



# ColorLogic Pool Lamp

Color LED Replacement Lamp

## Owner's Manual



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BPCUS11120

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*see back of manual for details*

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## IMPORTANT SAFETY INSTRUCTIONS

**SAFETY WARNING:** Do not open. Lamp has no user serviceable parts inside. Improper installation may result in death or serious injury to bathers or service personnel or others by way of electric shock. Disconnect electrical power before installing or servicing this equipment. Read and follow all instructions. This product to be installed by qualified personnel only.

- This device is not intended for use with emergency exits.  
Ne convient pas aux sorties de secours.
- Added weight of the device may cause instability of a free-standing portable luminaire.  
Le dispositif constitue un poids supplémentaire ce qui peut causer l'instabilité d'un luminaire portatif autonome.
- Use only with a portable table luminaire that is provided with a shade.  
Utiliser uniquement avec une lampe de table dotée d'un abat-jour.

Model	Input (Volts, Amps, Watts)
BPCUS11120	120 VAC 60 Hz, 0.24A, 28.5W

## IMPORTANT WIRING CHECKLIST

Do not skip any steps in this or any section of the manual.

- The above safety warnings and the complete installation instructions in this manual have been read and followed.
- The cord length has not been extended beyond the guidelines in this manual.
- The cord jacket is not damaged, cut or spliced except as noted below.
- Extensions or splices to the cord are only made in a safety listed Pool/Spa junction box or junction box transformer system.
- The light fixture strain relief is firmly secured.
- The luminaire is firmly secured to the pool wall and cannot be removed without removal of the strain relief.
- The luminaire has been installed by qualified personnel in compliance with the National Electrical Code (NEC) or Canadian Electric Code (CE Code) and any applicable local codes and/or regulations.
- Bonding wire is secure and properly attached to bonding system.
- Ground is secure and properly attached.
- Power is shut off.

LEAVE THESE INSTRUCTIONS WITH PROPERTY OWNER



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## Introduction

The Hayward® BPCUS11120 is a UL Listed Color LED replacement lamp designed for use in compatible light fixtures listed below. Using up to 86% less energy and lasting up to 10x longer than conventional 300 watt incandescent and halogen lamps, the BPCUS11120 makes an efficient and long lasting replacement for your existing pool light. When used in standalone mode, lamp colors are controlled by turning on/off power repeatedly. When used with a Hayward automation control, colors can be programmed with schedules and easily changed and saved with a button.

### Pool & Spa Light Housing Compatibility

Replacement LED in-ground pool lamps must be installed in a compatible Nationally Recognized Testing Laboratory (NRTL) approved pool light fixture or housing. Compatible NRTL light fixtures include:

- Hayward® Astrolite™ SP058 Series
- Pentair® Amerlite 784 Series
- Swimquip 05086 Series

### Hayward Pool Control Compatibility

The Hayward® BPCUS11120 is compatible with the following Hayward Pool controls:

- OmniLogic
- OmniHub
- Pro Logic
- ColorLogic Light Controller

## Installation

### Before You Begin

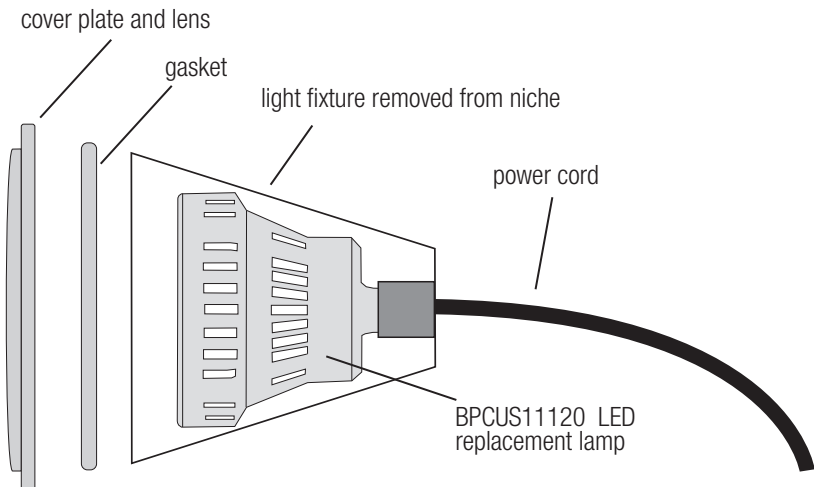
Before attempting to install, confirm that you have a compatible light fixture. Disconnect power to the pool light at the main panel before attempting to service the lamp. Refer to the original manufacturer's pool light installation manual before proceeding. This service should be performed by a qualified individual.

Because the BPCUS11120 must be kept dry, be sure to have a **new replacement gasket** for your light fixture before starting the installation. Do not re-use the existing gasket as a leak inside the fixture could cause serious injury or death due to electrical shock.

### Safety precautions and Installation notes

- Do not open, service or tamper with any internal component of the BPCUS11120 LED underwater pool lamp.
- Do not directly expose or immerse the lamp in water before installation.
- During removal of the old lamp and installation of the BPCUS11120, keep the inside of the light housing dry.
- Handle the lamp with care. Be careful not to drop the unit or permanent damage can occur.
- The BPCUS11120 can not be used with dimmers or dimming systems.

## Installation Steps



### 1. Remove existing light fixture from niche

With power off at the circuit breaker, carefully remove the existing light fixture from the pool light niche and place it on the pool deck. There should be enough power cord length to reach the deck. If the power cord is too short to reach the pool deck surface, the light fixture should be reinstalled with the proper length cord by a qualified individual before attempting to install the new lamp.

### 2. Remove glass lens

Refer to the manufacturer's owner's manual for lamp removal instructions. Typically, screws and/or a clamp fastens the cover plate and lens to the housing. Loosen fasteners and carefully remove the lens and gasket from the light fixture.

### 3. Inspect fixture and remove old lamp

While the fixture is out of the pool and the lens is off, inspect the housing for wear or damage. Do not install the BPCUS11120 into a fixture that may be prone to failure. Inspect the rubber seal where the power cord enters the housing for leaks or deterioration. Check the surface where the lens and gasket seats for warping or dents. Replace the tensioning clamp or other fasteners if worn or damaged. After inspection, unscrew the old lamp and remove.

### 4. Clean lens and install the BPCUS11120

Make sure the inside of the light housing is completely dry. Take this opportunity to clean both sides of the glass lens. Remove any gasket residue from the lens. Wipe completely dry. Carefully screw the BPCUS11120 into the lamp socket.



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## 5. Install lens

*Failure to install a new lens gasket could result in a leak that can damage the BPCUS11120 and cause serious injury or death due to electrical shock.* Before installing the lens, clean any old gasket residue from the light fixture. The surface must be clean for the new gasket to seat properly. Install your new replacement gasket onto the glass lens. Set the lens and cover plate on the light housing and secure by tightening the screws and/or clamp, allowing the gasket to seal evenly.

## 6. Test light fixture in water

Submerge the assembled light fixture in the water and visually check that air bubbles are not escaping from the gasket area or at the power cord entrance. If bubbles appear, immediately remove the light fixture from the water and re-seat the gasket and lens. Continue the installation only if there are no air leaks.

## 7. Install light fixture into niche

If there are no leaks, complete the installation by wrapping the cord around the light fixture in the same manner as when it was removed. Secure the light fixture to the niche using the original or equivalent fasteners.

## 8. Inspect

Turn power on to the lamp at the main panel. With the light on, check for air bubbles exiting the light housing. Leave the lamp on for 30 minutes and continue to inspect. If there are no air bubbles, the housing is watertight and installation is complete.



## Operation

### BPCUS11120 Lamp modes

The Hayward BPCUS11120 lamp is designed to operate in one of two modes; Universal ColorLogic or Omni Direct.

**Universal ColorLogic mode (default):** The lamp is shipped in this mode. Use this mode for new installations and for installations with other Universal ColorLogic lights.

**Omni Direct mode:** Omni Direct mode offers unique colors as well as speed and brightness control. It must be configured and controlled by a Hayward OmniLogic or OmniHub pool controller only. Refer to the controller's manual for more information.

#### How to change modes:

1. Turn on lights and then turn off for between 11-15 seconds.
2. Turn on lights and then turn off for between 11-15 seconds.
3. Turn on lights and then turn off for between 11-15 seconds.
4. The light should blink one of two colors indicating which mode it is currently in. Refer to the table below to determine which mode the BPCUS11120 lamp is in. Note that new lights are shipped from the factory in Universal ColorLogic mode (blinking red).

MODE	COLOR
Universal ColorLogic	Red
Omni Direct	Purple

5. To change modes, turn the light off and then back on. Continue this method until you arrive at the desired mode. Note that Universal ColorLogic modes (blinking red) are repeated 4 times so it may take a few cycles to arrive at Omni Direct mode (blinking purple).
6. When the light is in the desired mode, remove power from the lights for at least one minute.
7. The light will restart in the new mode the next time it is turned on.

### Operating the BPCUS11120 lamp

The BPCUS11120 lamp is controlled through power-cycling: a method of changing light programs 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 light program (fixed color or color show), turn the switch off, then back on within 10 seconds.

When the light has been off for over 60 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 or spa has multiple BPCUS11120 lamps, they may be operated independently, or they can be easily synchronized so they will all display the same colors and shows at the same time. For



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light synchronization, 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 between 11-15 seconds and turn the switch back on. When the lights come back on, they should enter program #1, and be synchronized.

## Programs

When in Universal ColorLogic mode (default), the BPCUS11120 lamp has the capability to display 17 different programs; 10 fixed colors and 7 color-changing shows. These programs are advanced using power-cycling (quickly powering the lights on, then off, then back on). The programs are listed below:

- |                          |                        |
|--------------------------|------------------------|
| 1. Show-Voodoo Lounge    | 10. Fixed-Vivid Violet |
| 2. Fixed-Deep Blue Sea   | 11. Fixed-Sangria      |
| 3. Fixed-Royal Blue      | 12. Show-Twilight      |
| 4. Fixed-Afternoon Skies | 13. Show-Tranquility   |
| 5. Fixed-Aqua Green      | 14. Show-Gemstone      |
| 6. Fixed-Emerald         | 15. Show-USA           |
| 7. Fixed-Cloud White     | 16. Show-Mardi Gras    |
| 8. Fixed-Warm Red        | 17. Show-Cool Cabaret  |
| 9. Fixed-Flamingo        |                        |

Refer to the included color card as a quick reference to the available programs.

## Omni Direct

The BPCUS11120 lamp must be configured and controlled by a Hayward OmniLogic or OmniHub pool control to use Omni Direct mode. This mode offers some unique colors as well as speed and brightness control. The programs are listed below.

- |                          |                         |
|--------------------------|-------------------------|
| 1. Show-Voodoo Lounge    | 15. Show-USA            |
| 2. Fixed-Deep Blue Sea   | 16. Show-Mardi Gras     |
| 3. Fixed-Royal Blue      | 17. Show-Cool Cabaret   |
| 4. Fixed-Afternoon Skies | 18. Fixed-Yellow        |
| 5. Fixed-Aqua Green      | 19. Fixed-Orange        |
| 6. Fixed-Emerald         | 20. Fixed-Gold          |
| 7. Fixed-Cloud White     | 21. Fixed-Mint          |
| 8. Fixed-Warm Red        | 22. Fixed-Teal          |
| 9. Fixed-Flamingo        | 23. Fixed-Burnt Orange  |
| 10. Fixed-Vivid Violet   | 24. Fixed-Pure White    |
| 11. Fixed-Sangria        | 25. Fixed-Crisp White   |
| 12. Show-Twilight        | 26. Fixed-Warm White    |
| 13. Show-Tranquility     | 27. Fixed-Bright Yellow |
| 14. Show-Gemstone        |                         |

Refer to the OmniLogic or OmniHub manuals for Omni Direct configuration and operation information.



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**WARNING** - Read and follow all instructions in this owner's manual and on the equipment. Failure to follow instructions can cause severe injury and/or death.



**WARNING – Suction Entrapment Hazard** Suction in suction outlets and/or suction outlet covers which are, damaged, broken, cracked, missing, or unsecured can cause severe injury and/or death due to the following entrapment hazards:



**Hair Entrapment**- Hair can become entangled in suction outlet cover.



**Limb Entrapment**- A limb inserted into an opening of a suction outlet sump or suction outlet cover that is damaged, broken, cracked, missing, or not securely attached can result in a mechanical bind or swelling of the limb.

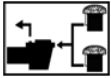


**Body Suction Entrapment**- A negative pressure applied to a large portion of the body or limbs can result in an entrapment.



**Evisceration/ Disembowelment** - A negative pressure applied directly to the intestines through an unprotected suction outlet sump or suction outlet cover which is, damaged, broken, cracked, missing, or unsecured can result in evisceration/ disembowelment.

**Mechanical Entrapment**- There is potential for jewelry, swimsuit, hair decorations, finger, toe or knuckle to be caught in an opening of a suction outlet cover resulting in mechanical entrapment.



### **WARNING - To Reduce the risk of Entrapment Hazards:**

- When outlets are small enough to be blocked by a person, a minimum of two functioning suction outlets per pump must be installed. Suction outlets in the same plane (i.e. floor or wall), must be installed a minimum of three feet (3') [1 meter] apart, as measured from near point to near point.
- Dual suction fittings shall be placed in such locations and distances to avoid "dual blockage" by a user.
- Dual suction fittings shall not be located on seating areas or on the backrest for such seating areas.
- The maximum system flow rate shall not exceed the flow rating of as listed on Table 1.
- Never use Pool or Spa if any suction outlet component is damaged, broken, cracked, missing, or not securely attached.
- Replace damaged, broken, cracked, missing, or not securely attached suction outlet components immediately.
- In addition two or more suction outlets per pump installed in accordance with latest ASME, APSP Standards and CPSC guidelines, follow all National, State, and Local codes applicable.
- Installation of a vacuum release or vent system, which relieves entrapping suction, is recommended.

**WARNING** – Failure to remove pressure test plugs and/or plugs used in winterization of the pool/spa from the suction outlets can result in an increase potential for suction entrapment as described above.

**WARNING** – Failure to keep suction outlet components clear of debris, such as leaves, dirt, hair, paper and other material can result in an increase potential for suction entrapment as described above.

**WARNING** – Suction outlet components have a finite life, the cover/grate should be inspected frequently and replaced at least every ten years or if found to be damaged, broken, cracked, missing, or not securely attached.

**CAUTION** – Components such as the filtration system, pumps and heater must be positioned so as to prevent their being used as means of access to the pool by young children. To reduce risk of injury, do not permit children to use or climb on this product. Closely supervise children at all times. Components such as the filtration system, pumps, and heaters must be positioned to prevent children from using them as a means of access to the pool.



**WARNING – Hazardous Pressure** Pool and spa water circulation systems operate under hazardous pressure during start up, normal operation, and after pump shut off. Stand clear of circulation system equipment during pump start up. Failure to follow safety and operation instructions could result in violent separation of the pump housing and cover, and/or filter housing and clamp due to pressure in the system, which could cause property damage, severe personal injury,





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or death. Before servicing pool and spa water circulation system, all system and pump controls must be in off position and filter manual air relief valve must be in open position. Before starting system pump, all system valves must be set in a position to allow system water to return back to the pool. Do not change filter control valve position while system pump is running. Before starting system pump, fully open filter manual air relief valve. Do not close filter manual air relief valve until a steady stream of water (not air or air and water) is discharged.



**WARNING – Separation Hazard** Failure to follow safety and operation instructions could result in violent separation of pump and/or filter components. Strainer cover must be properly secured to pump housing with strainer cover lock ring. Before servicing pool and spa circulation system, filters manual air relief valve must be in open position. Do not operate pool and spa circulation system if a system component is not assembled properly, damaged, or missing. Do not operate pool and spa circulation system unless filter manual air relief valve body is in locked position in filter upper body. Never operate or test the circulation system at more than 50 PSI. Do not purge the system with compressed air. Purging the system with compressed air can cause components to explode, with risk of severe injury or death to anyone nearby. Use only a low pressure (below 5 PSI), high volume blower when air purging the pump, filter, or piping.



**WARNING – Risk of Electric Shock** All electrical wiring MUST be in conformance with applicable local codes, regulations, and the National Electric Code (NEC). Hazardous voltage can shock, burn, and cause death or serious property damage. To reduce the risk of electric shock, do NOT use an extension cord to connect unit to electric supply. Provide a properly located electrical receptacle. Before working on any electrical equipment, turn off power supply to the equipment. To reduce the risk of electric shock replace damaged wiring immediately. Locate conduit to prevent abuse from lawn mowers, hedge trimmers and other equipment. Do NOT ground to a gas supply line.

**WARNING – Risk of Electric Shock** Failure to ground all electrical equipment can cause serious or fatal electrical shock hazard. Electrical ground all electrical equipment before connecting to electrical power supply.

**WARNING – Risk of Electric Shock** Failure to bond all electrical equipment to pool structure will increase risk for electrocution and could result in injury or death. To reduce the risk of electric shock, see installation instructions and consult a professional electrician on how to bond all electrical equipment. Also, contact a licensed electrician for information on local electrical codes for bonding requirements.

**Notes to electrician:** Use a solid copper conductor, size 8 or larger. Run a continuous wire from external bonding lug to reinforcing rod or mesh. Connect a No. 8 AWG (8.4 mm<sup>2</sup>) [No. 6 AWG (13.3 mm<sup>2</sup>) for Canada] solid copper bonding wire to the pressure wire connector provided on the electrical equipment and to all metal parts of swimming pool, spa, or hot tub, and metal piping (except gas piping), and conduit within 5 ft. (1.5 m) of inside walls of swimming pool, spa, or hot tub. **IMPORTANT** - Reference NEC codes for all wiring standards including, but not limited to, grounding, bonding and other general wiring procedures.

**WARNING – Risk of Electric Shock** The electrical equipment must be connected only to a supply circuit that is protected by a ground-fault circuit-interrupter (GFCI). Such a GFCI should be provided by the installer and should be tested on a routine basis. To test the GFCI, push the test button. The GFCI should interrupt power. Push reset button. Power should be restored. If the GFCI fails to operate in this manner, the GFCI is defective. If the GFCI interrupts power to the electrical equipment without the test button being pushed, a ground current is flowing, indicating the possibility of an electrical shock. Do not use this electrical equipment. Disconnect the electrical equipment and have the problem corrected by a qualified service representative before using.

**CAUTION** – HAYWARD® pumps are intended for use with permanently-installed pools and may be used with hot tubs and spas if so marked. Do not use with storable pools. A permanently-installed pool is constructed in or on the ground or in a building such that it cannot be readily disassembled for storage. A storable pool is constructed so that it is capable of being readily disassembled for storage and reassembled to its original integrity.

## SAVE THESE INSTRUCTIONS



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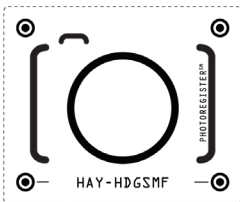
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Take a photo of the camera icon



## 2. SEND IT IN

Send it in using one of the methods below



### SMARTPHONE

Text a photo of the camera icon to **71403**

OR



### ONLINE

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OR



### MESSENGER

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\*Extended warranty is in addition to applicable product warranty and is for parts only, labor not included.  
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