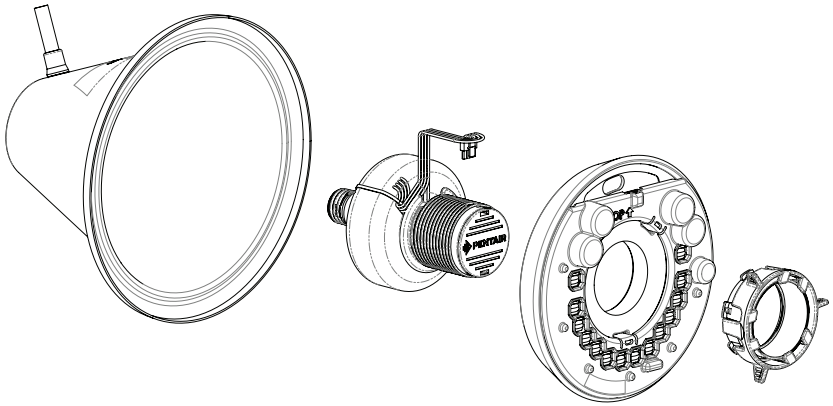




AMERBRITE™
UNDERWATER WHITE LED POOL LAMP
FOR USE ONLY WITH PENTAIR® AMERLITE® LUMINAIRE



INSTALLATION
AND
USER'S GUIDE

IMPORTANT SAFETY INSTRUCTIONS
READ AND FOLLOW ALL INSTRUCTIONS
SAVE THESE INSTRUCTIONS

Technical Support

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READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL.

IMPORTANT WARNING AND SAFETY INSTRUCTIONS



SERIOUS BODILY INJURY OR DEATH CAN RESULT IF THIS LAMP IS NOT INSTALLED AND USED CORRECTLY.

INSTALLERS, POOL OPERATORS AND POOL OWNERS MUST READ THESE WARNINGS AND ALL INSTRUCTIONS BEFORE USING THE POOL AND/OR SPA LIGHT.

Most states and local codes regulate the construction, installation, and operation of public pools and spas, and the construction of residential pools and spas. It is important to comply with these codes, many of which directly regulate the installation and use of this product. Consult your local building and health codes for more information.



IMPORTANT NOTICE - Attention Installer: This Installation and User's Guide ("Guide") contains important information about the installation, operation and safe use of this underwater pool and spa lamp. This Guide should be given to the owner and/or operator of this equipment.



Before installing this product, read and follow all warning notices and instructions in this Guide. Failure to follow warnings and instructions can result in severe injury, death, or property damage. Call (800) 831-7133 for additional free copies of these instructions. Please refer to www.pentairpool.com for more information related to this products.



RISK OF ELECTRICAL SHOCK OR ELECTROCUTION: THE AMERBRITE™ WHITE LAMP MAY REQUIRE HIGH VOLTAGE WHICH CAN SHOCK, BURN, OR CAUSE DEATH.

Before working on the AMERBRITE white lamp, always disconnect power to the pool/spa lights at the source circuit breaker from the light before servicing the lamp. Failure to do so could result in death or serious injury to service person, pool users or others due to electric shock. When installing and using this electrical equipment, basic safety precautions should always be followed, include the following:

This underwater light must be installed by a licensed or certified electrician or a qualified pool professional in accordance with the current National Electrical Code (NEC), NFPA 70 or the Canadian Electrical Code (CEC), CSA C22.1. All applicable local installation codes and ordinances must also be adhered to. Improper installation will create an electrical hazard which could result in death or serious injury to pool users, installers or others due to electrical shock, and may also cause damage to power source. Always disconnect the power to the pool light at the circuit breaker before servicing the light. Failure to do so could result in death or serious injury to service person, pool users or others due to electrical shock.



For countries in compliance with International Electrotechnical Commission (IEC) regulatory standards:

The light fixture must be installed by a licensed or certified electrician or a qualified pool service person, in accordance with current IEC 364-7-702 and all applicable local codes and ordinance. Improper installation will create an electrical hazard, which could result in death or serious injury to pool user, installer or other due to electrical shock and may also cause damage to the property.

IMPORTANT WARNING AND SAFETY INSTRUCTIONS

⚠ WARNING **Risk of Electrical Shock. Connect only to a branch circuit protected by a ground-fault circuit-interrupter (GFCI). Contact a qualified electrician if you cannot verify that the circuit is protected by a GFCI.**

This light 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 the 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 light without the test button being pushed, a ground current is present, indicating the possibility of an electric shock. Do not use this light. Disconnect the light and have the problem corrected by a qualified service representative before using.

⚠ WARNING **Important Safety Information for Pentair Niche and Light Installation**

- All Niche and Light installations must conform with all codes. If local codes mandate a cord seal, use Pentair plastic niches (P/N 79206600 and P/N 79206700) and Cord Seal Kit (P/N 670044).
- Under no circumstances replace lights by splicing wire under water or behind niche.

⚠ CAUTION

THE AMERBRITE® WHITE LED LAMP, CANNOT BE USED ON A DIMMER CIRCUIT. USING A DIMMER SWITCH WILL RESULT IN PERMANENT DAMAGE TO THE LAMP.

AmerBrite™ Underwater White LED Pool Lamp Overview

This manual describes how to replace the Amerlite® Incandescent Lamp with the AmerBrite underwater white LED pool lamp. The energy efficient AmerBrite white LED array utilizes IntelliBrite® LED Light technology, creating a spectacular effect in your pool and spa.

Operating AmerBrite White LED Lamps Using a Wall Switch

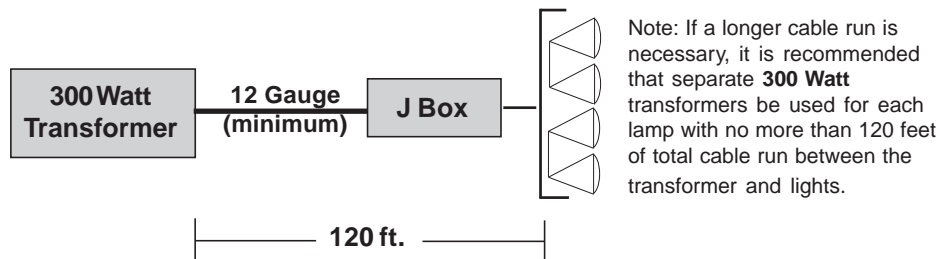
The AmerBrite white LED lamp can be manually controlled using a standard wall-mount light switch. AmerBrite lamps are controlled by cycling AC power from a standard wall switch. Multiple AmerBrite lamps can be connected via a junction box to a single switch so that all lamps can be switched on and off together.

Operating AmerBrite White LED Lamps Using a Control System

AmerBrite lamps can also be automatically controlled using the Pentair IntelliTouch® EasyTouch® and SunTouch® Control System. For more information refer to the IntelliTouch Control System User's Guide (P/N 521075), EasyTouch Control System User's Guide (P/N 521044), and SunTouch® Control System User's Guide (P/N 520785).

Using an External Transformer for Multiple 12 VAC AmerBrite Lamps

When using a 300 Watt UL Listed transformer (set at 14 VAC) with multiple 12 VAC AmerBrite lamps, it is recommended that no more than four (4) AmerBrite lamps be used with a maximum of 75 feet 12 gauge cable run, between the transformer and the junction box. There should be no more than 45 feet of cable between the junction box and the AmerBrite lamp. This will ensure that the AmerBrite lamps receive a minimum operating power of 9.5 VAC.



Maximum Wattage Using multiple AmerBrite White LED Lamps (with a 300 Watt Transformer)

IMPORTANT! When using multiple 12 VAC Pentair® LED white pool and spa lights the total allowable light wattage is 300 Watts maximum. The individual light wattage is as follows:

- One AmerBrite White LED (500W) pool light is 51 Watts maximum
- One AmerBrite White LED (400W) pool light is 44 Watts maximum
- One AmerBrite White LED (300W) pool light is 36 Watts maximum
- One AmerBrite Color LED pool light is 36 Watts maximum
- One IntelliBrite Color LED pool light is 35 Watts maximum
- One IntelliBrite Color LED spa light is 18 Watts maximum

BEFORE REPLACING THE AMERLITE® INCANDESCENT LIGHT READ THE FOLLOWING INFORMATION



WARNING Be sure that the pool or spa meets the requirements of the current National Electrical Code (N.E.C.) Article 680-22 and all local codes and ordinances. A licensed or certified electrician must install the electrical system to meet or exceed those requirements before the underwater light is installed. Some of the requirements of the National Electrical Code which the pool's electrical system must meet are as follows:

- The lighting circuit has a Ground Fault Circuit Interrupter (GFCI) for 120 VAC line voltage models, and has an appropriately rated circuit breaker. 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 codes for complete details.
- The Junction Box (or, for 12 volt models, the low voltage transformer) is located at least eight (8) inches (20.3 cm) above water level and at least 48 inches (1.22 m) from the edge of the pool. See Figure 1 below.
- The light fixture and all metal items within five (5) feet (1.524 m) of the pool are properly electrically bonded.
- The wet niche is properly electrically bonded and grounded via the No. 8 AWG ground connector located at the rear of the niche; see Figure 1.
- The wet niche is properly installed so that the top edge of the underwater light's lens is at least 18 inches below the surface of the water in the pool; see Figure 1.
- The Amerlite® Light niche must be properly installed so that the top edge of the AmerBrite™ Light's lens is at least 18" below (not more than 48 inches (1.22 m) below in Canada) the surface of the water in the pool or spa.
- Be certain that the pool or spa electrical system meets all applicable requirements, the electrician should also consult the local building department.

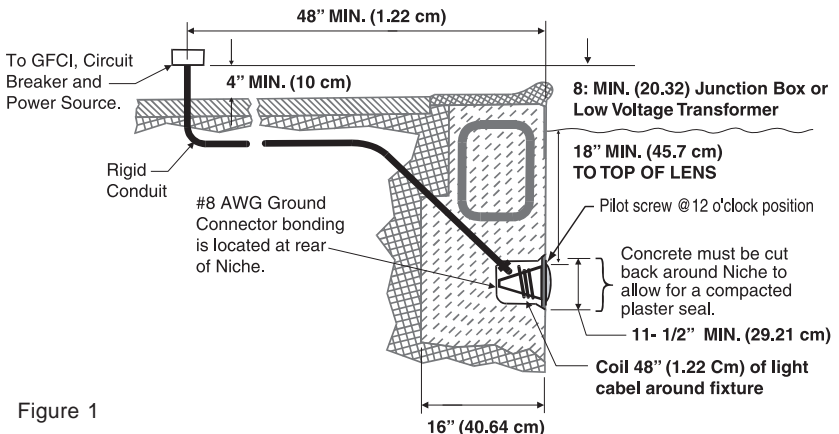


Figure 1

AMERBRITE™ WHITE LAMP INSTALLATION INSTRUCTIONS

⚠ DANGER



RISK OF ELECTRICAL SHOCK OR ELECTROCUTION: THE AMERBRITE™ WHITE LAMP MAY REQUIRE HIGH VOLTAGE WHICH CAN SHOCK, BURN, OR CAUSE DEATH.

BEFORE WORKING ON the AmerBrite white lamp always disconnect power to the pool and/or spa lights at the source circuit breaker from the light before servicing the light. Failure to do so could result in death or serious injury to service person, pool users or others due to electric shock. When installing and using this electrical equipment, basic safety precautions should always be followed, include the following:

⚠ WARNING

Be sure to use the special pilot screw provided with the Amerlite® Incandescent Light. This screw mounts and electrically grounds the housing securely to the mounting ring and wet niche. Failure to use the screw provided could create an electrical hazard which could result in death or serious injury to pool users, installers or others due to electrical shock.

**PILOT SCREW
(12 O'clock)**



Always install a new lens gasket (part number 79101601) whenever disassembling the Amerlite incandescent light fixture assembly. Failure to do so may permit water to leak into the assembly which could cause; (a) an electrical hazard resulting in death or serious injury to pool users, installers or others due to electrical shock; or; (b) breakage of the lamp or lens, which could result in serious injury to pool users, installers, bystanders, or property damage.

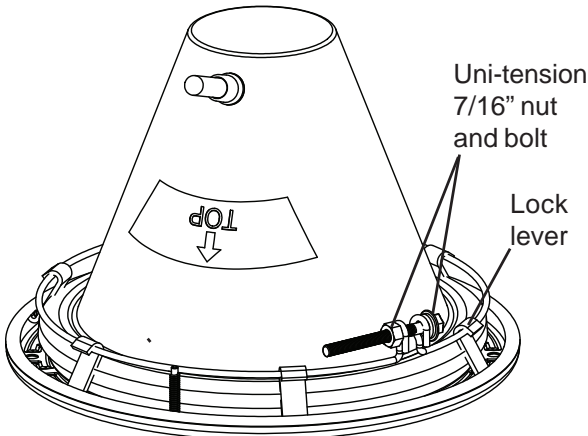
AMERBRITE™ WHITE LAMP INSTALLATION INSTRUCTIONS (CONTINUED)

The following describes how to replace the Amerlite® Incandescent Lamp with the “screw-in” AmerBrite™ White LED Lamp.

1. **Turn off main electrical switch or circuit breaker**, as well as the switch which operates the underwater Amerlite pool light. Note: It is not necessary to drain down the pool to replace the lamp.
2. **When replacing or reassembling the pool light assembly, the Gasket (P/N 79101601) or Gasket and Lens (P/N 619864) which is included in the AmerBrite Lamp kit must also be replaced. See page 10 for part numbers.**

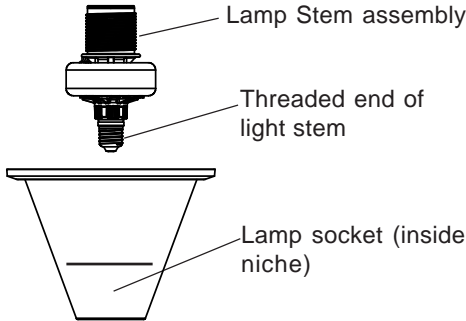
Before starting make sure that you have the AmerBrite white pool lamp assembly (12 VAC P/N 602060, or 120 VAC P/N 602065) ready to install.

3. **Remove the Amerlite incandescent light assembly:** Remove the PILOT screw at top of face ring, then remove the light assembly from the niche by tilting the top away from the niche and then lifting the light assembly from the locking tab at the bottom of the niche.
4. Place the light assembly on the pool deck.
5. Place a cloth on the ground. Turn the light over so the lens is resting on the cloth. Using a 3/8" nut driver or #3 Phillips screwdriver and a 7/16" wrench, remove the nut and uni-tension wire clamp.
6. Remove the face ring and uni-tension wire clamp from the light housing.
8. Unscrew and remove the Amerlite lamp.
9. Discard the uni-tension wire clamp.
10. Inspect the inside of the Amerlite light housing. Be sure the inside is clean and dry.
11. Discard the lens, gasket and Amerlite light lamp.
12. Using a clean dry cloth, thoroughly wipe the inside of the light housing. Be sure the light housing is clean and dry. Residual moisture and humidity inside the light housing may reduce the life of the AmerBrite LED lamp assembly.



13. Install the "Screw-in" AmerBrite™ White LED Lamp (120 VAC or 12 VAC):

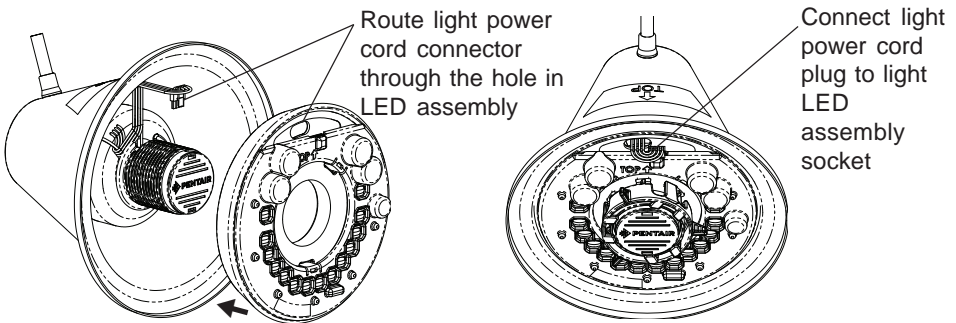
Insert the threaded end of the AmerBrite light stem assembly into the lamp socket. Rotate the stem assembly to secure it into the socket. Do not over tighten.



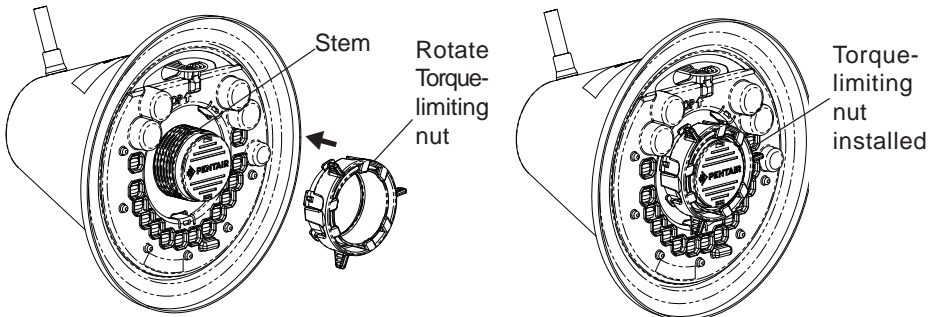
14. While holding the AmerBrite LED lamp assembly, route the lamp power cord connector through the hole in the top of the LED assembly.

15. Install the lamp assembly onto the light housing. Carefully align the "TOP" indicator arrow on the LED assembly with the "TOP" indicator on the Amerlite® Stainless Steel Light housing. Be sure the LED assembly is level with the lamp housing. CAUTION: If the LED assembly is not level, the LED assembly may interfere with the lens installation and/or have improper lighting performance.

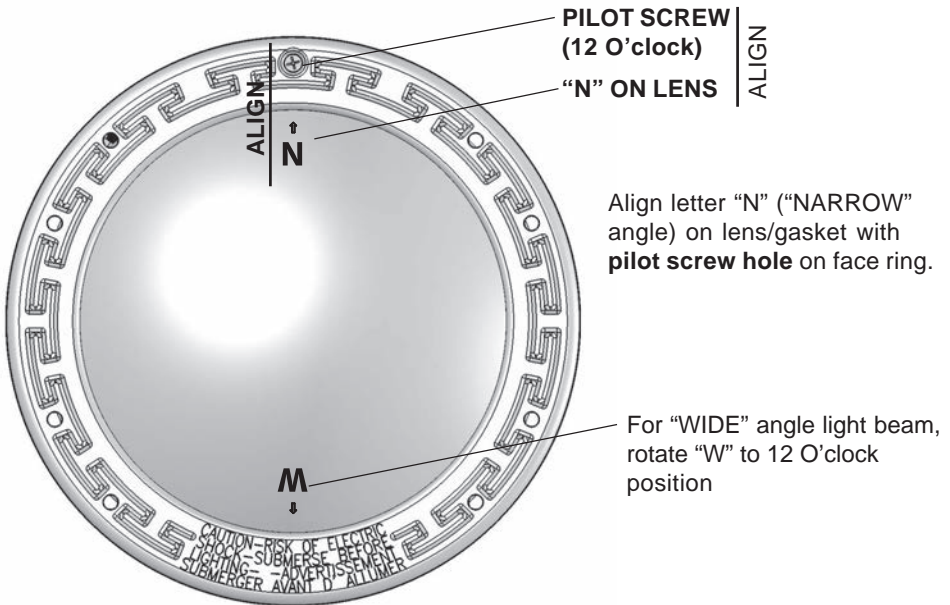
16. Connect the lamp power cord plug to the LED assembly socket.



17. Install the torque-limiting nut onto the top of the stem. Rotate the top section of the torque-limiting nut until it continues to "click" with each rotation (similar to a car gas cap), this indicates the nut is secured in place.

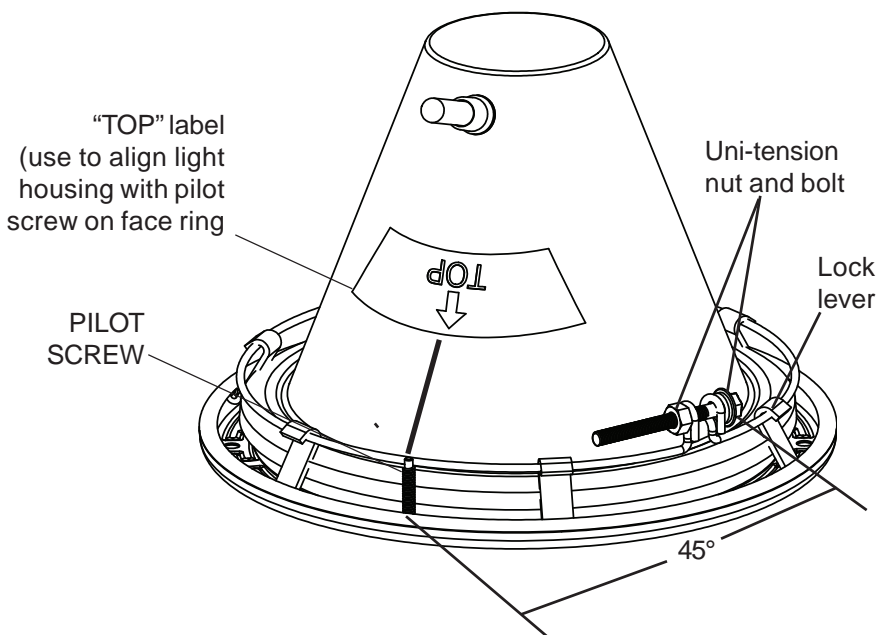


18. **Install NEW LENS and GASKET (P/N 79101601):** Align the lens and gasket onto the light housing. Note: The gasket is shipped installed on the lens.
- a) With the lamp housing resting on its base, place the lens/gasket on top of the Amerlite® lamp housing.
- b) Rotate the lens/gasket to align the letter “N” (“NARROW” angle for installing light at either end of pool length) on the lens to the UP arrow on the LED assembly. **See page 8 to determine the best option.**



19. **INSTALL FACE RING:** Place the face ring on top of the lens/gasket/housing. Rotate the face ring so the **pilot screw hole** is aligned in the 12 O'clock position, with the lens letter “N” (or “W”). Note: Also, verify the “TOP” position arrow indicator label (see page 7) on the rear of the housing is aligned with the pilot screw on the face ring.
20. **INSTALL UNI-TENSION CLAMP:** With the hook ends of the circular uni-tension clamp pointing down, spread the clamp and place it in the “U” recesses of the locking levers. Be sure the hook ends of the clamp are located between the pair of locking levers as shown on page 8 and that the wire clamp is properly engaged with all of the lock levers.

21. Place a cloth on the ground to protect the lens. Turn the light over so the lens is resting on the cloth. Be sure the orientation of the wire clamp and the bolt connection is positioned at 45°.
22. Tighten the bolt and nut until the distance between the ends of the clamp equals ¼-inch or less.
23. Install the special bronze pilot screw at the top of face ring to secure the light to the niche.



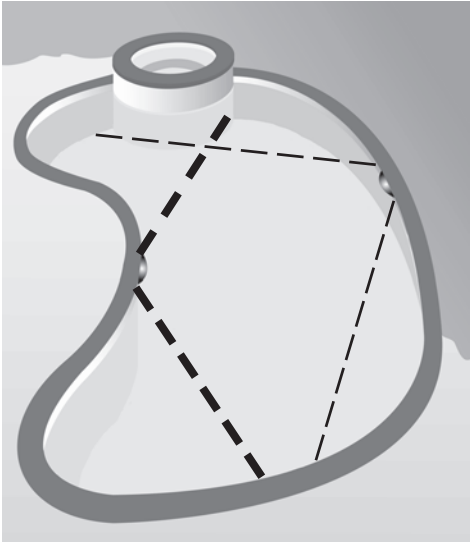
Position the wire clamp (nut and bolt) about 45° between the PILOT SCREW and NUT/BOLT.

24. **Final check for proper AmerBrite™ White LED Lamp operation:** Switch on the main switch or circuit breaker to the system, and the switch that operates the AmerBrite lamp itself. The lamp should illuminate when power is applied. If not recheck the installation steps starting with Step 1 (page 4).
25. Reinstall the Amerlite® Light housing back into the niche by wrapping the cord around the body. Then engage the bottom locking tab and tighten the pilot screw.

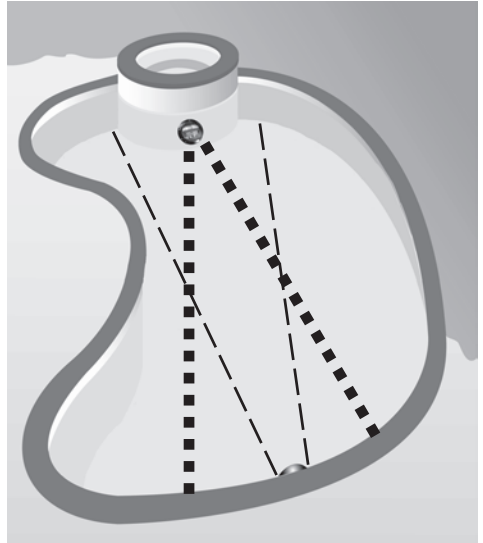
Wide and Narrow Angle Lens Adjustment

Wide and Narrow Angle Lens Feature

The AmerBrite™ Light Lens geometry provides a choice of “wide” or “narrow” angle light beam to suit various size pools. For lights located on either side of the pool, rotate the lens to the ‘wide’ (W) angle position, which will provide a wider angle light beam for greater underwater coverage and light reflection the width of the pool. For lights located either end of the pool, rotate the lens to the ‘narrow’ (N) angle light beam position for increased underwater light intensity and distance.



**WIDE ANGLE LIGHT BEAM
(FOR SIDES OF POOL)**



**NARROW ANGLE LIGHT BEAM
(FOR ENDS OF POOL)**

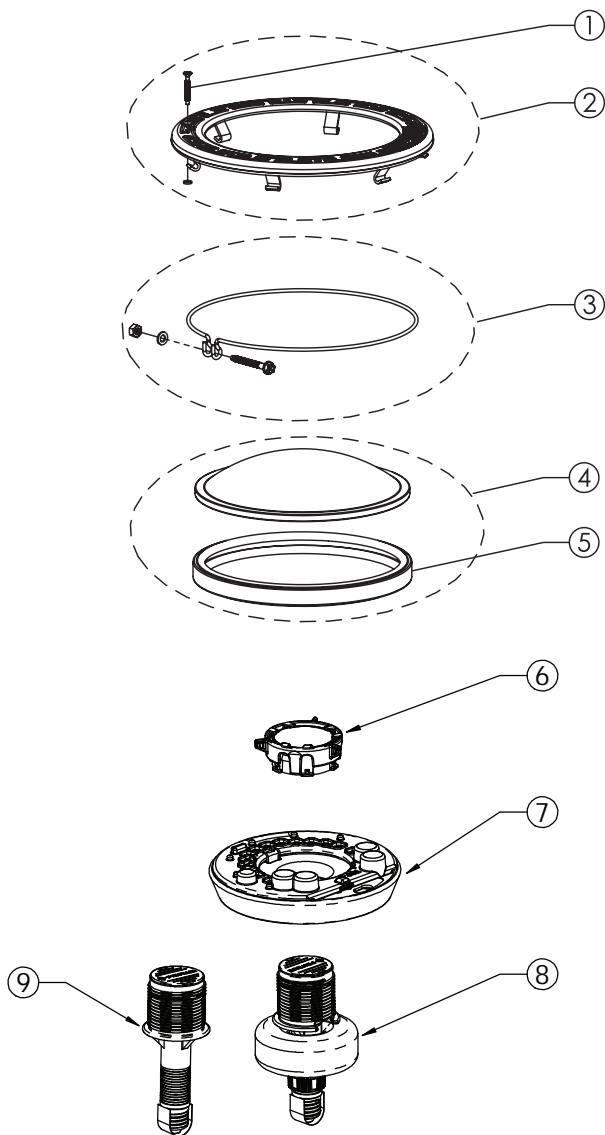
Troubleshooting

Problem	Cause/Action
<p>The light will not illuminate.</p> <p>Light does not function properly.</p>	<p>Check the GFCI ground fault wiring and reset if necessary.</p> <p>Check the light wiring connection to the junction box at the pool side and to the AC power switch.</p> <p>Be sure that there is proper AC power applied to the light.</p> <p>For AmerBrite lamp (12 VAC) - Check transformer and connections.</p>

AmerBrite™ White LED Pool Lamp

Illustrated Replacement Parts View

Note: A 120 VAC to 12 VAC external transformer is required for the 12 VAC model AmerBrite white pool lamp. See page 1 for more information.



See next page for replacement part numbers.

AmerBrite™ White LED Pool Lamp Replacement Parts List

Item No.	Kit Part No.	Description
2, 3, 5	600095	Face Ring assembly, stainless steel. - Uni-tension wire clamp assembly. - Gasket, 8-3/8 in. diameter, off white.
4	619864Z	Replacement Lens Kit. - Gasket, 8-3/8 in. diameter, silicone. - Lens, IntelliBrite 5G, Pool, 8-3/8 in. diameter, tempered.
1	79104800	Pilot screw, with captive gum washer.
5	7910160Z	Gasket, 8-3/8 in. diameter, silicone.
3, 5	602097	Kit, Gasket and Clamp.
6	620026Z	Kit nut handle assembly AmerBrite.
7	620063Z	Kit Disc Assy. AmerBrite White 120/12V (300W equivalent).
	620064Z	Kit Disc Assy. AmerBrite White 120/12V (400W equivalent).
	620065Z	Kit Disc Assy. AmerBrite White 120/12V (500W equivalent).
8	620060Z	Kit stem, transformer assembly 120 VAC AmerBrite.
9	620061Z	Kit stem, harness assembly 12 VAC AmerBrite.
10	602070	AmerBrite Lamp Assembly, White 300W, 12 VAC.
(Not shown)	602071	AmerBrite Lamp Assembly, White 400W, 12 VAC.
	602072	AmerBrite Lamp Assembly, White 500W, 12 VAC.
	602075	AmerBrite Lamp Assembly, White 300W, 120 VAC.
	602076	AmerBrite Lamp Assembly, White 400W, 120 VAC.
	602077	AmerBrite Lamp Assembly, White 500W, 120 VAC.

Note: The 120 VAC AmerBrite white pool lamp has an integrated 12 VAC transformer.

CAUTION

Each time the Amerlite® Light is opened, a new gasket and clamp ring (P/N 602097) must be used to reseal the light. Not doing so may allow the light to leak and damage the AmerBrite lamp components.

NOTES



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