

# HAYWARD®

## Underwater ColorLogic™ LED Lighting Fixtures

FOR SWIMMING POOLS

OWNER'S GUIDE

INSTALLATION AND OPERATING  
INSTRUCTIONS

GENERAL INFORMATION



UL Listed File No. E234517

The Hayward ColorLogic™ LED (light-emitting diode) underwater lighting fixture you have purchased is designed to mount into Hayward DuraNiche Series models SP600 and SP607 manufactured 1993 and later. Hayward light fixtures may fit into other niches, but the installation will not carry a U.L. approval.

Hayward SP520 Series ColorLogic LED lights are U.L. listed under file number E234517 and, to be approved, must be used with Hayward models SP600 or SP607 fixture housings (niches). Installation of light and niche must be in accordance with Article 680 of the National Electric Code (N.E.C.) and any applicable local codes. If non-metallic conduit is used, a #8 AWG grounding conductor must be run through the conduit and connected to the grounding connector on the inside of the niche. This connection must be encapsulated using a listed potting compound in accordance with N.E.C. Article 680-20, such as 3M Inc. Scotch Cast Wet Niche Potting Compound No. 2135 (U.L. File E130394) or equivalent. The integral external connection on the niche is for the #8 AWG bonding conductor also required by the N.E.C. Please refer to your niche installation instructions for details.

Except when the fixture is installed in an area of the swimming pool that is not used for swimming and the lens is adequately guarded to keep any person from contacting it, the fixture must be installed in or on a wall of the pool, with the top of the lens not less than 4 inches (10.2 cm) below the normal water level of the pool.

**Important Note When Installing SP-600 Niche (for Concrete/Gunite Pools):** A cover and two screws have been provided to protect the niche and mounting screw holes. Leave these in place during construction to prevent intrusion of concrete which may foul the niche or threads. REMOVE and discard both the screws and the protective cover when ready to install the light fixture.

MODEL #	VOLTAGE	WATTAGE	WIRE SIZE
SP-0521LED30 SP-0521LED50 SP-0521LED100	120VAC	50W	#14 AWG

### IMPORTANT SAFETY INSTRUCTIONS

#### READ AND FOLLOW ALL INSTRUCTIONS

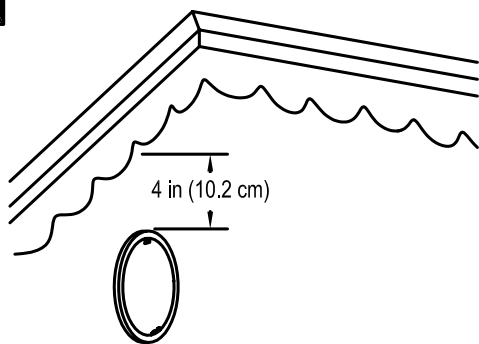
When installing and using this electrical equipment, basic safety precautions should always be followed, including the following: Failure to follow instructions may result in injury.

1. Warning - Risk of Electric Shock. Do not open. Pool light has no user serviceable parts inside.
2. Warning - To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.
3. Caution - This swimming pool light is U.L. Listed for permanently installed pools only. It is not listed for storable pools. Permanently installed pools are those constructed in or partially in the ground and all others capable of holding water in a depth greater than 42 in (1.07 m). Storable pools are those constructed on or above the ground and capable of holding water to a maximum depth of 42 in (1.07 m).
4. This Light Fixture must be installed by qualified personnel in compliance with the National Electric Code (N.E.C.) and any applicable local codes.
5. Disconnect electrical power before installing or servicing this equipment.
6. Improper installation may result in death or serious injury to bathers or service personnel or others by way of electric shock. Read and follow all instructions.

**SAVE THESE INSTRUCTIONS**

**CAUTION:** Local electrical codes and/or regulations must be followed when installing this light fixture.

1

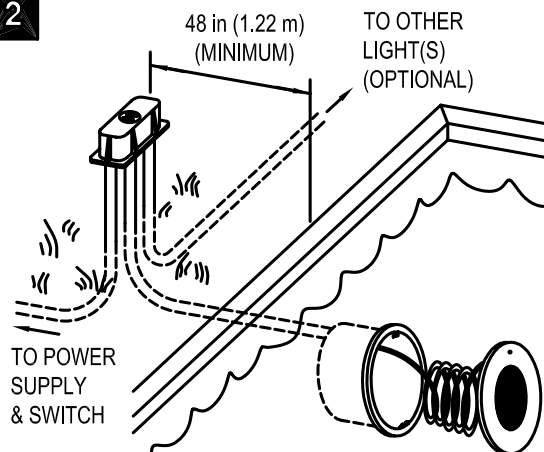


NOTE: For installation of Hayward PVC Fixture Housings (Niches), see installation instructions provided with the fixture housing.

#### INSTALL FIXTURE HOUSING (NICHE)

The light fixture must be installed in or on a wall of the pool with the top of the lens opening not less than 4 inches (10.2 cm) below the normal water level of the pool except when the fixture is installed in an area of the swimming pool that is not used for swimming and the lens is adequately guarded to prevent any person from contacting it. Select a location for the light fixture(s) that will give optimum light dispersion for the pool design.

2

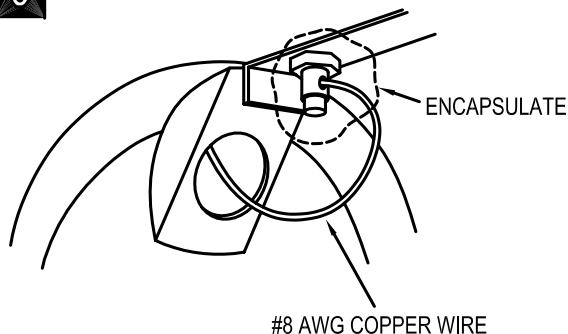


#### INSTALL JUNCTION BOX AND CONDUIT

Select a suitable location for the junction box (Hayward SP680, SP681, or equivalent) not less than 48 inches (1.22 m) from the edge of the pool. Run conduit from the niche up to the junction box such that the junction box is not less than 8 inches (20 cm) above the maximum pool water level, or not less than 4 inches (10 cm) above the ground, whichever is greater. Additional conduit should be run from the junction box to the power supply, switch panel, pool/spa controller, etc.

Snake the 3-conductor cord, and a #8 AWG copper ground wire through the conduit outlet of the fixture housing (niche), into the conduit and up to the junction box. DO NOT CUT EXCESS CORD. Leave adequate cord coiled up in the niche so that the fixture will be able to be raised to the pool deck for servicing. Cut off extra cord at the junction box.

3

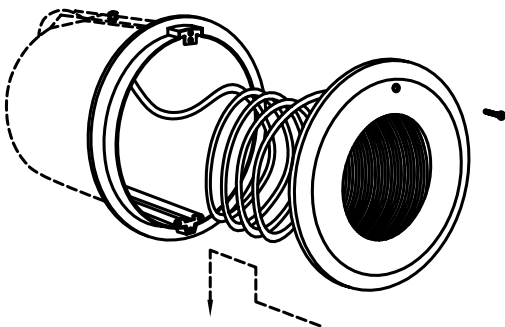


#### CONNECT GROUND WIRE TO NICHE

Connect the #8 AWG copper ground wire to the grounding connector inside the fixture housing (niche). This termination must be encapsulated using a listed potting compound\* to a thickness of at least 1/8 inch (4 mm) in accordance with article 680 of the N.E.C.

\* 3M Inc. Scotch Cast Wet Niche Potting Compound No. 2135 (U.L. File E130394) or equivalent.

4

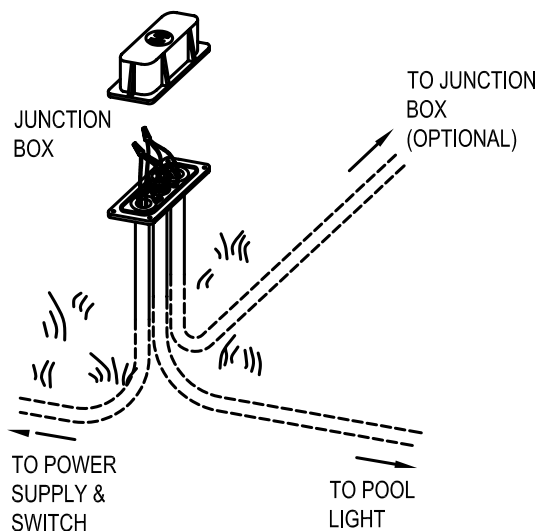


#### MOUNT THE LIGHT FIXTURE

Coil up the extra cord and insert it in the fixture housing (niche) behind the light fixture. To mount the light fixture, insert the fixture into the niche with the mounting screw at the top (12 o'clock). Place the bottom hook in first (6 o'clock), then tilt the top of the fixture up and secure it with the mounting screw. Be sure the hook on the bottom catches on the niche. When removing the fixture from the niche, unscrew the mounting screw, tilt the top of the fixture out, and lift it up and out.

When mounting the light fixture, ensure that the mounting screw threads through the steel grounding tab on the back plate of the light fixture.

5



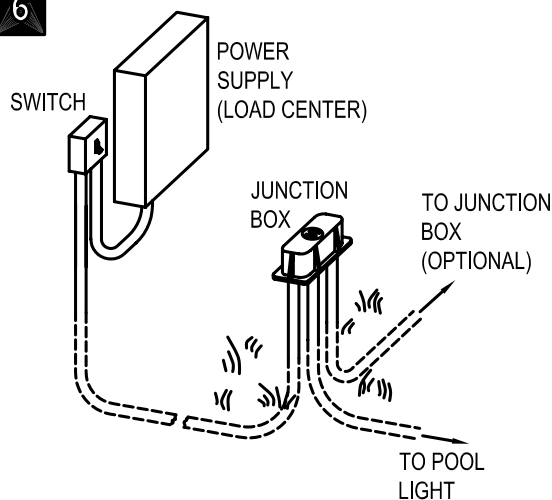
#### INSTALL FIELD-INSTALLED WIRING

Run conduit from the junction box to the power supply, pool/spa controller, or switch box. Snake 3 wires (# 14 AWG or larger) through the conduit from the junction box to the power supply, pool/spa controller, or switch box.

If multiple lights are being installed, run additional wires from the junction box to the additional junction box(es).

Use wire nuts to connect the field-installed wiring to the light fixture cord in the junction box. Connect the ground wires to the ground terminal connections inside the junction box.

6



#### CONNECTING THE LIGHT TO CONTROLS

In accordance with N.E.C. Article 680-22, all 120V underwater light fixtures must have a GFCI protector.

If multiple Hayward ColorLogic lights are installed, they may be synchronized. To enable light synchronization, wire all lights to the same switch.

The Hayward ColorLogic lights are controlled via power-cycling. No special controller is required to activate the light and switch it through different modes. The light fixture can be switched with any basic on/off light switch.

If a Hayward PSC2100 Pool/Spa Control System is being used, wire the LED light fixture to either the main "LIGHT" circuit, or the "AUX 4" circuit. The Hayward PSC2100 controller has an integral GFCI for these circuits and an additional GFCI need not be installed. Please note that if the "LIGHT" circuit on the PSC controller is used, the controller must be configured for a non-dimming light (dip switch #1 down). The Hayward LED light fixtures are also compatible with a variety of other pool/spa controllers that control devices through simple on/off switching; refer to your controller's installation manual for details.

# OPERATING INSTRUCTIONS

## GETTING STARTED

Congratulations on your purchase of a Hayward ColorLogic LED Light. Welcome to a more colorful world brought to you by Hayward and Chromacore®, patented technology that generates colored light and effects using a microprocessor to control red, green, and blue LEDs.

Your Hayward ColorLogic underwater pool light has these features:

1. Long-lasting LED's (light-emitting diodes) which can last up to 10 times longer than current incandescent, halogen, or metal-halide pool lights.
2. Multicolor capability without any color wheels or moving parts to wear out.
3. Multi-color program capability which allows you to select any one of 12 different programs, 5 fixed colors, and 7 color shows.
4. Low power consumption. Uses approximately half of the power needed for an ordinary 100 watt light.

## OPERATING THE LIGHT

Your Hayward ColorLogic light is operated through power-cycling: a method of changing modes which requires no special controller or interface. To activate the light, simply turn on the switch. To deactivate the light, turn off the switch. To advance to the next program, turn the switch off, then back on within 10 seconds. Whenever the light has been off for over 15 seconds, and is first turned on, it will come on to white for 15 seconds for quick clear view of your pool, then go to the last fixed color or color show it was running.

## LIGHT SYNCHRONIZATION

If your pool has multiple Hayward ColorLogic LED lights, they can be easily synchronized so that they will all display the same colors and shows at the same time. To do this, all lights must be wired to the same switch. Once installed, all lights should be automatically synchronized, however, if they get out of sync, they can be re-synchronized easily. To re-synchronize your lights, turn the switch on, then back off, then wait 10-15 seconds and turn the switch back on. When the lights come back on, they should enter program #1, and be synchronized.

® Chromacore is a registered trademark of Color Kinetics, Inc.  
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Patents 6,016,038 and 6,150,774  
European Patent 1,016,062  
Other patents pending  
PUB-000088-00R00

## PROGRAMS

Your Hayward ColorLogic light has the capability to display 12 different programs. These programs are advanced using power-cycling. The programs are:

1. Show - Voodoo Lounge - Fast Color Wash
2. Fixed - Deep Blue Sea
3. Fixed - Afternoon Skies
4. Fixed - Emerald
5. Fixed - Sangria
6. Fixed - Cloud White
7. Show - Twilight - Slow Color Wash
8. Show - Tranquillity - Blue/Cyan/White Fade
9. Show - Gemstone - Blue/Green/Magenta Fade
10. Show - USA! - Red/White/Blue Switch
11. Show - Mardi Gras - Fast Random Fade
12. Show - Cool Cabaret - Slow Random Fade

## TROUBLESHOOTING

If you have a problem with your Hayward ColorLogic light, please try the following tips before calling for service:

PROBLEM: Light will not advance to the next show when it is power-cycled.

SOLUTION: Do not power-cycle the switch rapidly, leave it off for at least 1 second before turning it back on.

PROBLEM: Light goes to white whenever it is power-cycled.

SOLUTION: Be sure that you power-cycle the light for less than 10 seconds.

PROBLEM: Multiple lights are not correctly synchronized.

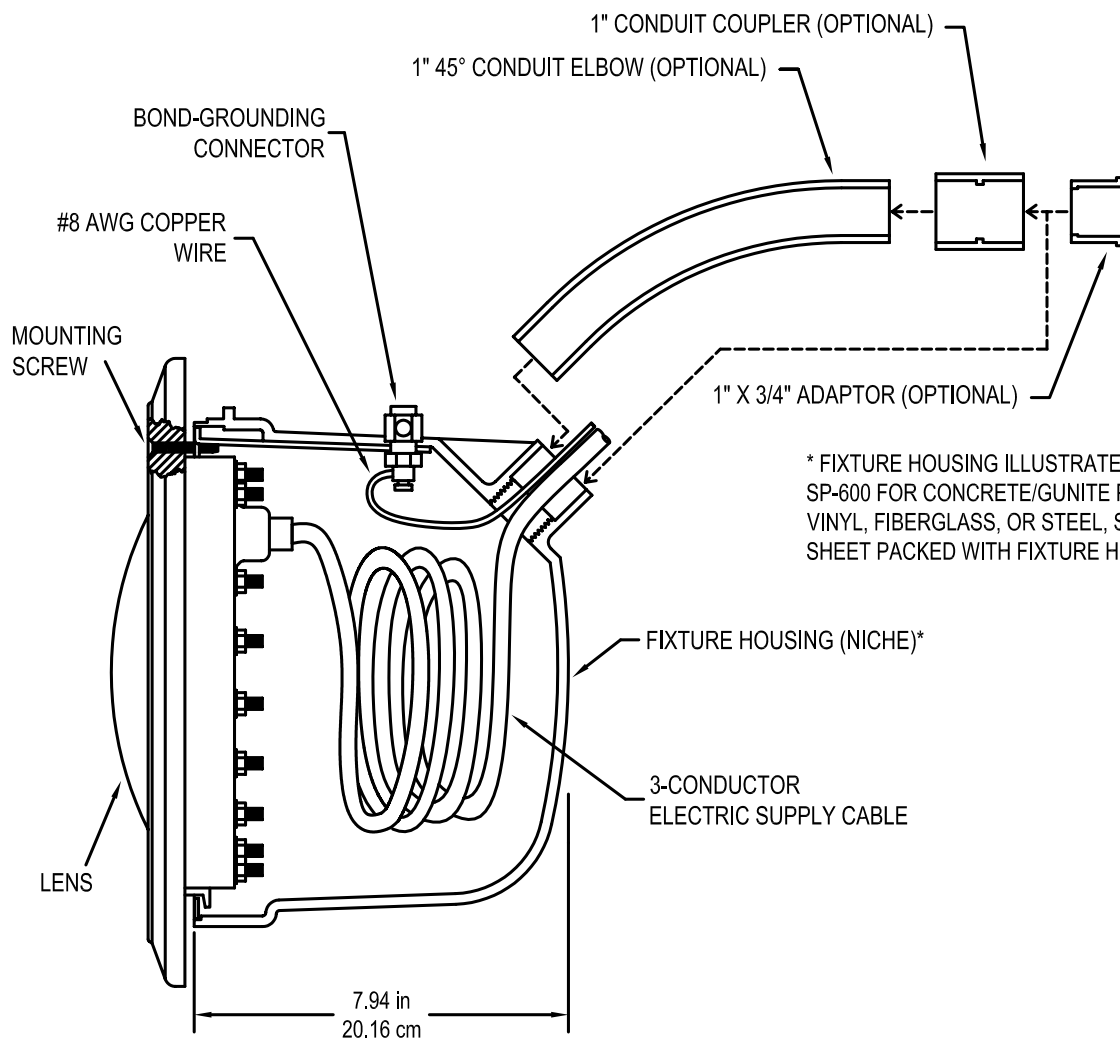
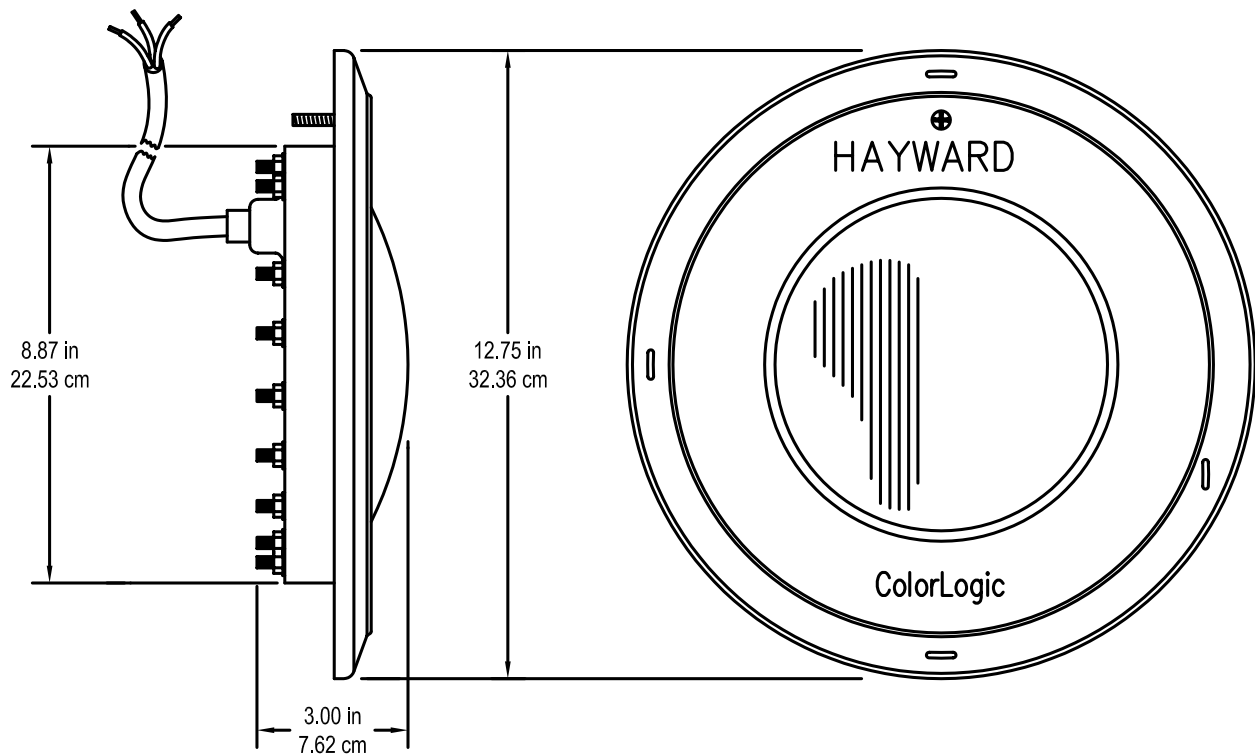
SOLUTION: Follow the steps in these instructions to re-synchronize the lights.

PROBLEM: Light will not come on.

SOLUTION: Check ground fault and reset if necessary.

# HAYWARD®

# PRODUCT ILLUSTRATIONS





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