

# Wall Mounted (Ultra Flat Resin Filled) Underwater LED Swimming Pool Light

## Operation Manual



**⚠ ATTENTION INSTALLER:** This manual contains important information about the installation, operation and safe use of this product. This information should be given to the owner or operator of this equipment. Please read this operation manual carefully and keep it for future reference.

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**⚠ WARNING: RISK OF ELECTRICAL SHOCK OF ELECTROCUTION.** This underwater light must be installed by a licensed or certified electrician or a qualified serviceman in accordance with the requirements of your government standard or local authorities. Improper installation will create an electrical hazard, which could result in death or serious injury to pool or spa users, installers, or others due to electrical shock, and may also cause damage to property. Read and follow the specific instructions below.

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**⚠ WARNING:** Before installing this underwater light, read and follow all warning notices and instructions accompanying this light. Failure to follow safety warnings and instructions can result in severe injury, death, or property damage.

## PRODUCT DESCRIPTION



**IMPORTANT:** Pay attention to the detailed specifications on the packages accompanying this underwater light. Choose corresponding items and methods of operation in accordance with the specifications.

**NOTE:** This underwater light is designed for use only when fully submerged in fresh water, connecting with a safety transformer.

**Only DC 12 volt or 24 volt low voltage input** is suitable for this product, according to its own specifications. A safety transformer is essential when carrying out the installation of this product. Failure to do so may result in the injury, death, and damage of this product.

**It is recommended** to install a light every 20m<sup>2</sup>, or every 1W (or above) for 1m<sup>2</sup>. Choose corresponding lights in according to the approximate exposure area of each light, and match it with your swimming or spa pool.

### PRODUCT APPLICATION:

- Installed in concrete pools.
- Suitable depth range under the water for light installation: 1~5 meter.
- Maximum water temperature range for light operation: -20°C~38°C.

# INSTALLATION AND OPERATION

## 1. BEFORE INSTALLING

**NOTE:** The electrician must complete preparatory steps for local electrical system before any parts of this underwater light is installed. (See Figure 1)

- Ensure that the pool meets the requirements of the current local electrical system codes and ordinances. A licensed or certified electrician must install the electrical system to meet or exceed those requirements before this underwater light is installed.
- The lighting circuit must have a Ground Fault Circuit Interrupter (GFCI), or have an appropriately rated current circuit breaker.
- All metal items within 200mm of the pool must be properly electrically bonded to a reliable point of grounding.
- The junction box or the DC 12 volt or 24 volt low voltage transformer, should be located at least 300mm above the water level, at least 200mm above the ground level or pool deck level, and at least 1200mm from the edge of the pool.
- The distance between the light and the transformer must not exceed 30m (See Figure 2), the cables connecting must be at least  $6\text{mm}^2$ , and otherwise the light would not function properly.
- This underwater light must be installed in or on a flat wall of the pool, with the top of the lens not less than 450mm below the normal water level of the pool.
- To achieve synchronization, make sure a master switch is installed. (See Figure 3)

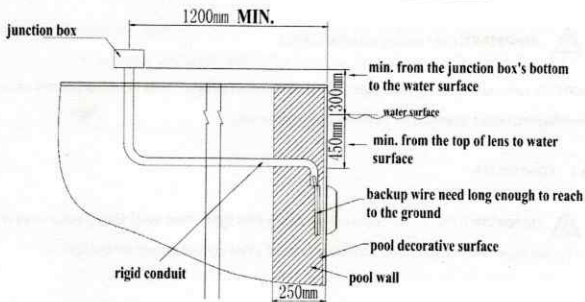


Figure 1

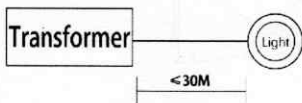


Figure 2

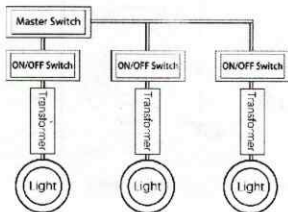


Figure 3

## 2. INSTALLATION OF THE UNDERWATER LIGHT

Obey all regulations in effect for preventing accidents.

**⚠ WARNING:** Use only the special pilot screw provided with this underwater light. This screw mounts and electrically grounds the mounting parts of the light. Or choose qualified 304# or better stainless steel pilot screw. Failure to do so may cause serious corrosion of the pilot screw and the light.

- The light must be installed on a flat surface of the pool. Place the mounting plate on the concrete wall and tighten it with 4 screws. The conduit must be put next to the mounting plate. (See Figure 4)
- Reserve at least 150mm of cable to coil around the back of the light. This 150mm of cable allows the light to be serviced after the pool is filled with water.
- Feed cable through the conduit to the junction box or low voltage transformer. (See Figure 5)
- The TOP sign on the light should be lined up with 12 o'clock position. If there's not a TOP sign, the screw hole on the face ring of the light should be lined up with 12 o'clock position. (See Figure 6)
- Hang the light onto the mounting plate and tighten the pilot screw. (See Figure 7)

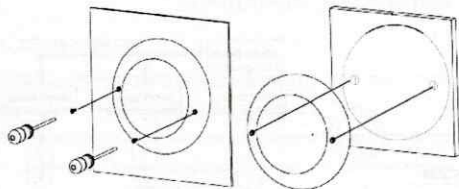


Figure 4 Figure 5

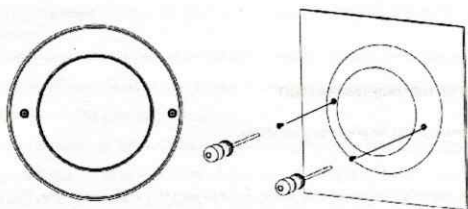


Figure 6 Figure 7

**⚠ WARNING:** Always disconnect the power to the pool light at the circuit breaker when installing the light. The light must be fully submerged in water before any check for proper operation after installing.

### 3. OPERATION NOTES

**NOTE:** The pool electrical system should be verified at least once every month with a pool and spa electrical qualification test kit. This inspection must be performed by trained and certified personnel.

**⚠ SAFETY WARNING:** Keep any person from contacting or stepping upon the light when it's ON in a pool unless the lens is extra adequately guarded. Otherwise it may cause serious injury to pool users or bystanders or damage to property due to the split of the lens.



**SAFETY WARNING:** Never operate this underwater light for more than 1 minute unless it is totally submerged in water. Without total submersion, the light could get extremely hot, which may result in serious burns or in breakage of the light or its lens. This may result in serious injury to pool users, installers, or bystanders or damage to property.

#### 4. TO OPERATE THE LIGHT

##### 4.1 WHITE ONLY, WARM WHITE ONLY, OR OTHER SINGLE COLOR LIGHTS

**NOTE:** To prevent risk of fire which could result in property damage, and to ensure optimum performance, do not exceed the load factor specified in the instruction provided by the transformer manufacturer.

WHITE ONLY or WARM WHITE ONLY, or any other single color lights are not dimmable, and are not compatible with dimmer switches or dimmer relays. These lights can be wired into a switch to manually turn ON/OFF the lights.

##### 4.2 RGB LIGHTS



**IMPORTANT:** Only applies external control.

**NOTE:** To synchronize several RGB lights to the same color, all lights must be wired into the same transformer, circuit or switch for synchronization to occur.

##### 4.3 CONTROLLER



**IMPORTANT:** This section only applies to the RGB lights. Pool users and operators can choose to (or not to) install one (or more) controller to build a fine control system for the lights.

**NOTE:** The specifications of the controller, especially the input voltage, must be well known by pool

users and installers before installation. Failure to do so may cause the injury to person and damage to both the light and controller.

## **5. MAINTENANCE, REPLACEMENT, WARRANTY**

**NOTE:** There is no maintenance required for this light. It is designed to be used only once, meaning that replacement is necessary if it becomes defective. The repairing is impossible.

**NOTE:** To replace the complete light, unfasten it from the bracket. Make sure the new light is in the same switch.

The warranty is limited to the first retail purchaser, it is not transferable, and does not apply to products that have been moved from their original installation sites. This warranty does not cover failures or malfunctions from improper installation and/or operation.

The manufacturer is not responsible in any circumstances for assembly, installation or start-up of any electric components which have been inserted or handled at locations other than its own premises.

The user of this underwater light should confirm the warranty period with the seller of this product. When there are any problems during the warranty period, the seller of this product should be the first person you should contact.