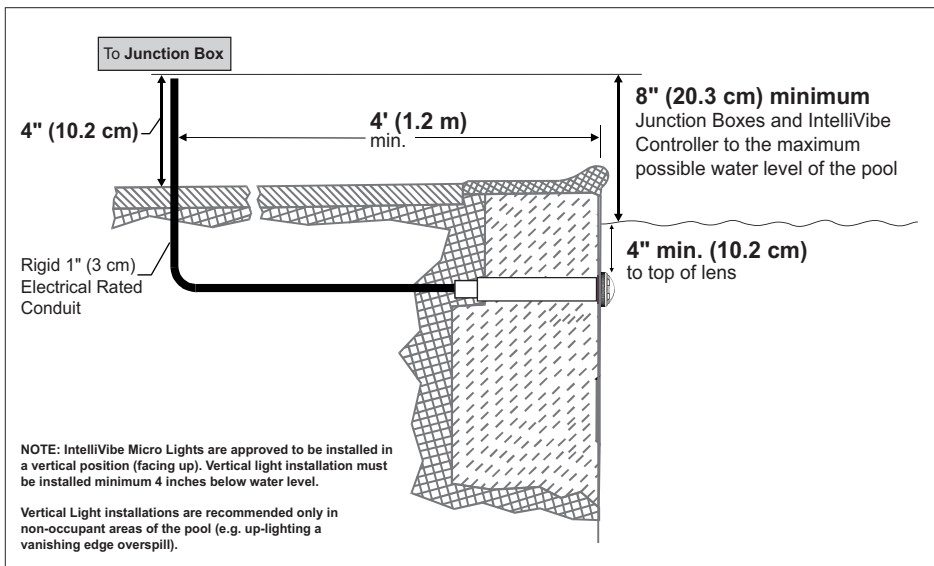


Figure 1

**Note:** See *Light Dimensions* on page 1.

## LIGHT INSTALLATION IN 1.5" WALL FITTING (CANADA)

### **⚠ WARNING**

Be sure the electrical system of your pool conforms with the following requirements of the Canadian Electrical Code (CE), and all local codes and ordinances. A licensed or certified electrician must install the electrical system to meet or exceed those requirements before the light and (fixture-housing) is installed. Some of the CE requirements are listed below.

- The junction/deck box must be sealed to the conduit to prevent water from getting into the box. See Figure 2 below.

The following information is for the Junction Box and pool deck location for Canada only.

Junction/Deck boxes shall be installed:

- above the normal water level of the pool;
- so that the top of the box is located at or above the finished level of the pool deck;
- in a location that the box will not be an obstacle; and
- where any water on the deck will drain away from the box (See diagram below.)

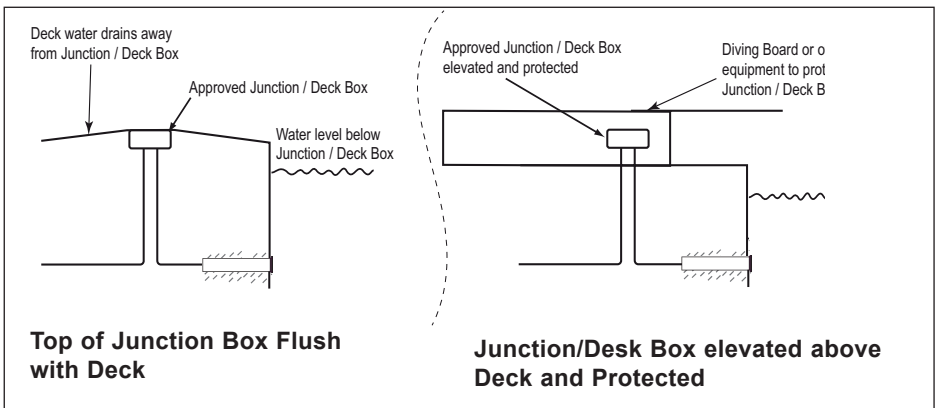


Figure 2

## COMPATIBLE WALL FITTINGS

Brand	Part Number	Brand	Part Number
PENTAIR	542402	WATERWAY	215-9170B
	542404		215-9890B
	542405		400-9150B
	542414		400-9170B
	542429	CMP	CMP25522100000
	86205100		CMP25550000000
HAYWARD	SP1022		CMP25550001060

The IntelliVibe Micro light adapter allows the mounting of the light in the 1-1/2" return fitting. Refer to the Compatible Wall Fittings table above.

### **FOR FIBER OPTIC RETROFIT APPLICATIONS, SEE PAGE 10.**

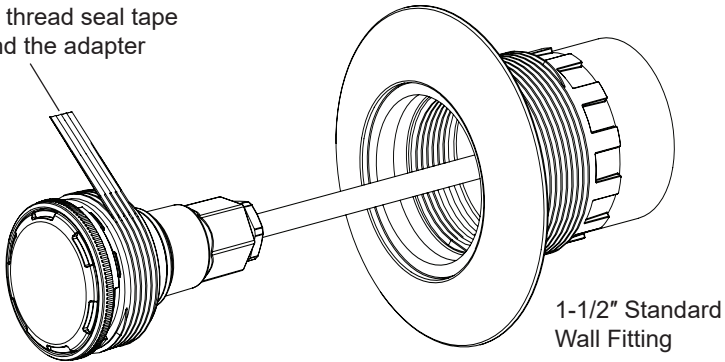
## WET CONDUIT INSTALLATION

**Note:** The white threaded adapter is factory-installed onto the light assembly. This adapter allows the light to be threaded into most 1-1/2" light wall fittings.

To install the light into the wall fitting:

1. Route the light power cord through the 1.5" wall fitting to the IntelliVibe controller or junction box.
2. Wrap thread seal tape around the male threads on the white threaded adapter on the light. Thread tape reduces friction to allow the light to fully seat in the 1-1/2" return fitting.
3. Pull the light power cord through the conduit until there is approximately 3 to 6 inches of visible cord between the body of the light and the wall fitting.

Wrap thread seal tape  
around the adapter

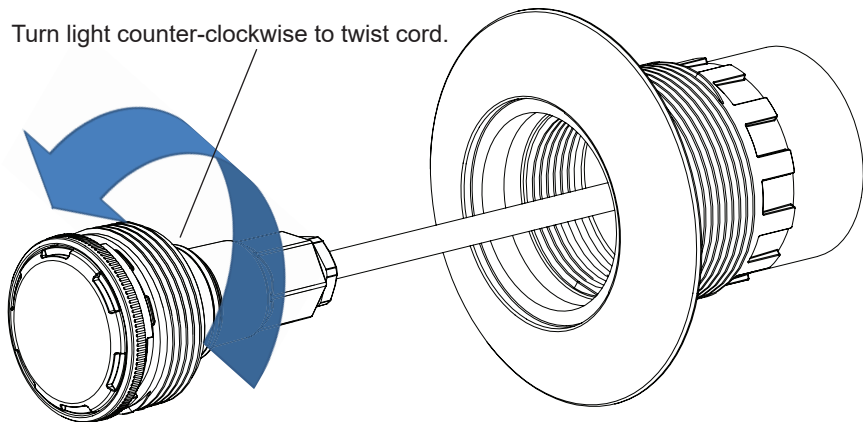




## WET CONDUIT INSTALLATION (continued)

4. With the light in hand, twist the light assembly approximately five turns counter-clockwise. This prevents twists remaining in the cord after the light is fully installed.

Turn light counter-clockwise to twist cord.

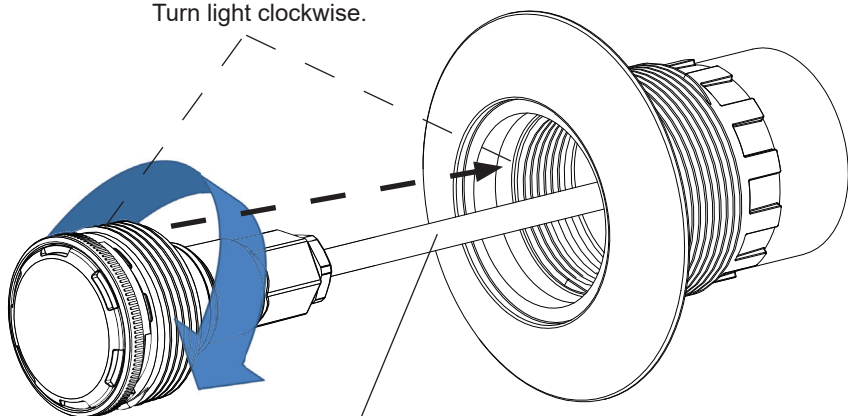


5. Ensure the inside of the wall fitting and threaded adapter are free of debris, then thread the light clockwise into the wall fitting until hand-tight.

**CAUTION**

**HAND-TIGHTEN ONLY. OVER-TIGHTENING CAN PERMANENTLY DAMAGE THE LIGHT.**

Turn light clockwise.

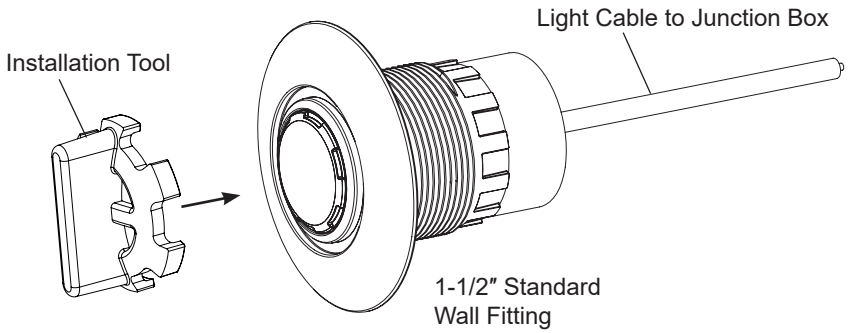


Cord will un-twist as light is threaded into wall fitting.

## WET CONDUIT INSTALLATION (continued)

- Place *Micro Light Installation Tool* (P/N 602158z) over the front of the light and tighten the light into the 1.5" fitting.

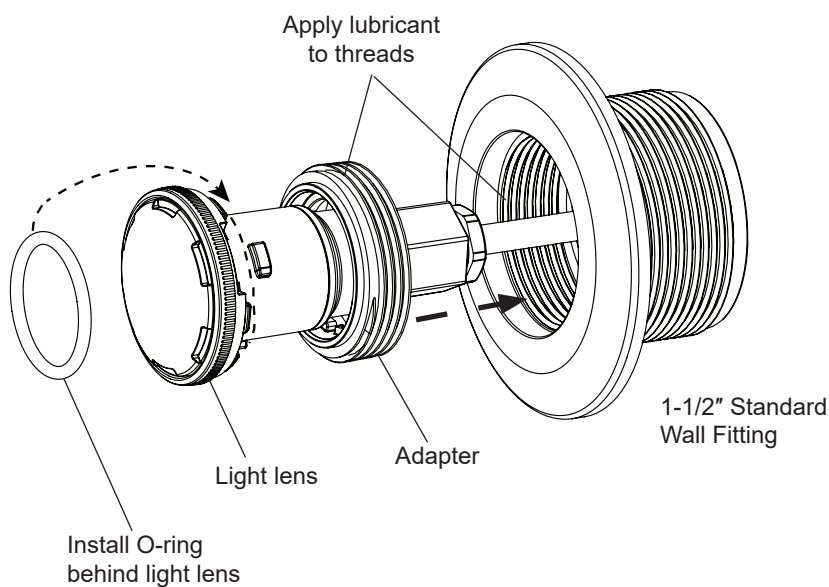
**Note:** The light should be secured in place so that it can only be removed by using the light installation tool.



- Continue to *Light Wiring Installation* on page 10.

## DRY/SEALED CONDUIT INSTALLATION (USE PROVIDED KIT)

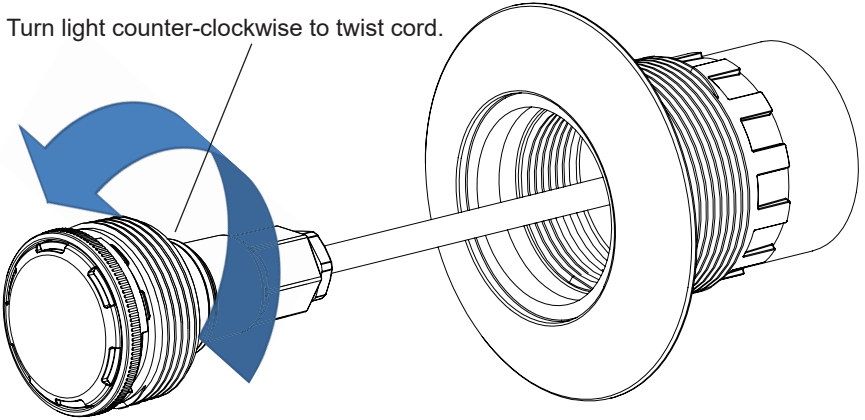
1. **The pool water level must be below the light wall fitting.**
2. Route the light power cord through the 1.5" wall fitting to the IntelliVibe controller or junction box.
3. Pull the light power cord through the wall fitting until there are approximately 3 to 6 inches of cord between the light and wall fitting.
4. Stretch O-ring over lens and seat in proper position.
5. Using the provided lubricant, lubricate the O-ring.
6. Pull adapter over O-ring and twist adapter until tightly secured in place.
7. Using the provided lubricant, lubricate both the adapter threads and inner threads of the wall fitting.



**DRY/SEALED CONDUIT INSTALLATION (continued)**

8. With the light in hand, twist the light assembly approximately five turns counter-clockwise. This prevents twists remaining in the cord after the light is fully installed.

Turn light counter-clockwise to twist cord.

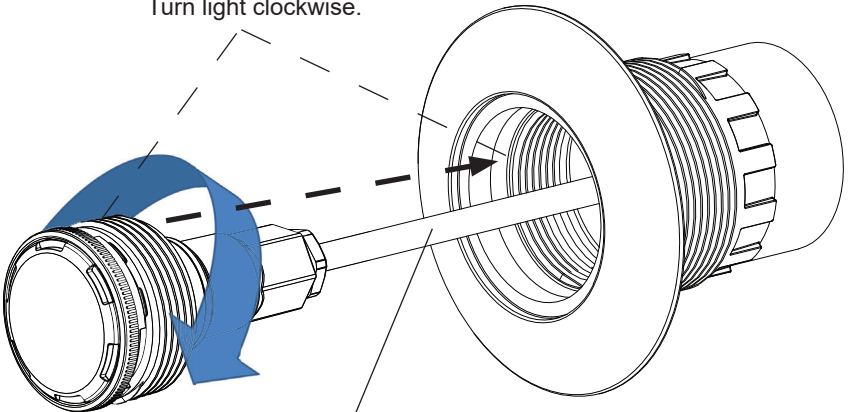


9. Ensure the inside of the wall fitting and threaded adapter are free of debris, then thread the light clockwise into the wall fitting until hand-tight.



**HAND-TIGHTEN ONLY. OVER-TIGHTENING CAN PERMANENTLY DAMAGE THE LIGHT.**

Turn light clockwise.

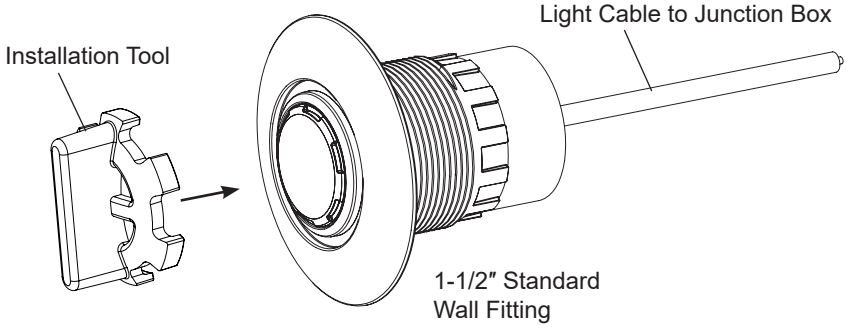


Cord will un-twist as light is threaded into wall fitting.

## DRY/SEALED CONDUIT INSTALLATION (continued)

10. Place *Micro Light Installation Tool* (P/N 602158z) over the front of the light and tighten the light into the 1.5" fitting.

**Note:** The light should be secured in place so that it can only be removed by using the light installation tool.



11. Continue to *Light Wiring Installation* on page 10.

## FIBER OPTIC RETROFIT APPLICATIONS

The IntelliVibe Micro LED Light may be suitable for many fiber optic retrofit applications.

### **IMPORTANT:**

1. Before proceeding with the fiber optic retrofit installation, verify that the light fits properly before removing the fiber optic system.
2. Refer to *Light Dimensions* on page 1.
3. Read all instructions to verify that all of the 1.5" fittings in the pool have suitable dimensions to allow the light to fit properly.
4. Be sure the conduit that was previously utilized as housing for the fiber optic cables meets all applicable codes and regulations that apply to electrical conduit in swimming pool applications.

## LIGHT WIRING INSTALLATION

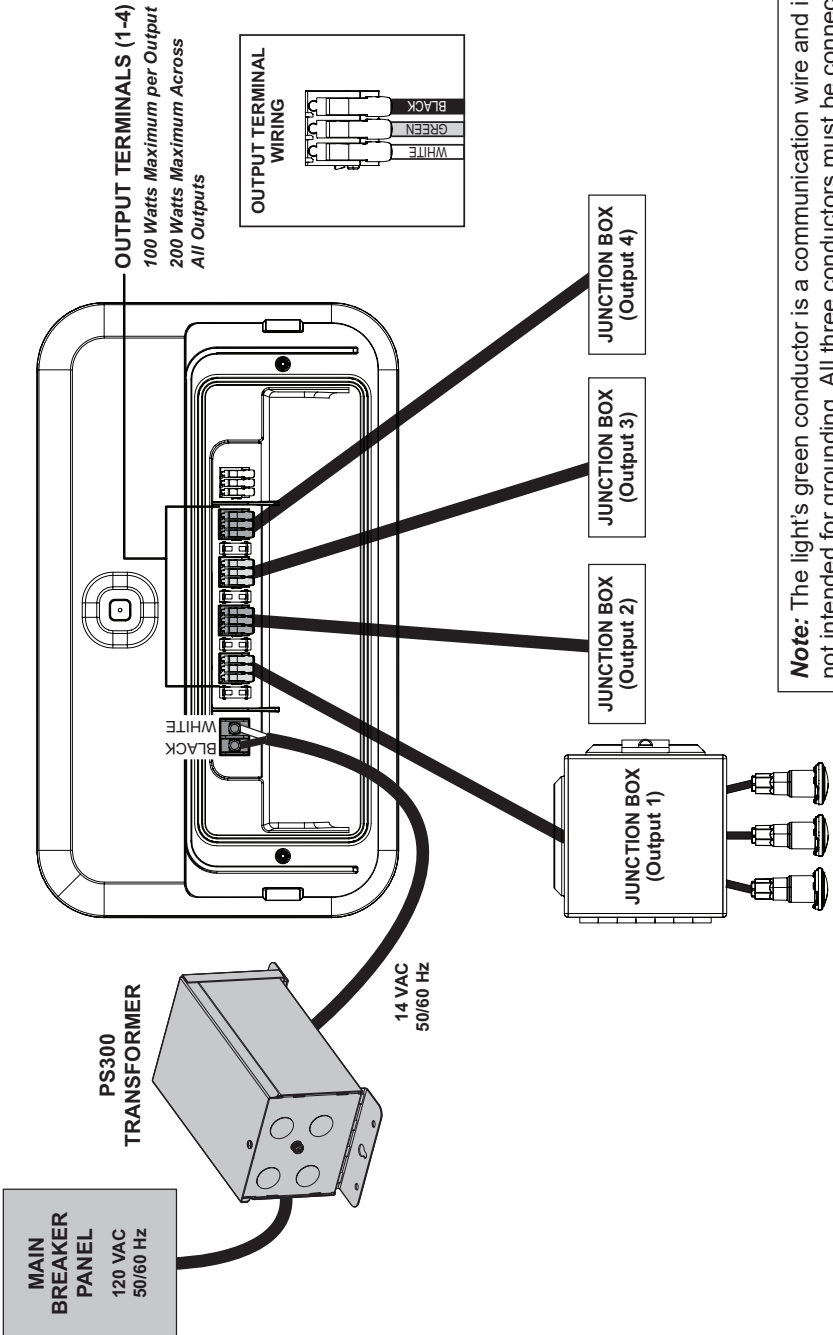
To connect the IntelliVibe Micro Light to the IntelliVibe controller or junction box:

1. Route the IntelliVibe Micro light power cord through the wall fitting to the location of the IntelliVibe controller or junction box.
2. At the IntelliVibe controller or junction box, cut off any extra cord. Leave at least 6 inches (15.2 cm) of cord in the Junction Box or controller to facilitate the light installation wall fitting inspection.  
 See *Figure 1* on page 2 for junction box installation in the USA.  
 See *Figure 2* on page 3 for junction box installation in Canada.
3. Connect the 3 conductors to the corresponding colors of circuit wires in the Junction Box. Secure the Junction Box cover.  
**Note:** The light power cord has three conductors. The black and white conductors are for power. The green conductor is a communication wire and is not intended for grounding. All three conductors must be connected to the IntelliVibe controller directly or via a junction box.
4. Refer to *IntelliVibe Controller Manual (P/N 619140)* for wiring connections.
5. Before operating the light, fill the pool with water until the light is completely submerged.



**DO NOT OPERATE LIGHT OUT OF WATER.**

# WIRING DIAGRAM



**Note:** The light's green conductor is a communication wire and is not intended for grounding. All three conductors must be connected to the IntelliVibe controller directly or via a junction box.

# MAINTENANCE

## REPLACING THE LIGHT ASSEMBLY (IN AN EXISTING POOL OR SPA)

### DANGER



This underwater light must be installed by a licensed or certified electrician or a qualified pool professional in accordance with the current National Electrical Code (NEC), NFPA 70 or the Canadian Electrical Code (CEC), CSA C22.1 and all applicable local codes and ordinances. Improper installation will create an electrical hazard which could result in death or serious injury to pool users, installers or others due to electrical shock, and may also cause damage to property.

Always disconnect the power to the pool light at the circuit breaker before servicing the light. Failure to do so could result in death or serious injury to service person, pool users or others due to electrical shock.

The following removal and installation instructions describe how to remove and install the light assembly.

### WARNING

Failure to bring the pool or spa's electrical system up to code requirements before installing the underwater light will create an electrical hazard which could result in death or serious injury to pool users, installers, or others due to electrical shock, and may also cause damage to property.

1. **Switch off electrical switch or circuit breaker at the source.**
2. Remove existing light junction box, light wiring compartment, or IntelliVibe controller wiring cover. Disconnect the light wires and attach fish tape to the existing light power cord. *This will assist in pulling the replacement light power cord through the conduit back to the junction box.*
3. **Remove the existing pool light assembly from the pool or spa.** Use provided installation tool (P/N 602158z) to rotate the light assembly counter-clockwise 1/8 of a turn to release the light from the wall fitting.
4. Completely unthread light from the wall fitting.
5. Slowly pull the light (with attached fish tape) out of the wall fitting. Place the light on the deck.
6. Secure the new light power cord to the fish tape and carefully feed the fish tape and cable back to the junction box.
7. **Install the light into the wall fitting:** Refer to *Wet Conduit Installation*, page 4 and *Dry/Sealed Conduit Installation (Use Provided Kit)*, page 7 for specific instructions.
8. **Connect the 3 conductors to the corresponding circuit wires in the Junction Box:** See *Light Wiring Installation* on page 10.



# TROUBLESHOOTING

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## **If lights are not turning on:**

1. Ensure power is being supplied to the IntelliVibe controller. Refer to the *IntelliVibe Controller Manual (P/N 619140)*.
2. Ensure lights are wired to IntelliVibe controller correctly. Refer to the *IntelliVibe Controller Manual (P/N 619140)*.
3. Ensure IntelliVibe controller is installed properly and provisioned to the Pentair Home App.
4. If 1-3 are all proper, measure the voltage being delivered to the light from the white and black conductors. Ensure voltage is between 15-20 V DC.

# REPLACEMENT PARTS

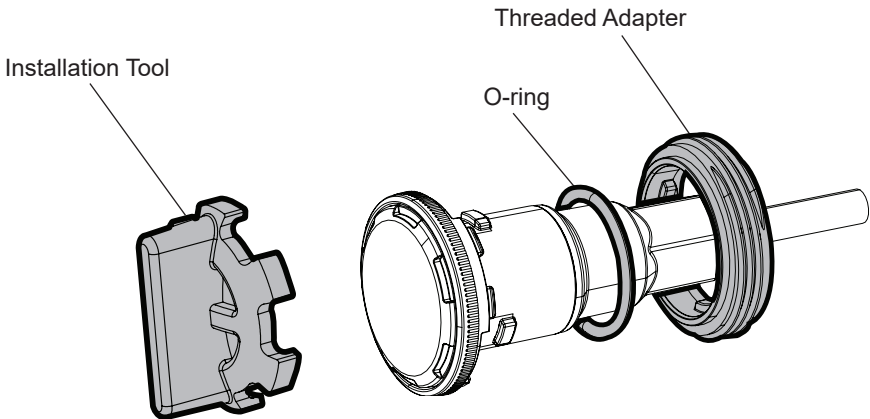
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## INTELLIVIBE MICRO MODELS

PART NUMBER	DESCRIPTION
602278	IntelliVibe Micro Light 50' cord
602279	IntelliVibe Micro Light 100' cord
602280	IntelliVibe Micro Light 150' cord

## INTELLIVIBE MICRO REPLACEMENT PARTS

PART NUMBER	DESCRIPTION
620460	Threaded Adapter
602158z	IntelliVibe Micro Installation Tool
620463	Conduit Seal O-ring
618040	MicroBrite Adapter for GloBrite Niches



## NOTES

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