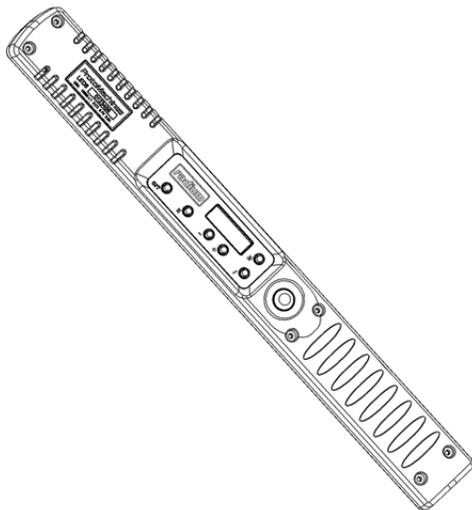




Operating / Safety Instructions



ProtoMachines

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Thank you for choosing the ProtoMachines RADIUM full color LED light. It is the result of years of research and development and represents the cutting edge of full color LED technology. Please review these instructions carefully to familiarize yourself with the design and operation of this device.

SPECIFICATIONS:

Model number:	LED6
Input voltage:	3.7VDC
Input power:	6 watts
Ambient temperature:	32°F - 104°F ⁽¹⁾ (0°C - 40°C)
Humidity:	85% or less
Weight:	0.35lb (160g)
Dimensions:	12" x 1.3" x 0.9" LWH (300 x 34 x 24mm)
Power source:	18650 li-ion battery

o Specifications subject to change without notice.
o Designated trademarks and brands are the property of their respective owners.
1. Duty cycle may be reduced while operating in hot environments.

IMPORTANT SAFETY INSTRUCTIONS:



WARNING:

When using any battery operated device, basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injury. Please read this instruction manual carefully and understand it fully before use.

1. Keep out of reach of children. This is not a toy.
2. Do not expose device to impacts or strong vibration. Do not crush. The device may malfunction if damaged. Remove batteries and discontinue use.
3. Keep dry. Do not immerse or expose to water. If water gets inside the device, promptly remove the batteries.
4. Keep dust, debris and foreign objects out of the controls and vents.
5. Do not disassemble or modify this device. There are no user serviceable parts inside.
6. The device may become hot during usage. Make sure the vents are not obstructed and maintain adequate airflow around the device at all times.
7. Not intended for use as the sole source of illumination in critical survival or hazardous environments. Always carry a backup light source.
8. To prevent accidents or excessive battery drain, always remove the batteries after use, before storage or transport.
9. Observe all safety rules and regulations regarding the handling and transport of lithium ion batteries.
10. If any problem develops, consult your reseller or ProtoMachines for assistance.



WARNING:

This is powerful LED light source. Always use common sense when operating this product.

- Do not stare directly into the beam.
- Do not aim at your eyes, the eyes of other people or animals. Prolonged exposure may result in injury or blindness.

Please do not use this product if you do not fully understand these instructions and warnings.

LIMITED WARRANTY

Before using this product, please read this warranty carefully. By using your RADIUM LED, you agree to the terms and conditions of this warranty. If you do not accept this warranty, do not use your RADIUM LED. ProtoMachines will not be liable for any indirect, incidental, or punitive damages arising from use of this product.

The RADIUM LED is warranted to the original purchaser to be free from manufacturing and component defects for one (1) year from the date of purchase. This limited warranty is the sole and exclusive remedy, offered in lieu

of all other warranties, expressed or implied. ProtoMachines LLC has sole discretion to determine manufacturer's defects and will (at its option) repair or replace it, or refund the purchase price. Repair may use new or refurbished parts. Replacement may be with a new or refurbished unit.

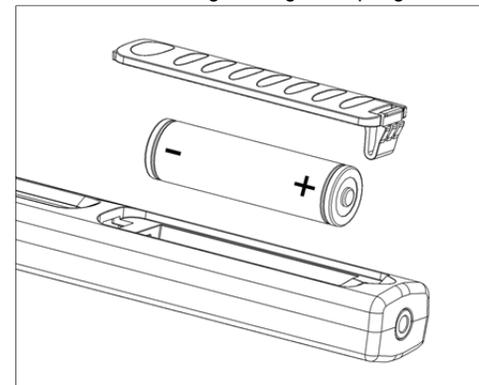
This warranty does not cover normal wear and tear, damage caused by accident, abuse, misuse, modification of the product, or external causes such as acts of nature, or damage to or from any non-ProtoMachines product used in conjunction with this product. This warranty is void if the product is disassembled or used for commercial and/or rental purposes.

OPERATION

Installing the batteries

- The RADIUM LED light is powered by one 18650 li-ion battery.
- Always use button top PCB protected cells capable of at least 2.5A discharge rate.
- Always switch the light off before inserting or removing the batteries.

1. Remove battery door.
2. Insert one (1) 18650 li-ion battery into the rear battery compartment as shown. The positive terminal will face the ¼-20 screw mount, while the negative terminal will be facing the negative spring.

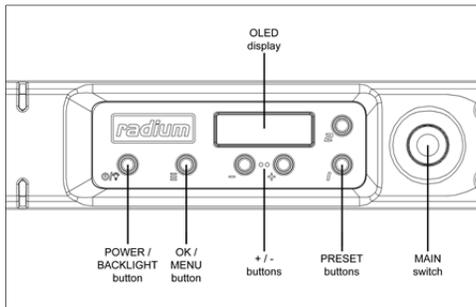


3. Reinstall the battery door and make sure the tab locks back into place.

Tripod socket

The RADIUM LED incorporates an industry standard tripod socket in its base for use with ¼-20 threaded mounts. It is intended to support the weight of the device. Thread engagement should not exceed 0.25" (6.35mm) depth max. Do not overtighten.

User controls



Switching device On/Off

Make sure batteries with adequate charge are installed. To switch OFF, press and hold the **POWER/BACKLIGHT** button for 3-4 seconds until the device switches off. To switch ON, press and hold the **POWER/BACKLIGHT** button for 3-4 seconds until the device switches on.

Sleep mode

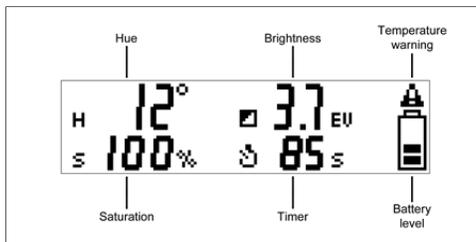
The LED light will automatically enter Sleep Mode after being inactive for a few minutes. Pressing the **MAIN** switch will wake the LED light out of Sleep Mode.

Switching LED output On/Off

Make sure batteries with adequate charge are installed. Press the **MAIN** switch once to turn the LED output on. Press the **MAIN** switch again to turn the LED output off.

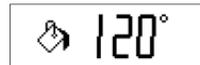
Home Screen

The Home Screen displays a snapshot of the LED light's current settings and status.

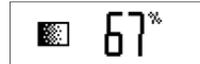


Adjusting the active settings

To change the active color settings, press the **OK/Menu** button from the Home screen. This will cycle through the menus available for the current color mode. You may use the **+/-** buttons to adjust the current setting, or the **OK/Menu** button to accept the setting.



Adjust hue over 0-359° range in HSB color space.



Adjust saturation over 0-100% range in HSB color space.



Set output power over 1-5 range in 1/10th stop increments.



Adjust simulated white balance from 2500K to 9500K.



Adjust hue cycling rate during auto hue cycle mode.



Sets exposure timer in 1 second increments or '----' to disable.

NOTE - the new timer value will not become active until the next time the output is switched on using the POWER switch.

Color mode

Press and hold the **OK/Menu** button until color mode selection menu is displayed. Use the **+/-** and **OK/Menu** buttons to make your selection.

HSB – Adjust hue over 360° range and saturation over a 0-100% range.

Hue cycle – Hue cycled automatically at a tunable rate whenever LED output is switched on.

Hue (RAW) – Maximize light output for general illumination. Not balanced for photo/video use.

White – Simulated white balance output, adjustable from 2500K to 9500K.

Recalling presets

The **PRESET** buttons can be used to recall a combination of hue, saturation, power level and exposure duration. The **PRESET** buttons operate in a similar fashion to presets on a car radio.

Presets 1 and 2 may be retrieved by a single press to their numbered buttons, while presets 3 and 4 may be retrieved with a double-press to buttons **1** & **2** respectively. For example, button **1** will retrieve preset 1 if single pressed and preset 3 if double-pressed.

Storing presets

Once you have tuned your desired color/power/timer settings, press and hold the appropriate **PRESET** button until the preset save menu is displayed. The display will alternate between "SINGLE press" and "DOUBLE press". Release the **PRESET** button when the desired setting is displayed.

Backlight operation

The backlight may be temporarily disabled by pressing the **BACKLIGHT** button. Pressing it again toggles it back on. The backlight will turn off automatically when the LED light enters Sleep mode. Manually toggling the backlight will not trigger sleep mode nor extend battery life noticeably.

Battery level indicator

The battery level icon will give an estimation of remaining battery life. If the level meter is low or blinking, replace depleted battery with a freshly charged one.

Temperature warning indicator

The temperature warning indicator may be displayed if the ambient temperature is too high or if the LED light has been operated continuously for long periods of time. If the temperature limit is exceeded, the LED light will enter shutdown mode to prevent further damage. This is indicated by a blinking temperature warning icon.

Please wait for the LED light to cool before resuming use. To prevent overheating, make sure the vents are clear of all obstructions and always maintain adequate airflow around the LED light. Using a slightly lower power setting with a longer exposure time may also help.

Restore to factory defaults

To reset settings to factory defaults, remove the battery and then re-install it while holding down the **MAIN** switch until the "Reset settings" option is displayed. Use the **+/-** and **OK/Menu** buttons to make your selection.

CARE AND STORAGE:

Cleaning

Wipe the body of the **RADIUM** LED gently with a soft dry cloth to remove most dust and fingerprints. For persistent dirt, clean the surface with a soft cloth slightly moistened with water, then wipe the surface with a dry cloth.

To clean the LCD screen or front lens, wipe the surface lightly with a soft dry cloth only. Do not apply pressure.

Do not expose to organic solvents, oils or corrosive chemicals.

Storage

When the LED light will not be used for an extended period of time, remove the batteries and store it in a cool, dry area away from direct sunlight. Do not store your LED light near flammable or corrosive chemicals, near strong electromagnetic fields, or in temperatures above 104°F (40°C) or below 32°F (0°C).