

PopBloom RL90

PopBloom RL90 LED Aquarium Light User Manual

Model: RL90

1. INTRODUCTION

The PopBloom RL90 LED Aquarium Light is designed for marine tanks, providing optimal lighting for corals, including SPS and LPS. This advanced lighting system features smart APP control, allowing for flexible programming and customization of light cycles. The RL90 is an upgraded model engineered for balanced PAR output and coverage, ensuring a healthy environment for your aquatic life.

Key features include:

- Smart-APP control for remote operation.
- Real daisy chain capability, controlling up to 10 panels simultaneously.
- Four independently programmable channels for diverse light spectrums.
- Efficient cooling system with quiet fans and aluminum heat sinks.
- Glare-proof recessed lens for uniform light distribution.




Figure 1: PopBloom RL90 LED Aquarium Light with arm mounting kit and smartphone app control.

2. SAFETY INFORMATION

- Ensure the power adapter and cords are kept dry and away from water. This product is not water resistant.
- Always unplug the light from the power source before performing any maintenance or cleaning.
- Do not operate the light if any part is damaged, especially the power cord or adapter.
- Keep out of reach of children.
- Ensure proper ventilation around the light to prevent overheating.

3. PACKAGE CONTENTS

Verify that all items listed below are included in your package:

- 1 x RL90 Light Unit
- 1 x DC Power Adaptor
- 1 x Arm Mounting Kits
- 1 x Power Cords
- 1 x User Manual (this document)

Figure 2: Contents of the RL90 package with arm mounting kit.

4. INSTALLATION (ARM MOUNTING)

The RL90 light comes with an adjustable arm mounting kit for easy installation on most rimmed or rimless tanks.

4.1 Arm Mounting Kit Components

Figure 3: Detailed diagram of the arm mounting kit. The adjustable length is 12-25cm, and the adjustable height is 20-35cm. Various mounting options for horizontal, rimless, and rimmed tanks are shown.

4.2 Installation Steps

1. Assemble the arm mounting kit according to the diagram, ensuring all screws are securely tightened.
2. Attach the mounting bracket to your aquarium tank. The kit supports various tank rim thicknesses (e.g., 2cm/0.8" and 4cm/1.6").
3. Adjust the arm's length and height to position the light unit over your tank at the desired distance from the water surface.
4. Securely attach the RL90 light unit to the arm mount.
5. Connect the DC power adaptor to the light unit and then plug the power cord into a suitable electrical outlet.

5. SMART-APP CONTROL SETUP

The RL90 light system is controlled via a smart application. Ensure you have a 2.4GHz Wi-Fi network available, as 5GHz networks are not supported.

5.1 App Download

Download the "Smart Life" app from your smartphone's app store.

Figure 4: Scan the QR code or search "Smart Life" in your app store to download. [Download Smart Life App](#)

5.2 Wi-Fi Connection

1. Ensure your smartphone is connected to a 2.4GHz Wi-Fi network.
2. Open the Smart Life app and register/log in.

3. Follow the in-app instructions to add a new device. The light should enter pairing mode automatically when first powered on. If not, consult the app for specific reset instructions for the device.
4. Once connected, you can control the light from anywhere with an internet connection.

6. OPERATING THE LIGHT (APP FUNCTIONS)

The Smart Life app provides extensive control over your RL90 light, including channel programming, natural simulations, and group control.

6.1 Control Methods Comparison

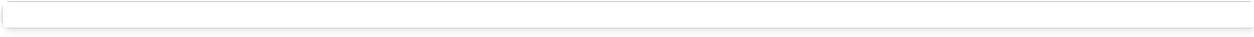


Figure 5: The RL90 (100W) uses Smart-APP control for comprehensive features, unlike remote-controlled models.

6.2 Channel Programming

The RL90 features 4 independently programmable channels, adjustable from 1% to 100% brightness. You can set up to 8 time-points for each channel with auto ramp-up and ramp-down functions.

- **Channel 1:** 10W 8000K White, for deep penetration.
- **Channel 2:** 5W Moon UV&Blue, for simulating natural moonlighting.
- **Channel 3:** 65W Reef Blue, for deep penetration and optimal coral (SPS/LPS) growth.
- **Channel 4:** 10W Cyan Blue.

6.3 Natural Simulation

The app allows for natural simulations including sunrise, sunset, lunar cycles, and four seasons. These features help create a dynamic and natural environment for your aquarium inhabitants.



Figure 6: App interface examples for programming, including acclimation, lightning, and lunar cycle settings.

6.4 Group Control (Daisy Chain)

The RL90 supports real daisy chain functionality, allowing one smart-APP system to control up to 10 light panels simultaneously. This is ideal for larger tanks requiring multiple light units.



Figure 7: Group control setup, where one phone can manage multiple RL90 lights.

7. TECHNICAL SPECIFICATIONS & PERFORMANCE

7.1 Light Output and Coverage

The RL90 features a 90W LED array, providing approximately 500 PAR at the water surface and 150 PAR at 60cm depth. It is recommended for 40-60cm (16-24 inch) hard and soft coral SPS/LPS tanks.



Figure 8: RL90 light specifications and tank size recommendations. For larger tanks, multiple RL90 units are suggested.

7.2 Blue Spectrum Optimization

The RL90 is optimized for a blue spectrum, beneficial for SPS and LPS corals. The homogeneous light distribution covers the tank effectively.



Figure 9: RL90 Blue Spectrum and PAR distribution. The graphs show the spectral output for each of the four channels.

7.3 Glare-proof Recessed Lens

The light features a glare-proof recessed lens design, ensuring homogeneous light with gentle shimmer. This design achieves over 90% optical efficiency and provides a diffuse exit surface for improved color blending, reaching depths of up to 80cm.



Figure 10: Glare-proof recessed lens design and its impact on reef coverage, minimizing shaded areas compared to other brands.

7.4 Efficient Cooling System

The RL90 incorporates quality cold forging heat sinks and smart cooling fans. This efficient cooling system extends the lifespan of the LEDs and operates quietly, contributing to 15% energy savings.

8. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your RL90 LED Aquarium Light.

- **Cleaning:** Periodically clean the light unit's exterior and lens with a soft, dry cloth. Ensure the light is unplugged before cleaning. Avoid using harsh chemicals or abrasive materials.
- **Fan Check:** Ensure the cooling fans are free from dust and debris to maintain efficient heat dissipation. Do not obstruct the fan vents.
- **Cable Inspection:** Regularly check power cords and connections for any signs of wear or damage. Replace any damaged components immediately.

9. TROUBLESHOOTING

If you encounter issues with your RL90 light, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Light does not turn on	No power, faulty connection, damaged power supply.	Check power cord and adapter connections. Ensure the outlet is functional. Verify the power supply is working.
Cannot connect to Wi-Fi / App control not working	Incorrect Wi-Fi band, weak signal, incorrect pairing process.	Ensure your router is broadcasting a 2.4GHz Wi-Fi signal. Move the light closer to the router. Re-attempt the pairing process as per app instructions. Contact support if using a WiFi6 router for specific setup guidance.

Problem	Possible Cause	Solution
Light is overheating	Obstructed ventilation, fan malfunction.	Ensure nothing is blocking the air vents. Clean any dust from the fans. If overheating persists, discontinue use and contact support.
Inconsistent light output	App programming error, loose connection.	Review your app programming schedule. Check all physical connections to the light unit.

10. PRODUCT SPECIFICATIONS

Model Name	RL90-1-A-US
Brand	PopBloom
Wattage	100 watts
Light Source Type	LED
Number of Light Sources	4 Channels
Light Color	White, Royal Blue, Blue, Purple (Cyan Blue)
Control Method	App (Smart Life)
Wi-Fi Frequency	2.4GHz Only
Material	Aluminum
Finish Type	Powder Coated
Product Dimensions	6.3"D x 4.7"W x 1.4"H
Item Weight	2 pounds
Average Life	50000 Hours
Water Resistance Level	Not Water Resistant
Mounting Type	Panel Mount (Arm Mounting Kit Included)

11. WARRANTY AND SUPPORT

PopBloom provides a warranty for its products. Based on customer feedback, the power supply may have an extended warranty of up to 3 years. For specific warranty details and claims, please refer to the official PopBloom website or contact their customer service.

For technical support, including assistance with Wi-Fi setup or any operational questions, please contact PopBloom customer service. If you are using a WiFi6 router, specific guidance may be available.

