

# CrystaLogic Pool Lamp

LED Replacement Lamp

## Owner’s Manual



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BPWUS11120

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USE ONLY HAYWARD GENUINE REPLACEMENT PARTS

## 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.

Model	Input (Volts, Amps, Watts)
BPWUS11120	120 VAC 60 Hz, 40.0 W

## 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

## Introduction

### Description

The Hayward® BPWUS11120 is a UL Listed 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 500 watt incandescent and halogen lamps, the BPWUS11120 makes an efficient and long lasting replacement for your existing pool light.

### 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

## Installation

### Before You Begin

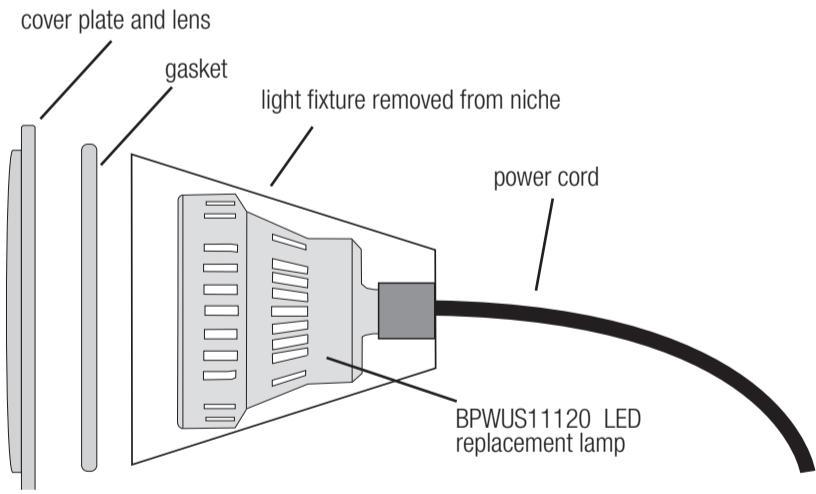
Before attempting to install, confirm that you have a compatible light fixture. Disconnect power to the pool light at the main panel before attempting to service the lamp. Refer to the original manufacturer’s pool light installation manual before proceeding. This service should be performed by a qualified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

Because the BPWUS11120 must be kept dry, be sure to have a 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 BPWUS11120 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 BPWUS11120, 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 BPWUS11120 can not be used with dimmers or dimming systems.

## Overview



## 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 BPWUS11120 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 BPWUS11120**  
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 BPWUS11120 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 BPWUS11120 and cause serious injury or death due to electrical shock.* Before installing the lens, clean any 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 light 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.

You are now ready to enjoy your new BPWUS11120 replacement LED lamp.

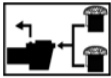


**WARNING** - Read and follow all instructions in this owner's manual and on the equipment. Failure to follow instructions can cause severe injury and/or death.



**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, 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 mm²) [No. 6 AWG (13.3 mm²) 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

For further information or consumer technical support, visit our website at [www.hayward.com](http://www.hayward.com)



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