

# ABBA

LIGHTING USA

*12V Landscape Light Specialist*



## PL54

## 2 WIRE

## INSTALLATION GUIDE

[www.ABBALightingUSA.com](http://www.ABBALightingUSA.com)

## RATED VOLTAGE 12V AC/DC

Congratulations on your purchase of this high-quality product! We want to ensure that you have the best possible experience with it, so we kindly ask that you take a moment to carefully read and follow all instructions before assembly, installation, and use. By doing so, you'll not only guarantee correct function and safety, but also optimize the full potential of this exceptional product. Thank you for choosing us as your trusted provider of top-notch products - we truly appreciate your business!

### IMPORTANT SAFETY INSTRUCTIONS

#### LIGHTEN LAMP IS **HOT!**

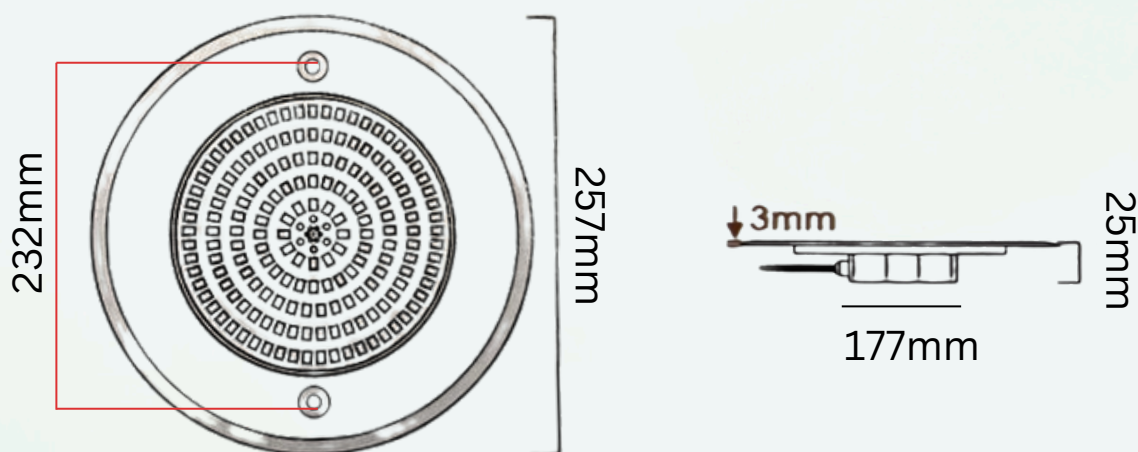
**WARNING: TO REDUCE THE RISK OF FIRE OR INJURY TO PERSONS:**

- ✔ Installation and maintenance of this product must be performed only by a licensed certified electrician or a qualified service technician.
- ✔ This product must be installed in accordance with the requirements set forth by your government standards or local authorities.
- ✔ This light is designed for use only when fully submerged in water.
- ✔ Never handle this product with wet hands or feet.
- ✔ Never operate this light for more than 30 seconds unless it is completely submerged in water.
- ✔ All lights must be disconnected from the main electricity supply before performing any maintenance operations.
- ✔ The light installation depth must range between 1 ~ 10 meters.
- ✔ The maximum water temperature range for the light is -20°C to 35°C.

## WARRANTY

The manufacturer guarantees this LED underwater light against defects in materials and workmanship for a period of five years from the date of purchase. This guarantee does not cover damage resulting from misuse, accidental damage, improper handling, or installation. It specifically excludes liability for direct, incidental, or consequential damages, including water entering the housing.

## PARAMETER



## INSTALLATION

### **1. PREPARATION FOR INSTALLATION**

- A. Please ensure that the pool and its electrical system are in full compliance with the current National Electrical Code (NEC) and all relevant local ordinances.
- B. This light is specifically designed for installation in new pools, as well as for replacing existing surface-mounted lights or niche fixtures in current pools.
- C. Please use only high-quality stainless steel screws or the screws provided with the light.

D. The light must be used or operated only while fully submerged underwater. Never switch on the light if it is not submerged.

## **2. INSTALLATION GUIDELINES**

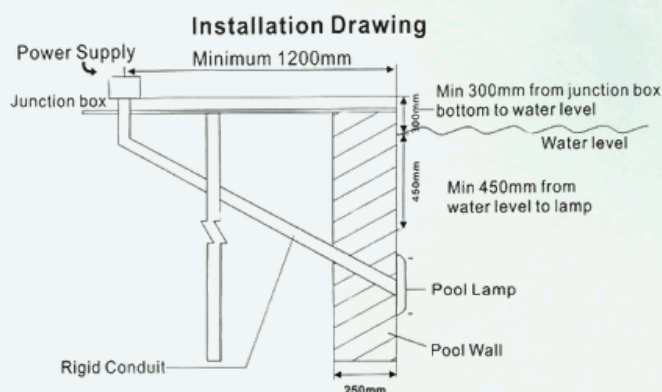
A. Ensure that the bracket is installed on a vertical wall of the pool.

B. Ensure that the top of the light is positioned at least 450mm below the normal water surface.





C. Reserve at least 150mm of backup wire coiled at the back of the light to facilitate convenient replacement.

D. The junction box or the 12V low-voltage transformer should be positioned at least 300mm above the water surface, at least 200mm above the ground, and at least 1200mm away from the edge of the pool.

E. To achieve synchronization, ensure that all lights are installed correctly according to the model and specifications of the light being replaced.



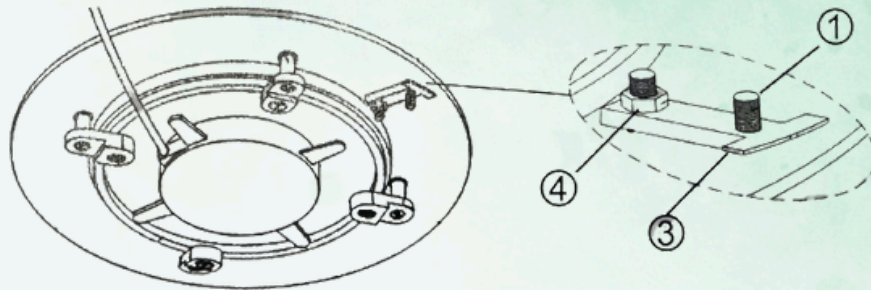
## **3. INSTALLATION**

| No. | Name          | Image   | Qty |
|-----|---------------|---|-----|
| ①   | Metric screws |  | 2   |
| ②   | US screws     |  | 1   |
| ③   | Buckle        |  | 1   |
| ④   | Non-slip nut  |  | 1   |

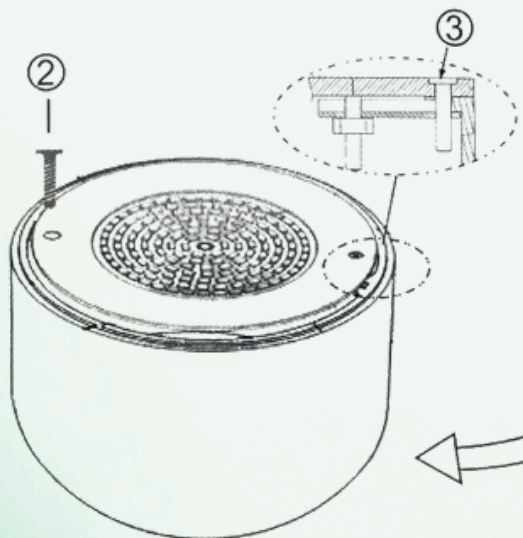
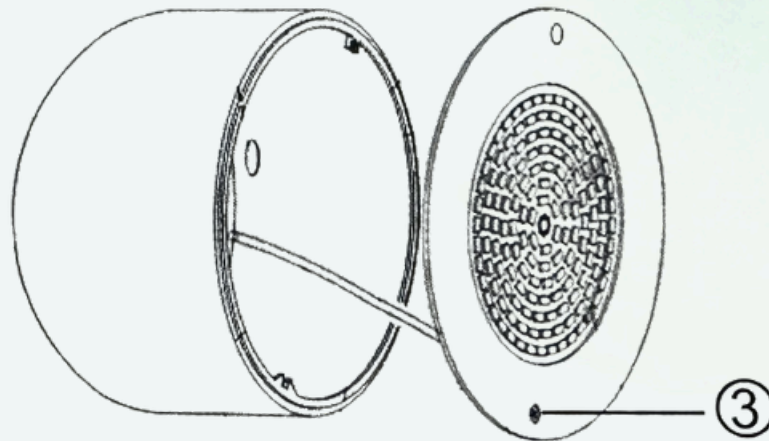
Note: Use US screws for Pentair and Hayward niches. For other niches, use metric screws. The niche is not included with this product.



## LED LIGHT REPLACEMENT FOR PENTAIR & HAYWARD

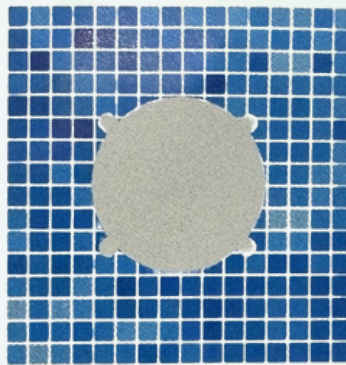
1. INSTALL THE SCREWS



2. INSTALL THE POOL LAMP TO THE NICHE

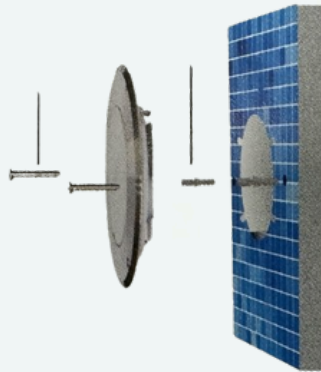


| No. | Name                 | Image   | Qty |
|-----|----------------------|---|-----|
| ⑤   | Rubber stopper       |  | 2   |
| ⑥   | Self-propelled screw |  | 2   |



1. Drill a hole

Install the screws

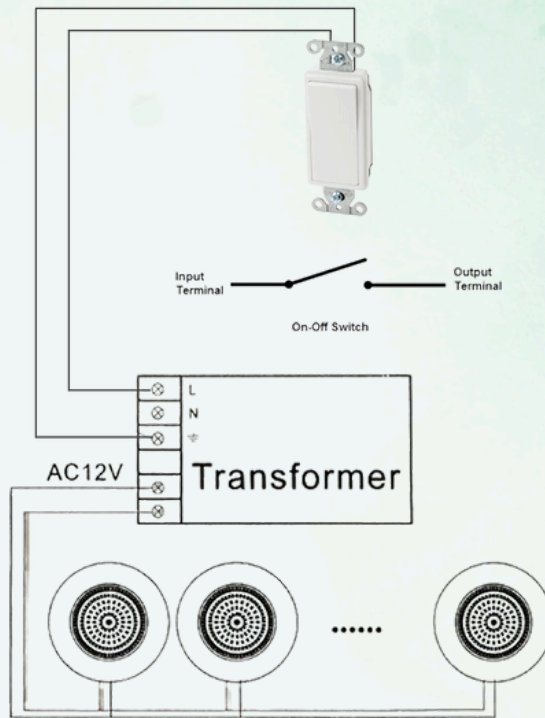


Finished



# WIRING DIAGRAM

## 1. RGB SWITCH CONTROL (AC12V INPUT VOLTAGE )



## 2. RGB SWITCH AND REMOTE CONTROL (AC12V INPUT VOLTAGE )

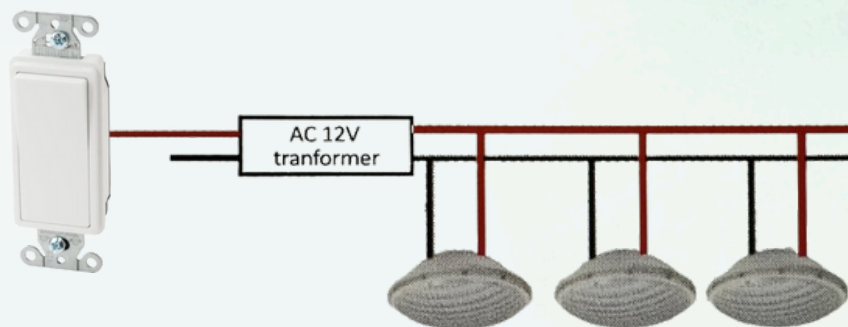


## MAINTENANCE AND REPLACEMENT

- A. This light requires no maintenance and is designed for single use. Replacement is necessary if it becomes defective, as repair is not possible.
- B. Before servicing, always disconnect the power at the circuit breaker and ensure there is no power supplied to the light.
- C. To replace the light, detach it from the bracket and ensure the new light matches the same switch.

## MEMORY FUNCTION

**After switching off for 5 seconds, the lighting color program will resume with the same effect as before switching off.** Ensure all lamps are correctly installed on the same switch and that the input voltage is 12V AC, not DC.



## RESET SYNCHRONIZATION FEATURE

**After switching off for 30 seconds, toggle the switch on and off three times to reset the lighting color to synchronous colorful cycle effect.** This control method synchronizes all lamps. Now, you can select a program starting from the first color by toggling the switch off and on within 3 seconds.

## RGB PROGRAMS OPERATING MANUAL

Upon initial power connection, the lamp will automatically cycle through colors in the sequence: Red, Green, Blue, Purple, Cyan, Yellow, RGB (White), RGB Jump, Colorful Jump, RGB Fade, Colorful Fade.



## 7 PRE PROGRAMMED STATIC COLOR EFFECTS

MODE S1: RED  
MODE S2: GREEN  
MODE S3: BLUE  
MODE S4: RED + BLUE(VIOLET)  
MODE S5: GREEN + BLUE(CYAN)  
MODE S6: RED + GREEN(GOLD)  
MODE S7: RGB(WHITE)

## 5 PRE- SET AUTOMATIC CHANGE EFFECTS

MODE A1: RED - GREEN - BLUE JUMP  
MODE A2: COLORFUL JUMP  
MODE A3: RED - GREEN - BLUE - FADE  
MODE A4: COLORFUL FADE  
MODE A5: EFFECTS CYCLE

## CONTROL COLOR EFFECTS BY SWITCH

Each time you toggle the lamp's power supply off and on within 3 seconds, the lamp will cycle through the following color modes in sequence: S1, S2, S3, S4, S5, S6, S7, A1, A2, A3, A4, A5. This synchronization occurs after toggling the switch on and off three times

## CAUTION!

- The transformer's output must be 12V AC. Avoid using electronic transformers, as they may damage the light. Use industrial frequency transformers or square transformers instead.
- The person responsible for installation should possess the necessary qualifications for this type of work.
- Avoid direct contact with electrical currents.
- Adhere to current standards for accident prevention
- Compliance with IEC 364-7-702 standards is mandatory for wiring in buildings, special wiring, and swimming pools.
- Replace the lamp only when disconnected from the electrical power system.
- Do not handle electrical components with wet feet.