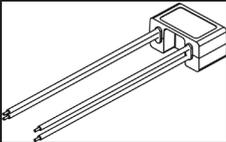




Coupler

for ColorLogic® Pool/Spa Lights

Owner's Manual



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LKBUN1000

Basic safety precautions should always be followed, including the following: Failure to follow instructions can cause severe injury and/or death.

▲ This is the safety-alert symbol. When you see this symbol on your equipment or in this manual, look for one of the following signal words and be alert to the potential for personal injury.

▲ **WARNING** warns about hazards that could cause serious personal injury, death or major property damage and if ignored presents a potential hazard.

▲ **CAUTION** warns about hazards that will or can cause minor or moderate personal injury and/or property damage and if ignored presents a potential hazard. It can also make consumers aware of actions that are unpredictable and unsafe.

The **NOTICE** label indicates special instructions that are important but not related to hazards.

Hayward Pool Products
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IMPORTANT SAFETY INSTRUCTIONS

Before installing or servicing this electrical equipment, turn power supply OFF.

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 – This product should be installed and serviced only by a qualified professional.

CAUTION – All electrical wiring **MUST** be in conformance with all applicable local codes, regulations, and the National Electrical Code (NEC).

ATTENTION INSTALLER – THIS MANUAL CONTAINS IMPORTANT INFORMATION ABOUT THE INSTALLATION, OPERATION, AND SAFE USE OF THIS PRODUCT THAT MUST BE FURNISHED TO THE END USER OF THIS PRODUCT. FAILURE TO READ AND FOLLOW ALL INSTRUCTIONS COULD RESULT IN SERIOUS INJURY.

WARNING – Risk of Electric Shock. All electrical wiring **MUST** be in conformance with all applicable local codes, regulations, and the National Electrical 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.

WARNING – Ground Fault Circuit protection must be used in the circuit, however, all electrical wiring **MUST** be in conformance with all applicable local codes, regulations, and the National Electrical Code (NEC).

IMPORTANT - Reference NEC codes for all wiring standards including, but not limited to, grounding, bonding and other general wiring procedures.

WARNING – Networked ColorLogic Lights and related electrical connections are receiving electrical power at all times, even when the lights are OFF! Turn off power at the main breaker before servicing ColorLogic lights.



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Introduction

This manual contains installation and wiring instructions for the Universal ColorLogic Coupler LKBUN1000. The coupler is required when a Hayward Pro Logic pool/spa controller will be used to control networked 12 Volt Hayward Universal ColorLogic pool/spa lights. It is designed to be installed in a Hayward pool light transformer and used with a Hayward ColorLogic Network Module (AQL-COLOR-MODHV). Together, the LKBUN1000 and AQL-COLOR-MODHV allow a Hayward Pro Logic pool/spa controller to fully control the color, speed, motion and brightness of pre-set light shows in the Universal ColorLogic light(s).

Compatibility

The LKBUN1000 is compatible with the following transformers:

Part Number	Type	Rating	Fits
LTBUY11300	Surface Mount	300 watt	_____
LRBUY11H65	Junction Box	65 watt	Hayward®
LRBUY11P65	Junction Box	65 watt	Pentair®
LRBUY11M65	Junction Box	65 watt	Intermatic®
LRBUY11T65	Junction Box	65 watt	ThermoCraft®
LRBUY11M13	Junction Box	130 watt	Intermatic®

Only these transformers are intended for use with the LKBUN1000 and offer a dedicated installation location.

The LKBUN1000 requires the use of a ColorLogic Network Module AQL-COLOR-MODHV which must be installed in a Hayward Pro Logic controller operating with software version 4.00 or greater.

The coupler and network module are intended to be used with the following Universal ColorLogic 12 volt pool/spa lights:

- LPCUN11xxx
- LSCUN11xxx



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Installation

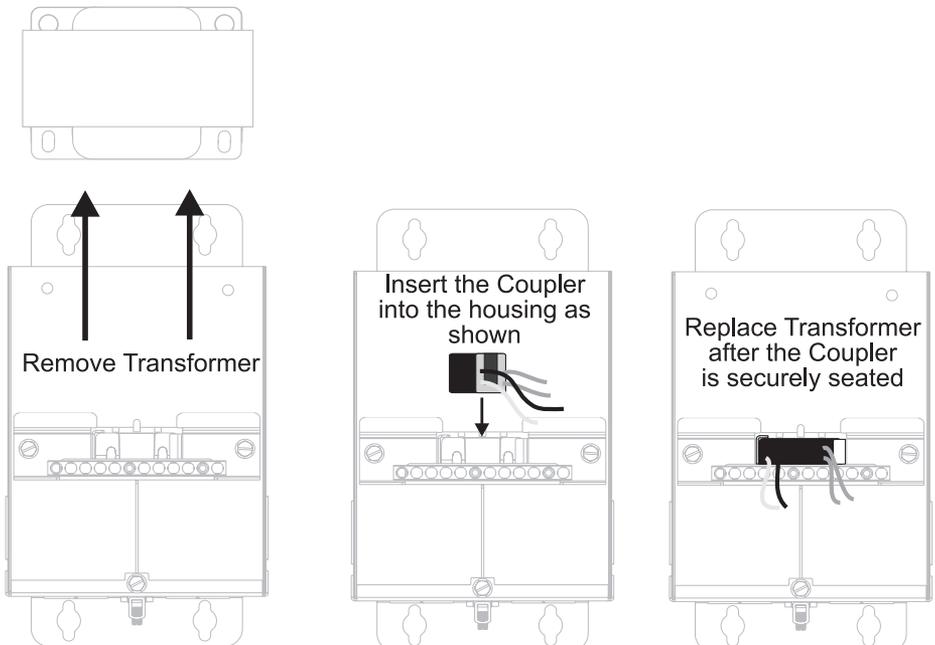
NOTE: Before attempting installation, remove power to the Pro Logic pool controller, your pool transformer(s) and any ColorLogic light(s).

Installation of the coupler requires that it be mounted and wired inside of the transformer housing. If your enclosure does not provide accommodations for the coupler, then the coupler is not compatible with your transformer. Refer to the following information on how to mount and wire the LKBUN1000.

Mounting

Mounting to LTBUY11300 300 Watt Transformer:

Mount the LKBUN1000 into the LTBUY11300 as shown below.

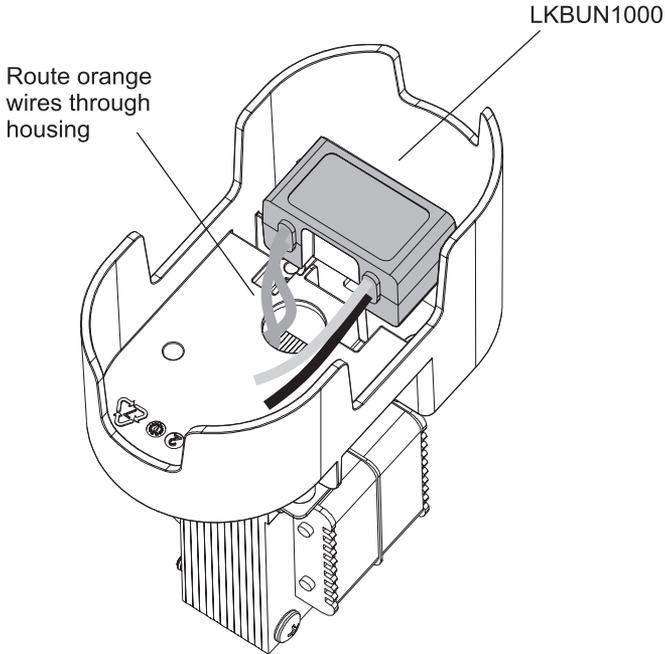




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Mounting to LRBUYxxxxxx Junction Box Transformer

Mount the LKBUN1000 into the LRBUYxxxxxx as shown below.



Insert the LKBUN1000 as shown. Push down until it locks then route the orange wires through the hole in the housing.

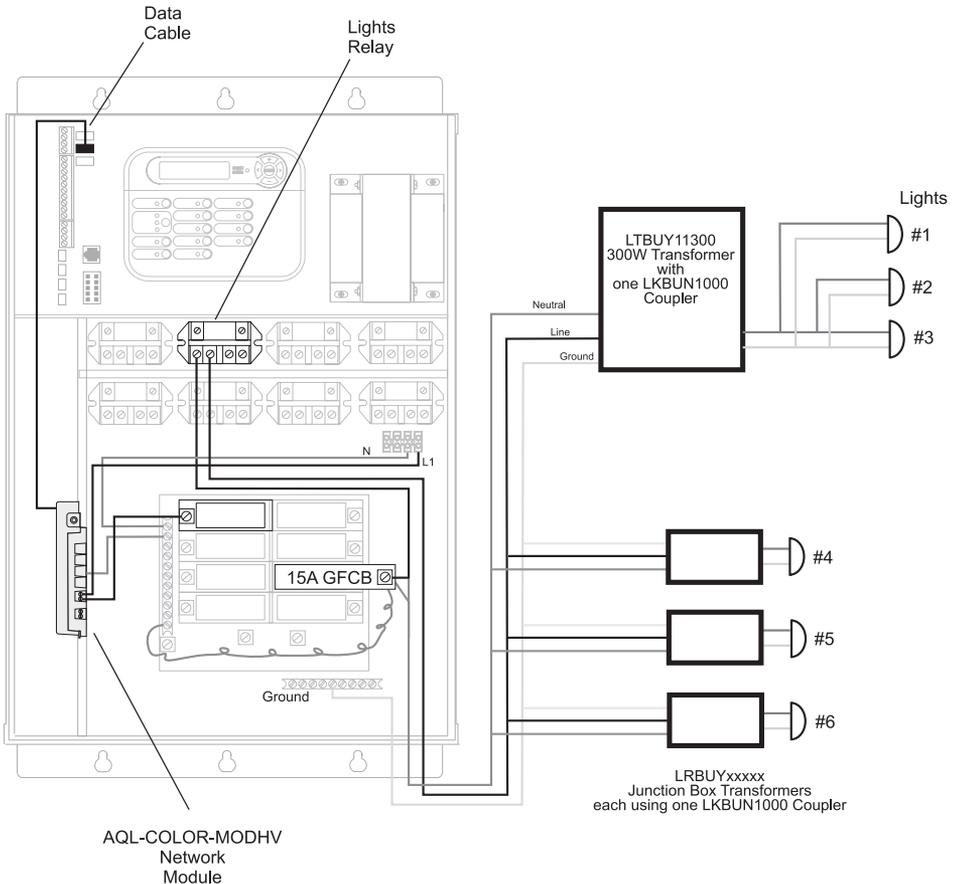


Wiring

Follow the local code, NEC (CEC) codes and the circuit breaker manufacturer's rating requirements regarding the size and temperature rating for wiring.

One coupler must be used for each transformer in the system.

An overview of sample system is shown below. A total of six lights are networked in this example. Three lights are powered by a single Hayward 300 watt transformer LTBUY11300 and the remaining three are each powered by a single junction box transformer. Note that the LTBUY11300 transformer only requires one LKBUN1000 even though it is powering 3 networked lights. Each junction box transformer requires its own coupler.

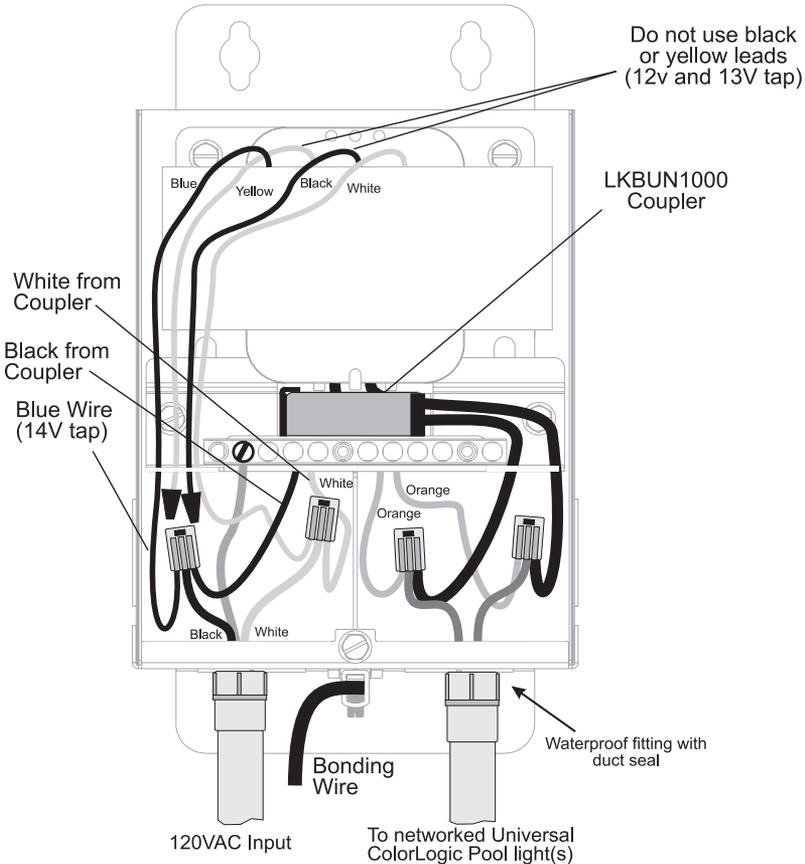




Wiring to LTBUY11300: To wire the LKBUN1000 to a LTBUY11300 transformer, refer to the diagram below. On the input side, the LKBUN1000's black and white wires are connected in parallel with the 120VAC input wires and the blue and black (14V) tap wires from the primary side of the transformer. Always use the 14V tap when using the LKBUN1000 regardless of the load. Connect wire nuts to the unused tap wires.

On the output side, the LKBUN1000's orange wires are connected in parallel with the black transformer wires and the yellow or orange leads from the Universal ColorLogic pool light(s).

Hayward LTBUY11300 300 watt transformer powering networked Hayward Universal ColorLogic Light(s)



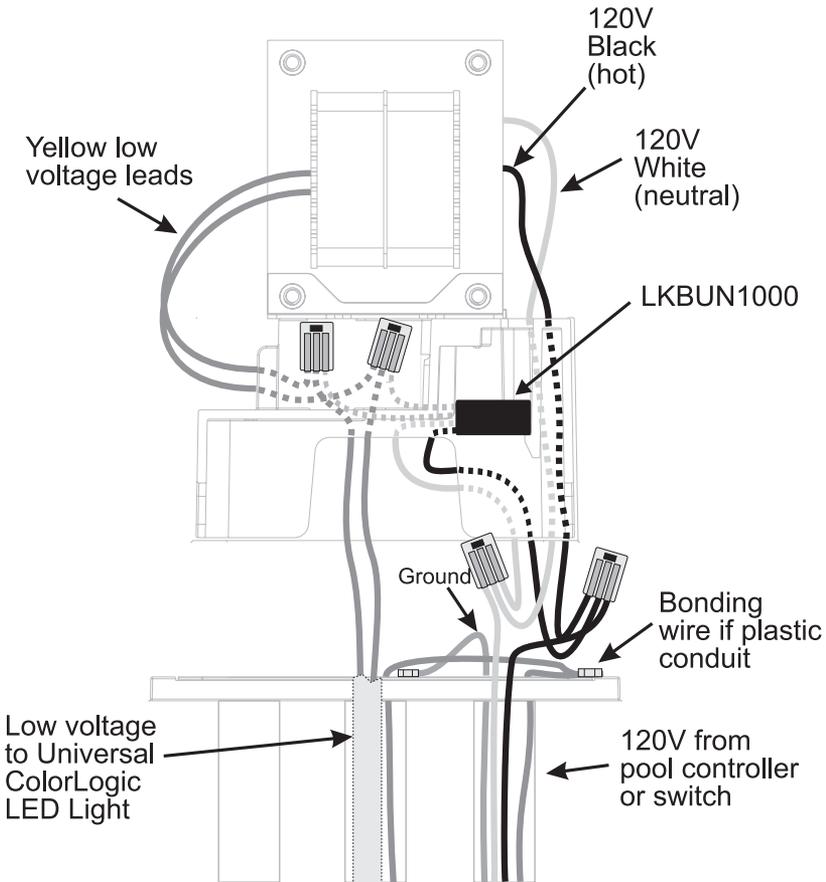


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LRBUYxxxxx Junction Box Transformer: Refer to the diagram below when wiring the LKBUN1000 to a Hayward junction box transformer LRBUYxxxxx . Be sure that the high voltage and 12 volt connections are separated as shown in the diagram (high voltage connections underneath the transformer housing, 12 volt connections above).

On the input side, the LKBUN1000's black and white wires are connected in parallel with the 120VAC input wires and the transformer's black and white primary wires.

On the output side, the LKBUN1000's orange wires are connected in parallel with the transformer's yellow wires and the yellow or orange leads from the Universal ColorLogic light.





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Operation

Refer to the ColorLogic Network Module (AQL-COLOR-MODHV) manual for detailed information on how to configure and program the Pro Logic to control Universal ColorLogic lights



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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.



Visceration/ 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 visceration/ 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.



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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



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Hayward® Pool Products Limited Warranty

To original purchasers of this equipment, Hayward Pool Products, Inc. warrants its Universal ColorLogic® and CrystaLogic™ pool and spa lights, niches, pool light transformers, and couplers to be free from defects in materials and workmanship for a period of ONE (1) year from the date of purchase, when used in single family residential applications.

The limited warranty excludes damage from freezing, negligence, improper installation, improper use or care or any Acts of God. Parts that fail or become defective during the warranty period shall be repaired or replaced, at our option, within 90 days of the receipt of defective product, barring unforeseen delays, without charge.

Proof of purchase is required for warranty service. In the event proof of purchase is not available, the manufacturing date of the product will be the sole determination of the purchase date.

To obtain warranty service, please contact the place of purchase or the nearest Hayward Authorized Service Center. For assistance on your nearest Hayward Authorized Service Center please visit us at www.hayward.com.

Hayward shall not be responsible for cartage, removal, repair or installation labor or any other such costs incurred in obtaining warranty replacements or repair.

The Hayward Pool products warranty does not apply to components manufactured by others. For such products, the warranty established by the respective manufacturer will apply.

The express limited warranty above constitutes the entire warranty of Hayward Pool Products with respect to its' pool products and is in lieu of all other warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose. In no event shall Hayward Pool products be responsible for any consequential, special or incidental damages of any nature.

Some states do not allow a limitation on how long an implied warranty lasts, or the exclusion of incidental or consequential damages, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.



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technical support, visit our website at
www.hayward.com



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