

PopBloom RF90-H-4-US

PopBloom RL90 Full Spectrum LED Aquarium Light Instruction Manual

Model: RF90-H-4-US

1. PRODUCT OVERVIEW

The PopBloom RL90 Full Spectrum LED Aquarium Light is designed for marine reef tanks, providing optimal lighting for hard and soft corals (SPS/LPS). It features a full color spectrum, efficient cooling, and smart app control for customizable lighting schedules and intensity.

This manual provides detailed instructions for the installation, operation, and maintenance of your RL90 LED aquarium light system.

2. WHAT'S IN THE BOX

Verify that all components are present in your package:

- 4x RL90 Light Units
- 4x Hang Kits
- 4x Power Plugs
- 4x Power Supplies
- 1x User Manual

4 Lights, With Hang Kit



Figure 2.1: Package Contents (4 Lights with Hang Kit)

3. SPECIFICATIONS

Feature	Detail
Model Number	RF90-H-4-US
Color	White
Material	Aluminum
Light Source Type	Light Emitting Diode (LED)
Power Source	Corded Electric
Mounting Type	Hanging
LED Array Power (per light)	90W
PAR Value (Water Surface)	500
PAR Value (60cm depth)	150

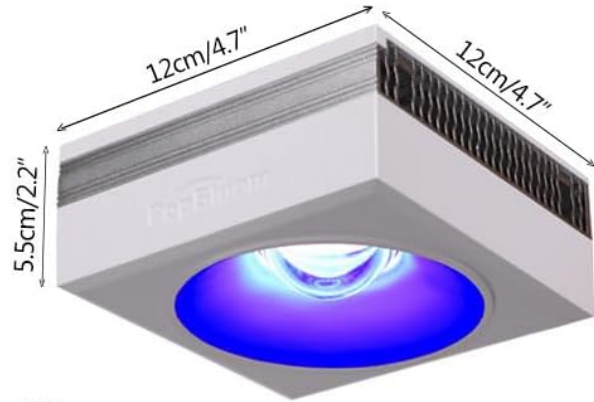
Channels	4 Dimmable and Programmable Channels
Dimensions (L x W x H)	4.7"L x 4.7"W x 2.2"H (12cm x 12cm x 5.5cm)

Specification for each light

90 W
LED Array

500 PAR
Water surface

150 PAR
60cm depth



4 Channels

10 W
8000K White

5 W
Moonlight

65 W
REEF GROW Blue

10 W
Growth Red

Recommendation

Size	1 Light	2 Light	3 Light	4 Light	5 Light	6 Light
recommended tank length	40-60cm 16-24inch	80-120cm 30-48inch	120-150cm 48-60inch	180-240cm 72-96inch	240-300cm 96-120cm	(300-360)x60 (120-150)x80
recommended tank width: 60cm						
max reach tank depth: 80cm						

Figure 3.1: RL90 Light Specifications and Channel Breakdown

RL90 WiFi

Smart. Group Control. Efficient

- 2025 newest aquarium reef LED light, the smart choice for SPS/LPS.
- Group-controlled by the phone / Internet, 12pcs lights at the same time freedom to control anytime and anywhere.

Suitable Tank Size	40-60CM 16-24inch	80-120CM 30-48inch	120-150CM 48-60inch	180-240CM 72-96inch
Qty:	1x RL90	2x RL90	3x RL90	4x RL90

Note: if want 2xRL90, make the order directly of



Dimension: 12x12x5.5cm | 4.7x4.7x2.2inch

90 W
LED array

500 PAR
water surface

150 PAR
60cm depth

Figure 3.2: RL90 WiFi Features and Tank Size Recommendations

4. SETUP AND INSTALLATION

4.1 Mounting Options

The PopBloom RL90 lights can be installed using a hang kit or an arm kit (sold separately). This package includes the hang kit.

4.1.1 Using the Hang Kit

Attach the hang kit to the top of the light unit. The light can then be suspended from the ceiling or mounted under a canopy/cover. Ensure the light is positioned 15-30cm above the water surface for optimal performance.



Figure 4.1: Hang Kit Installation

4.1.2 Other Mounting Options (Arm Kit, Pendant)

Other mounting options like the arm kit or pendant solution are available separately. The arm kit can be adjusted for tank widths of 12-25cm and heights of 20-35cm, suitable for rimless or rimmed tanks. The pendant solution allows hanging multiple RL90 units over larger tanks.

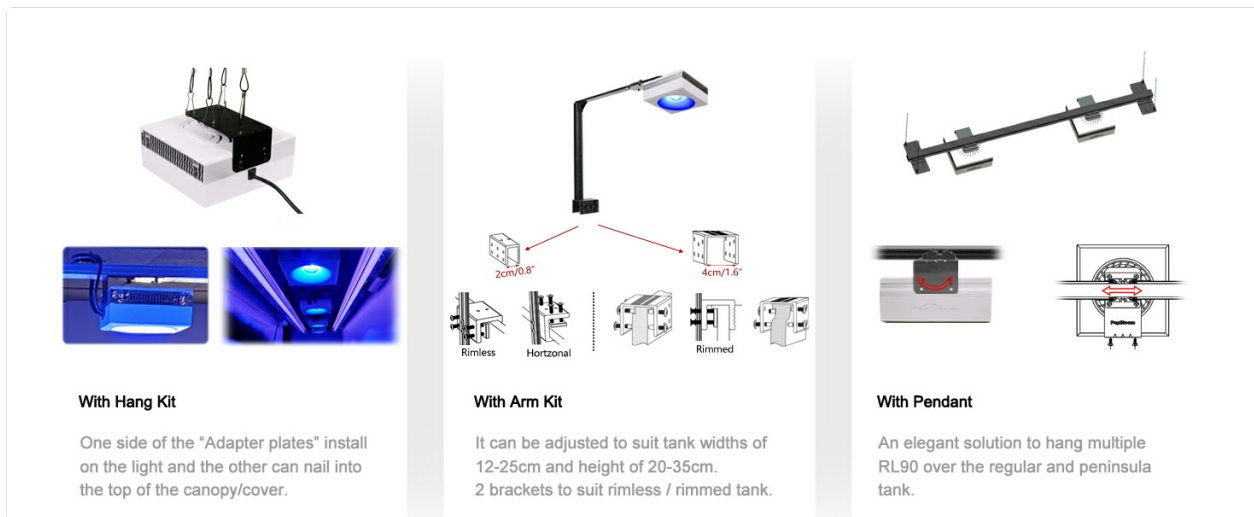


Figure 4.2: Mounting Options (Hang Kit, Arm Kit, Pendant)

4.2 Power Connection

Connect each RL90 light unit to its dedicated power supply and then to a power outlet. Ensure all connections are secure before powering on the units.

5. OPERATING INSTRUCTIONS: SMART APP CONTROL

The PopBloom RL90 lights are controlled via a smart application, allowing for flexible programming and adjustment.

5.1 App Download and Installation

1. Ensure your phone's Wi-Fi and Bluetooth are turned on.
2. Open the "Smart Life" app and tap "Add Device". The app will automatically search for nearby PopBloom lamps.
3. Select the discovered lamps and enter your Wi-Fi network information. Double-check the password for accuracy.
4. Wait for the lamps to connect. Once connected, you can name each lamp for easy identification (e.g., "left", "right").

Group Control System

24x24 inch

60x24 inch

WiFi

APP control anytime & anywhere

Smart Life

- scan to download the APP
- search "Smart Life" in APP store to download

		Tank Length					
		60cm 24"	90cm 36"	120cm 48"	150cm 60"	180cm 72"	240cm 96"
Tank Width	60cm 24"	1x RL90	2x RL90	2x RL90	3x RL90	3x RL90	4x RL90
	80cm 30"	1x RL90	2x RL90	3x RL90	3x RL90	4x RL90	5x RL90

Available on the **App Store**

GET IT ON **Google play**

Figure 5.2: Easy Setup Steps for Smart App Control

You can also find the app at: <https://smartapp.tuya.com/smartlife>

5.2 Group Control

To control multiple lights simultaneously, create a group within the app:

1. From the device list, select one of your connected lights.
2. Navigate to the settings or options menu (often represented by three dots or a gear icon).
3. Select "Create Group" and choose the lights you wish to include in the group.
4. Name your group (e.g., "Main Tank Lights") and save. You can now control all lights in the group together.

5.3 Channel Adjustment and Programming

The RL90 features 4 dimmable and programmable channels, allowing precise control over light intensity and spectrum. These channels can be operated together or independently.

- **Channel 1:** 10W 8000K White
- **Channel 2:** 5W Moonlight
- **Channel 3:** 65W REEF GROW Blue

- **Channel 4:** 10W Growth Red

The app provides various programming options, including:

- Manual Quick Set: Adjust individual channel intensity with sliders.
- Custom Programs: Create detailed daily schedules with varying intensities for each channel to simulate natural light cycles (sunrise, sunset, lunar cycle).
- Special Effects: Simulate lightning or other weather conditions.



Figure 5.3: Smart App Programming Interface

5.4 Video Tutorial: Smart App Programming

For a visual guide on how to program your PopBloom RL90 smart Wi-Fi light using the app, please watch the following video:

Your browser does not support the video tag.

Video 5.1: How to program the smart Wi-Fi light. This video demonstrates the step-by-step process of connecting the light to the app, creating groups, and adjusting individual channels and programming schedules.

6. LIGHT PERFORMANCE AND FEATURES

6.1 Full Spectrum Output

The RL90 provides a full color spectrum, including popular blue, red, green, and Violet+UV wavelengths. This spectrum is designed to promote optimal coral growth and enhance coloration, creating a natural shimmer effect in the aquarium.

Full Spectrum

Power Consumption

100 watts

Maximum Spread

24"x24"

LED Channels

4

PAR@Water Surface

500

PAR@24" Depth

150

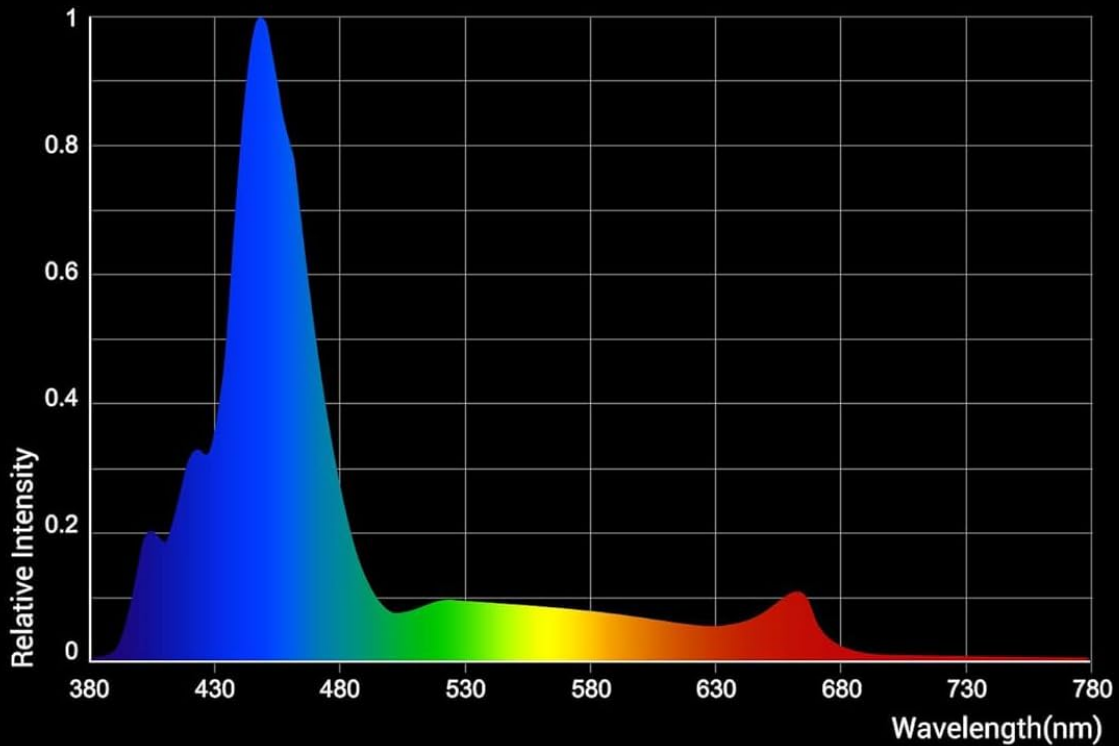


Figure 6.1: Full Spectrum Wavelength Distribution



Figure 6.2: RL90 Full Spectrum for Marine Coral

6.2 PAR Value and Distribution

The RL90 is scientifically engineered to balance PAR/Lumen output and coverage, suitable for tanks up to 30 inches deep. It provides ideal PAR values throughout the aquarium, minimizing hotspots and ensuring uniform

illumination for coral growth.

PAR Distribution

PAR* measured at a distance of 24 inch below the light in open air 24"x24" area.

Intensity: 100%

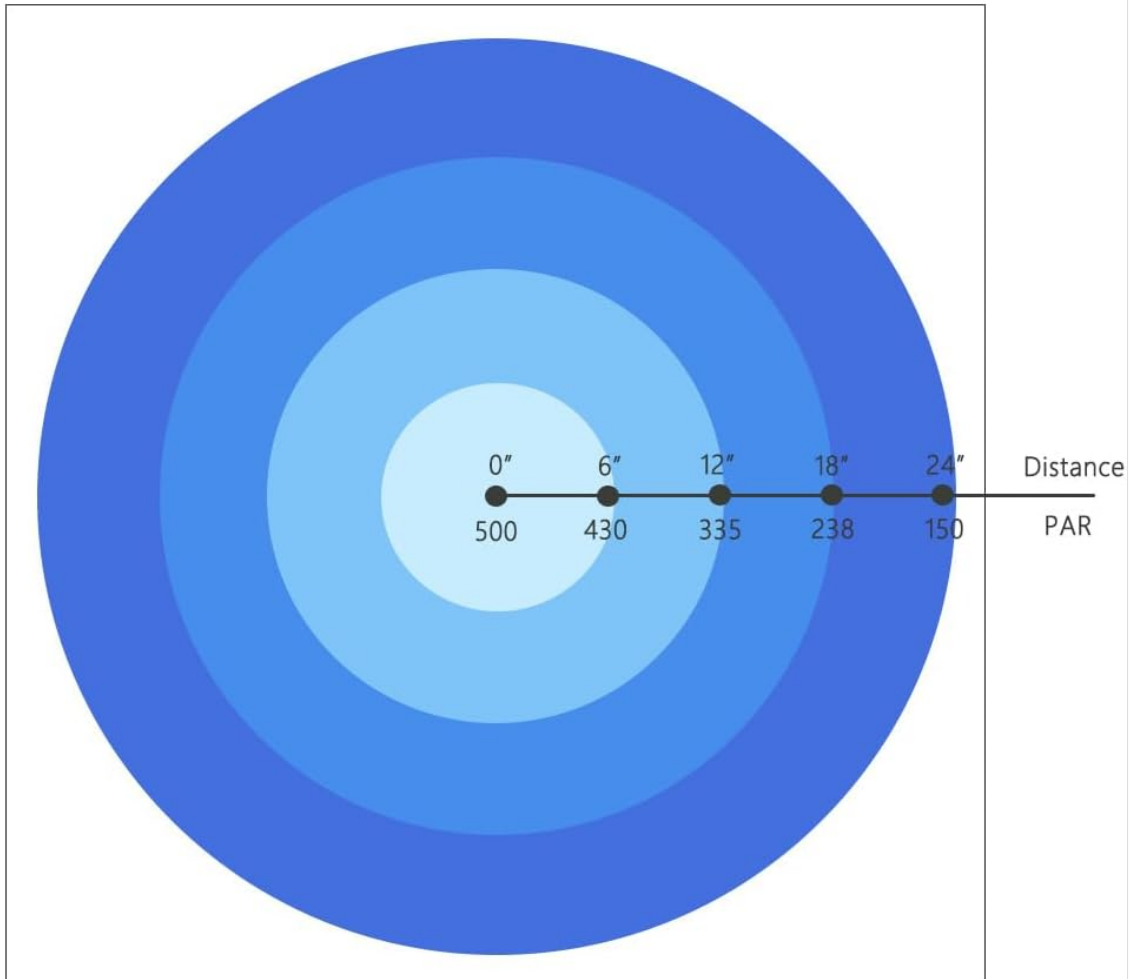


Figure 6.3: PAR Distribution

GET MORE



HD Power

No longer are you limited to using a fixed amount of power per channel, the RL90 Full Spectrum light dynamically adjusts power available to each color, borrowing power from the color you're not utilizing. Giving you the most vivid spectrum your tank ever seen.

Figure 6.4: Reef-healthy PAR Distribution

6.3 Glare-proof Recessed Lens and HD Power

The RL90 features a glare-proof recessed lens design, providing homogeneous light with a gentle shimmer. This design helps achieve a balance of power and spread, reaching up to 80cm deep with high uniformity. The HD Power feature dynamically adjusts power across channels, borrowing power from unused colors to provide the most vivid spectrum.

The image displays the 'Smart-APP Light' interface on a smartphone. The main screen shows a 'PopBloom' control panel with four channels (Ch1, Ch2, Ch3, Ch4) and their respective intensity levels (5%, 85%, 100%, 10%). A graph below the channels shows the intensity of each channel over time. The app also features various preset programs such as 'Lightning', 'Lunar cycle', 'Acclimation', and 'Tropical spring'. A hand is shown holding the phone, demonstrating the app's use.

Smart-APP Light

Powerful Function+User Friendly

> Easy Setup --- 4 steps <

- 1 open wifi&bluetooth**
Screenshot of the iOS Control Panel showing Wi-Fi and Bluetooth turned on.
- 2 open APP to search light**
Screenshot of the app's 'All Devices' screen with an 'Add Device' button.
- 3 connect to home Wi-Fi**
Screenshot of the 'Enter Wi-Fi Information' screen. It shows 'Your home 2.4G wifi' selected and a password field with asterisks. A note below says 'Note: it is your home wifi password'.
- 4 connect to light**
Screenshot of the 'Add Device' screen showing 'PopBloom1' added successfully.

At the bottom of the image, there are icons for iOS, Android, WiFi, and Bluetooth.

Figure 6.5: Glare-proof Recessed Lens



Figure 6.6: HD Power Lens Detail

7. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your PopBloom RL90 LED aquarium light.

- **Cleaning:** Periodically wipe the light unit and lens with a soft, damp cloth to remove salt creep, dust, and water spots. Ensure the unit is unplugged before cleaning. Do not use abrasive cleaners or solvents.
- **Cooling System:** The RL90 uses a smart cooling fan and cold forging heat sink. Ensure the fan vents are not obstructed to maintain efficient cooling and extend LED lifespan.
- **Power Connections:** Regularly check power plugs and connections for any signs of wear or corrosion.

8. TROUBLESHOOTING

If you encounter issues with your PopBloom RL90 LED aquarium light, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
Light not turning on	No power supply; loose connection; faulty power adapter.	Check if the power plug is securely connected to the outlet and the light unit. Verify the power adapter is functioning. Try a different outlet.
App cannot connect to light	Wi-Fi/Bluetooth off; incorrect Wi-Fi password; light not in pairing mode; app issues.	Ensure phone Wi-Fi and Bluetooth are enabled. Re-enter Wi-Fi password carefully. Power cycle the light unit to re-enter pairing mode. Restart the app. Ensure your Wi-Fi is 2.4GHz.
Inconsistent light output	Incorrect app settings; dust/salt creep on lens; cooling issues.	Check app programming for schedules or manual settings. Clean the light lens. Ensure cooling vents are clear.

Light overheating	Obstructed cooling vents; fan malfunction.	Clear any obstructions from the cooling vents. Contact support if the fan is not operating.
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If the problem persists after trying these steps, please contact PopBloom customer support for further assistance.

9. WARRANTY AND SUPPORT

9.1 Manufacturer Warranty

The PopBloom RL90 LED Aquarium Light comes with a **3-year manufacturer warranty**. Please retain your proof of purchase for warranty claims.

9.2 Customer Support

For any questions, technical support, or warranty inquiries, please contact PopBloom customer service through the retailer where you purchased the product or visit the official PopBloom website for contact information.