



Installation and Operation Guide

Halco ProLED® Nicheless LED Pool & Spa Light



IMPORTANT SAFETY INSTRUCTIONS
READ, FOLLOW AND SAVE THESE INSTRUCTIONS

TECHNICAL SUPPORT

Halco ProLED® Pool Customer Service at:

800.374.1927



© 2020 Halco Lighting Technologies. All rights reserved. ProLED® is a trademark of and manufactured by Halco Lighting Technologies.
All registered and trademarked brands and names are the property of their respective companies. JJ16607. REV. 050420





Contents

Important Safety Precautions and Warnings	3-4
Installation of the Halco ProLED® Nicheless LED Lights	5
- Preparing the Light Fixture for Installation	5
- Installing the Light Fixture	6
Wiring Options for Controlling Halco ProLED® Nicheless LED Lights	7
- Wire Gauge and Length	8
- Wiring to a Switch	9
- 12VAC Installation	9
Operating Instructions for the Halco ProLED® Nicheless LED Lights	9
Operating Instructions for the Halco ProLED® Color-Changing Halco ProLED® White Nicheless LED Lights	10
Description of Light Shows and Colors	11-12
Winterizing	12
Troubleshooting	13
Warranty information	14



1.5" LED Nicheless Light Installation Manual and Operation Guide for the following part numbers only:

FLCN (*Halco ProLED® Color-Changing Light*)

FLWN (*Halco ProLED® White Light*)

WARNING

FOR YOUR SAFETY - This product must be installed and serviced by a licensed or certified electrician or a qualified pool serviceman in accordance with the National Electrical Code (NEC).

Before installing this product, read and follow all warning notices and instructions accompanying this product. Failure to follow warning notices and instructions may result in property damage, personal injury, or death. Improper installation and/or operation will void the warranty. Always disconnect the power to the light at the circuit breaker before installing or servicing the light. Failure to do so could result in death or serious injury due to electrical shock. Before installing any underwater light fixtures or lamps read and follow all safety precautions, warning notices and instructions which are included in this Installation and Operation Guide. Failure to follow safety precautions, warnings and instructions can result in severe injury or death, and damage to the lights.

 **DANGER! FAILURE TO PROPERLY INSTALL AND USE THIS PRODUCT CAN RESULT IN SERIOUS BODILY INJURY OR DEATH.**

IMPORTANT SAFETY PRECAUTIONS AND WARNINGS

INSTALLER NOTICE: This Installation and Operation Guide contains important information about the installation, operation and use of this product. This information should be given to the operator and/or owner of the Halco ProLED® Nicheless LED Light for reference regarding the proper installation, operation and use of this product. When installing and using the Halco ProLED® Nicheless LED Light, basic electrical safety precautions should always be exercised, including the following:

WARNING

IMPORTANT SAFETY INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK, OR INJURY. READ, FOLLOW AND RETAIN ALL INSTRUCTIONS.

Read and follow all warning notices and instructions contained in this guide before installing or using the Halco ProLED® Nicheless LED Light. Severe injury, death or property damage may result if the warnings and instructions contained in this manual are not followed.

WARNING

RISK OF ELECTRIC SHOCK OR ELECTROCUTION WHICH CAN LEAD TO SERIOUS INJURY OR DEATH.

Except when the Halco ProLED® Nicheless Underwater LED Lights are installed in an area of the pool or spa that is not used for swimming and the lens is adequately guarded to keep any person from contacting it, the light shall be installed in or on a wall of the pool, with the top of the lens opening not less than 4" (102mm) below the normal water level of the pool.

WARNING

Read Important Safety Precautions and Instructions. Before beginning any electrical wiring, be sure to read and carefully follow ALL Safety Instructions. Installation of the Halco ProLED Nicheless Light should be performed by a qualified professional electrician or pool serviceman.

Before installing the Halco ProLED® Nicheless LED Light read and follow all safety precautions, warning notices and instructions which are included in this Installation and Operation Guide. Failure to follow safety precautions, warnings and instructions can result in severe injury or death, and damage to the Halco ProLED® Nicheless LED Light.

IMPORTANT SAFETY PRECAUTIONS AND WARNINGS

Check to make sure the electrical system for the pool, spa or fountain conforms with all requirements of the National Electrical Code (NEC) Article 680-22 requirements and any applicable local codes or ordinances. A licensed or certified professional electrician must install the electrical system to meet or exceed all NEC requirements and local building codes before the Halco ProLED® Nicheless LED Light is installed.

WARNING

RISK OF ELECTRIC SHOCK OR ELECTROCUTION WHICH CAN LEAD TO SERIOUS INJURY OR DEATH.

The Halco ProLED® Color-Changing Light RGB, Halco ProLED® Color-Changing Light RGB-W and Halco ProLED® White Light Nicheless Underwater LED Lights are only available for 12 VAC power. For supply connection, use only an isolating low voltage power supply with ungrounded output, evaluated and listed by a NRTL for swimming pool use.

INSTALLATION OF THE HALCO PROLED® NICHELESS LED LIGHT

Use the chart below to determine the appropriate minimum required pipe length for your installation. It is recommended to use 1.5" pipe so that lights can easily be upgraded to a higher wattage model in the future.

RGB / RGB-W / WHITE

WATTS

8 Watts

20 Watts

MINIMUM LENGTH FOR 1.5" PIPE

6"

6"

All products listed above are available in 50, 100 and 150 feet cord lengths.

NOTE: The Halco ProLED® Nicheless LED Lights are serviceable - do not attempt to remove the enclosure of cord from the conduit while submerged. No separate ground or bonding wire is required for the Halco ProLED® Nicheless LED Lights. These lights are low voltage and do not have any exposed metal.

⚠ WARNING

RISK OF ELECTRIC SHOCK OR ELECTROCUTION.

FOR YOUR SAFETY - This product must be installed and serviced by a licensed or certified electrician or a qualified pool serviceman in accordance with the National Electrical Code (NEC). Before installing this product, read and follow all warning notices and instructions accompanying this product. Failure to follow warning notices and instructions may result in property damage, personal injury, or death. Improper installation and/or operation will void the warranty. Always disconnect the power to the light at the circuit breaker before installing or servicing the light. Failure to do so could result in death or serious injury due to electrical shock. Before installing any underwater light fixtures or lamps read and follow all safety precautions, warning notices and instructions which are included in this Installation and Operation Guide. Failure to follow safety precautions, warnings and instructions can result in severe injury or death, and damage to the lights.

PREPARING THE LIGHT FIXTURE FOR INSTALLATION

NOTE: A licensed electrician must complete the below preparatory steps prior to the light fixture being installed (see figure 1).

Verify the pool meets the requirements of the current National Electrical Code (NEC) / Canadian Electrical Code (CEC) in Canada, and all local codes and ordinances. A licensed or certified electrician must install the electrical system to meet or exceed those requirements prior to installing the Halco ProLED® Nicheless LED Lights. Examples of the NEC code requirements pool electrical systems must meet are outlined below.

1. The junction box or the low-voltage transformer must be located at least eight (8) inches (measured from the inside of the bottom of the junction box or transformer) above the MAXIMUM water level, OR at least four (4) inches above the ground level or pool deck, whichever is greater. The junction box or transformer must also be installed at least forty-eight (48) inches (4 ft.) from the edge of the pool. (see figure 1).

2. A standard 1.5" plastic wall / return fitting (not included) must be installed so that the top edge of the Halco ProLED® Nicheless LED Lights lens is at least four (4) inches (10.2 cm) below the surface of the pool water.

NOTE: Always verify the pool's electrical system meets all local city and state applicable requirements.

5

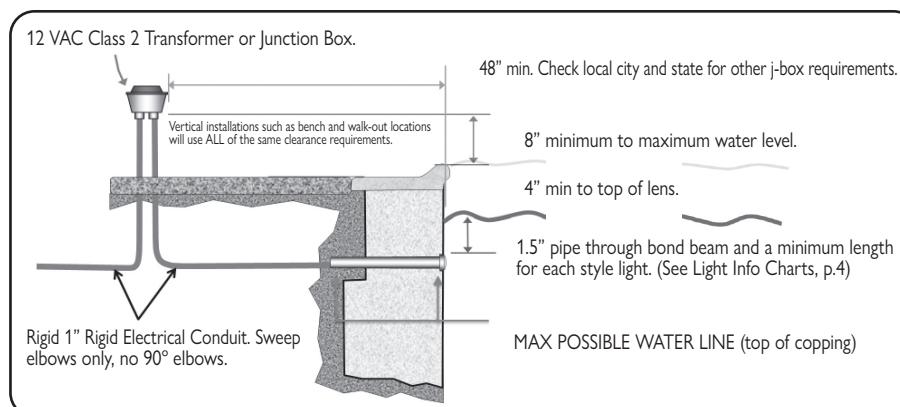


Figure 1: Halco ProLED® Nicheless Light installation with standard 1.5" plastic fitting.

INSTALLING THE HALCO PROLED® NICHELESS LIGHT FIXTURE

NOTE: THESE STEPS ARE TO BE PERFORMED ONLY AFTER ALL ELECTRICAL SYSTEM REQUIREMENTS ARE MET.

- 1.5" pipe must be installed through the bond beam with a minimum length of fourteen (14) inches, followed by a one (1) inch conduit with sweeps. DO NOT use 90 degree elbows. It is highly recommended to use 1.5" pipe through out the entire width of the bond beam. (see Figure 2).

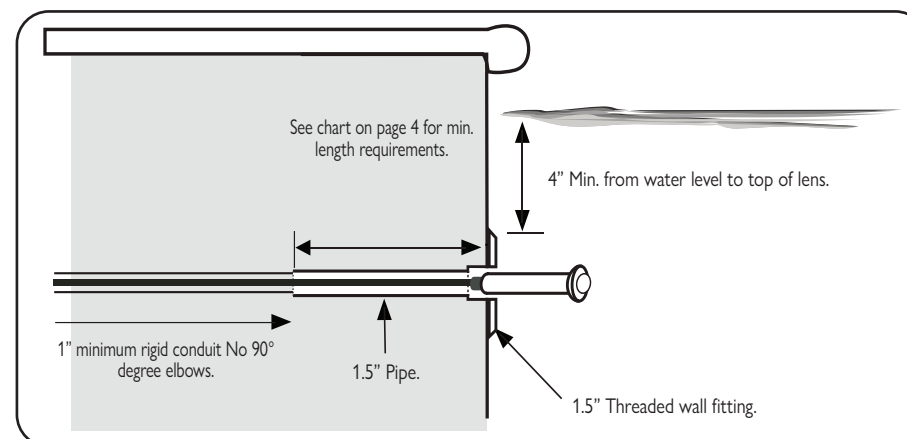


Figure 2: Standard Halco ProLED® Nicheless Light installation with 1.5" pool wall fitting.

- Snake the 2-Conductor electrical cord through the conduit outlet of the wall fitting, into the conduit and up to the location of the 12VAC pool transformer. Cut off the cord, after allowing for service and length of run to the transformer. A length of cord with 18" - 24" of excess cord is recommended for the service loop. Pull the fixture snug to the wall fitting.

NOTE: When using a 1 1/2" MIP fitting on the back of a SP-1022 or SP-1048 wall fitting, the interior dimension of the Spears or Dura brands of MIP are both too small for proper installation of the Halco ProLED® Nicheless Lights.

6

- Using the included Lens Key, thread the light into the wall fitting until it is snug.

NOTE TO INSTALLER: Please provide the pool owner with at least 1 Lens Key upon completion of installation.

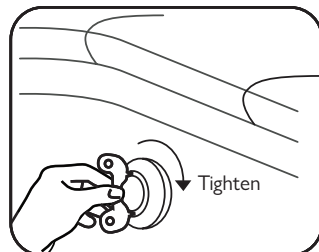


Figure 3: Lens Key Operation.

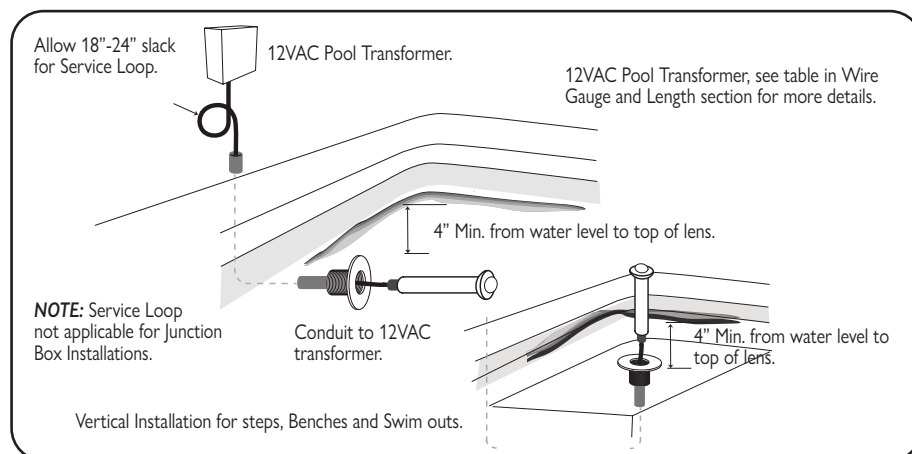


Figure 4: Standard Halco ProLED® Nicheless Light installation with 1.5" pool wall fitting.

WIRING OPTIONS FOR CONTROLLING THE HALCO PROLED® NICHELESS LIGHTS

NOTE: Always consider the cable length when calculating the input voltage at the transformer. The maximum service between a transformer and all the connected lights should not exceed 150 ft... in length. This includes the primary run from the Junction Box (J-Box).

Multiple Halco ProLED® Color-Changing Nicheless Lights may be synchronized by being controlled on a single circuit, with a single transformer and switch, up to and not exceeding 400 watts.

⚠ WARNING

IMPORTANT: All **Halco ProLED® Color-Changing Light Nicheless Lights** must be on the same circuit or switch, or tied into the same transformer in order to synchronize colors. Use only solid wire and bus style terminal connectors.

WIRE GAUGE AND LENGTH

⚠ WARNING

The **Halco ProLED® Nicheless LED Lights** are low voltage light fixtures. Improper wire gauge and/or wire length can affect the performance of these lights. Follow the guidelines below to determine the proper operation and optimum performance of the lights.

Voltages are determined by the measured voltage level at the bus bar where the transformer and cords are connected.

NOTE: Each color mode has a slightly different power draw.

Cord Length	Min Voltage	Max Voltage
50 feet	9.4VAC	12.4VAC
100 feet	10.7VAC	13.2VAC
150 feet	11.82VAC	13.8VAC

⚠ WARNING

RISK OF ELECTRIC SHOCK OR ELECTROCUTION.

Which could result in serious injury or death. A Ground Fault Circuit Interrupter (GFCI) for 120 Volt transformers should be used if required by the transformer manufacturer or if required by the local state or city code. When a GFCI is used, the conductors on the load side of the GFCI circuit shall not occupy conduit, boxes, or enclosures containing other conductors unless the additional conductors are also protected by a GFCI. Refer to local state and city codes for complete details.

⚠ WARNING

RISK OF ELECTRIC SHOCK OR ELECTROCUTION.

Which could result in serious injury or death. The **Halco ProLED® Nicheless LED Lights** are only available for 12VAC power. For supply connection, use only an isolating low voltage power supply with ungrounded output, evaluated and listed by a Nationally Recognized Testing Laboratory (NRTL) for swimming pool use.



WIRING TO A SWITCH

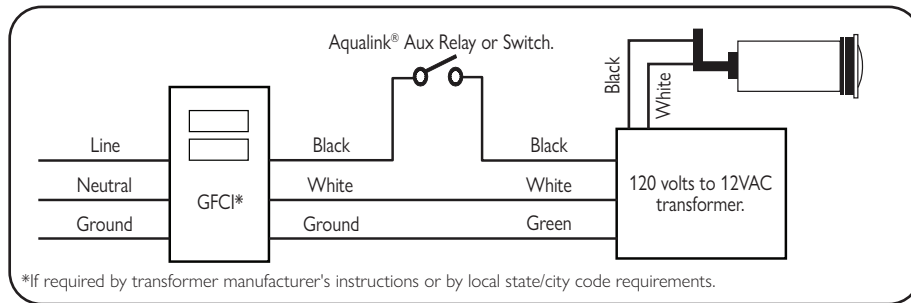


Figure 5: Wiring **Halco ProLED® Nicheless LED Underwater Lights**.

12VAC INSTALLATION

A 12-14 VAC Transformer must be used to power all 12VAC **Halco ProLED® Nicheless LED Lights**.

NOTE: For optimum performance Halco recommends not exceeding the load factor specified by the instructions included with the transformer.

To ensure maximum safety, only use a transformer that can supply 12VAC and is listed or certified by a Nationally Recognized Testing Laboratory (NRTL) as compliant with UL 379, Standard for Power Units for Fountain Luminaires, Swimming Pools and Spas.

⚠ WARNING

To prevent the risk of fire which could result in property damage, void the warranty, as well as to ensure optimum performance from your **Halco ProLED® Nicheless LED Lights**, do not exceed the load factor specified in the instructions provided by the manufacturer of the transformer.

OPERATING THE HALCO PROLED® COLOR CHANGING & HALCO PROLED® WHITE NICHELESS LED LIGHTS

Halco ProLED® Color-Changing Light and **Halco ProLED® White Lights Nicheless LED Underwater light fixtures** are operated through the light's switch. No special controller or interface is required. Use a junction box to connect and operate multiple lights with a single switch.

HALCO PROLED® NICHELESS LED LIGHT: SHOWS, SOLID COLORS AND FUNCTIONS

Halco ProLED® Color-Changing Light Nicheless LED light fixtures are pre-programmed and synchronous with each other while offering a wide array of lighting effects and options. They offer seven different light shows (1-7) and five solid colors (8-12) to choose from; as well as a Color Lock (13) and Return (14) feature which allows you to "lock" the light on a color shown during an active light show and can return to the last locked color effect. Halco ProLED® Color-Changing Light Nicheless LED light fixture features are selectable by turning the existing pool light power switch off and on, known as power cycling.

Your Halco ProLED® Color-Changing Nicheless LED light fixture has seven light shows and 5 solid colors from which you can choose. (See full description of light shows on page 13).

Your Halco ProLED® Color-Changing Nicheless LED light fixture can stop a light show and "color lock" on a color shown during an active light show and can also return to the last locked color effect.

LIGHT SHOWS:

- | | | | |
|------------------|-----------|---------------|-----------------|
| 1. TRANQUIL | 2. STROBE | 3. DEEP SPACE | 4. EMERALD SEAS |
| 5. PATRIOT DREAM | 6. SUNSET | 7. GALAXY | |

SOLID COLORS:

- | | | |
|--|----------|---------|
| 8. BLUE | 9. GREEN | 10. RED |
| 11. WHITE (RGB-W) or LILAC WHITE (RGB) | 12. PINK | |

COLOR LOCK AND RETURN:

- | | |
|----------------|------------|
| 13. Color Lock | 14. Return |
|----------------|------------|

NOTE: Halco ProLED® Nicheless LED Lights are "synchronous", meaning that multiple Halco ProLED® Nicheless LED Lights on the same power circuit will sync together so that they all display the same light show or solid color at the same time. All of the Halco ProLED® Nicheless LED Lights on the same power circuit must be on the same electrical circuit for this feature to be operational. Halco ProLED® Nicheless LED Lights on the same power circuit may not synchronize with other pool, spa or fountain light fixtures. Please consult a qualified electrician to determine your specific pool and spa circuit configuration.

NOTE: Halco ProLED® Nicheless LED Lights will not synchronize with any other manufacturer's pool or spa light fixtures.

⚠ WARNING

During off/on power cycling, prior to the selected show/color displaying, no illumination will occur. This is normal during the cycling process. During this period the pool/spa will be dark and precautions should be taken to avoid any unforeseen accidents. Failure to observe this warning may result in serious injury or death to pool/spa users.



HALCO PROLED® NICHELESS LED LIGHT OPERATION: HOW TO CHANGE LIGHT SHOW, SELECT SOLID COLORS AND FUNCTIONS

CHANGE LIGHT SHOW

Halco ProLED® Color-Changing light shows: Power cycle pool light switch off/on as many times needed to match the desired light show's specified number. Example: If you are on (10) RED and want to display (3) DEEP SPACE light show, power cycle three (3) times to select and activate DEEP SPACE.

SELECT SOLID COLORS

Similar to selecting an Halco ProLED® Color-Changing light show, power cycle pool light switch off/on as many times needed to match the desired solid color's specified number. Example: If you are on (6) SUNSET and want to display (11) Halco ProLED® White, power cycle eleven (11) times to select and display Halco ProLED® White (RGB-W) or LILAC WHITE (RGB).

NOTE: During power cycle process, before the selected light show or color is displayed, temporarily their will be no illumination. This is normal during the switching process.

NOTE: To control your Halco ProLED® Color-Changing Nicheless LED Lights using J&J Electronics XG Controller, please refer to the operation guide included with the XG Controller.

DESCRIPTION OF LIGHT SHOWS AND COLORS

1. TRANQUIL (FACTORY DEFAULT LIGHT SHOW):

Show: Slow color-fades between white, magenta, blue and green.

Cycle: Continuous color slow-fades between colors. Light will stay on each solid color for 4 seconds before fading to the next.

2. STROBE:

Show: Very rapid flashing through random colors.

Cycle: Continuous color flashing.

3. DEEP SPACE:

Show: Slow cross-fade through all colors.

Cycle: Continuous color sequence cycle with slow cross-fade between colors. Light will hold on each color for 8 seconds before cross-fading to the next.

4. EMERALD SEAS:

Show: Slow cross-fade between green and blue.

Cycle: Continuous color sequence cycle with slow cross-fade between green and blue colors. Light will hold on solid green and blue for 8 seconds before slowly transitioning.

5. STARS AND STRIPES:

Show: Cross-fade through red, white and blue.

Cycle: Light will hold on each color for 3 seconds before changing to the next.

6. SUNSET:

Show: Slow color-fade through orange, red and magenta.

Cycle: Continuous color sequence cycle with cross-fade between colors.

7. GALAXY:

Show: Fast color-change through random colors.

Cycle: Light will hold on each color for 2 seconds before changing to the next color.

8. BLUE: Solid Deep Blue

9. GREEN: Solid Deep Green

10. RED: Solid Deep Red

11. WHITE: Solid White Hue

12. PINK: Solid Deep Pink

WINTERIZING

⚠ WARNING

Consult a local state or city swimming pool professional for proper winterization of your **Halco ProLED® Halco ProLED Nicheless LED Lights. Nicheless LED Lights.**

The water level should be lowered to approximately 12 inches below the pool lights. Be certain the water is drained out of the wall housing. Minimum pool safeguard requires dropping the water level 2 inches to 4 inches below the light. NEVER remove water from the pool without checking ground water tables.

TROUBLESHOOTING

Use the following tips to help you resolve problems that might occur while operating the *Halco ProLED® Nicheless LED Lights*.

Problem		Possible Cause/Action
All lights fail to illuminate	Lights are not receiving power	Check 120VAC power supply into transformer. Check for 12VAC output at transformer. Check or reset GFCI. Make sure 120 volts has not been used in the installation - damage is assured and will void the warranty.
One or more lights are dim, blinking or not working	Poor connection of improper wire gauge	Separate each light and independently wire 12VAC to this single light only. Repeat this process on each light. If junction box is being used, check for proper connection of light cord. Verify that the correct wire gauge is being used between the transformer and the j-box.
Colored lights out of sync	Improper voltage supply or poor connection to the light	Verify that proper wire connections are being achieved for the lights that are out of sync. Reset all the lights to white by turning lights OFF for five (5) seconds, then turning ON.

HALCO LIGHTING TECHNOLOGIES 2-YEAR LIMITED WARRANTY HALCO PROLED® COLOR CHANGING LED NICHELESS LIGHT AND HALCO PROLED® WHITE LED NICHELESS LIGHT

Halco Lighting Technologies warrants its LED In-ground light fixtures to be free from defects in material and workmanship, under normal use, conditions and service, from the date of purchase and warrants its products as follows:

Product Line	Structural Housing	LED Module
Halco ProLED® Color Changing LED Nicheless Light	Two (2) Year	Two (2) Year
Halco ProLED® White LED Nicheless Light	Two (2) Year	Two (2) Year*

*If during the first twelve (12) months of the warranty period, the LED Module fails to operate due to a defect in material or workmanship, Halco will, at its option, repair or replace fixture at no charge. If during months thirteen (13) through twenty four (24), the LED Module fails to operate due to a defect in material or workmanship, Halco will grant the purchaser a pro-rated credit for purchase of a Halco ProLED® LED Light Fixture, as the purchaser's sole remedy.

TERMS AND CONDITIONS

This warranty is available to the original purchaser of the product(s) only. This warranty applies only when products are properly installed; any other use voids the warranty. This warranty does not apply to any abnormal use of product(s), use in violation of any applicable standard, code or instructions for use in installations including those contained in the latest National Electrical Code (NEC), the Standards for Safety of Underwriters Laboratory, Inc. (UL), Standards for the American National Standards Institute (ANSI). This warranty will not apply in the event of conditions demonstrating abnormal use or stress, under/over voltage/current conditions, excessive switching cycles or outside the recommended operating conditions. This warranty does not cover damage occurring during shipment, damage or failure resulting from alteration, accident, acts of God, theft, abuse, negligent installation, improper service, unauthorized repairs, freezing or where adequate care has not been taken to prevent damage to the product(s). Tampering with any internal component of this product(s) will void the warranty.

This warranty gives you specific rights. You may have other rights that vary according to the laws of your state.

LIMITATION OF LIABILITY

THE FOREGOING SHALL CONSTITUTE THE EXCLUSIVE REMEDY OF THE PURCHASER AND IS IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING ALL WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND ALL WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OR TRADE. THE LIABILITY OF HALCO UNDER THIS WARRANTY SHALL BE LIMITED TO THE REPLACEMENT, REPAIR OR CREDIT OF THE PRODUCT(S) AS STATED HEREIN. Halco IS NOT RESPONSIBLE FOR SHIPPING OR TRANSPORTATION COSTS RELATED TO OBTAINING WARRANTY SERVICE. IN NO EVENT SHALL HALCO BE LIABLE FOR ANY OTHER COSTS OR DAMAGES, INCLUDING LOST PROFITS OR REVENUES, LABOR CHARGES OR FOR ANY INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES.

Halco reserves the right to change the warranty and/or warranty period without prior notice and without incurring obligation.

To obtain warranty service, retain the failed Product; retain the installation invoice showing product purchase price and contact Halco ProLED® Pool Customer Service at: 800.374.1927