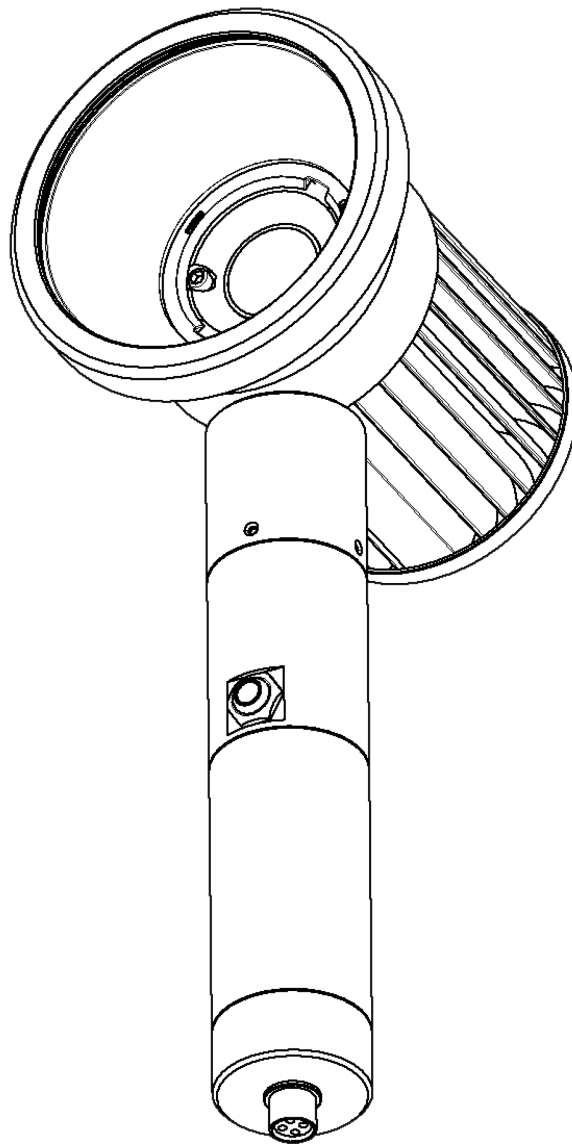


Matrix Light ML-SG4K LED Light

User Manual

English



••• Contents •••

ABOUT PRODUCT

Advantages	4
Safety and Warnings	6

PRODUCT FEATURES

Product and Accessories	11
-------------------------------	----

NAME AND FUNCTION OF EACH PART

LED Light	12
Battery and Power Cable	13

CONTROL AND USAGE

Control and Usage	14
Battery Charging and Usage	15
Diffuser Usage	16

TROUBLESHOOTING

Check Points	17
--------------------	----

WARRANTY, STORAGE INSTRUCTIONS & SPECIFICATIONS

Warranty	18
Storage Instructions	18
Specifications	19

- Before using this product carefully read this manual.
- This product is subject to change without notice in advance for improved performance.

©2016 Matrix Light

Matrix Light, All rights reserved.

Under the copyright laws, this manual may not be copied, in whole or in part, without the written consent of Matrix Light.

••• ABOUT PRODUCT

Advantages •••

All-Round Play LED Sun Gun Light

Matrix Light's ML-SG4K LED Sun Gun Light is a Portable Spot Light that will perfectly support any news gathering situation. With a maximum brightness of 4,750lm, reliable waterproofing, and excellent portability, the ML-SG4K LED Sun Gun Light is the superior choice. The ML-SG4K LED Sun Gun Light is an all-round light system, meaning it's not only for news gathering but also for any shooting situation. As such it possesses none of the halogen lamp's weakness such as low luminance efficiency and short battery life. The ML-BA48W Li-ion Battery provided with the SG4K LED Sun Gun Light, is the waterproof and high-efficient power source that allows the ML-SG4K LED Sun Gun Light to run for more than two hours in any weather conditions.

Electronic Dimming Control and Convenient Design

The Dimming controller located on the ML-SG4K LED Sun Gun Light's handle allows users to achieve the perfect brightness in 10% increments from 150lm to 4,750lm. Also the handle is detachable from the light body, maximizing its convenience.

Convenient Indicating System

The power button on the ML-SG4K LED Sun Gun Light's handle acts as an indicator LED as well indicating whether the light is on for off and the brightness control state.



Also, five power level indicator LED on the battery allows users to check the battery level conveniently.

Solid Body & Precise Micom Control








ML-SG4K LED Light's aluminum body is lightweight yet durable, and acts as an excellent heat sink, maximizing durability and lifetime. Also, the sophisticated micom controller promises the ML-SG4K LED Light to be the most advanced LED light providing users precise light control and the best quality.

Safety and Warnings ...

Before using the product, please check the details below.

Safety Icons		
Icon	Name	Function
	Warning	This icon indicates potentially hazardous actions and situations, which, if not avoided, could result in death or serious injury.
	Caution	This icon indicates potentially hazardous actions and situations, which, if not avoided, could result in personal injury or property damage.

Safety tips

-  Please carefully read the safety tips before using the product. ► Page 5~9
-  Product drawings on this manual and the actual product may differ slightly.
-  Please refer to Troubleshooting, before requesting for service. ► Page 15~16
-  Service charges are applicable for a non-defective product received by us, even within the warranty period.
-  Injury or damage caused by violating instructions in this manual is solely the responsibility of the user.
-  Please check the performance of your light before an important filming.
-  To maintain the performance and maximize the lifetime of your battery and light, we recommend using them at least once a month.

/// Safety and Warnings about Battery Charger

- ⚠ Avoid bending and/or pulling on the power cord of the charger unnecessarily, or placing heavy objects on the cord. Doing so can cause an electric shock and/or a fire.
- ⚠ Plug the charger into the power outlet firmly. Incomplete connections can cause an electrical fire.
- ⚠ Never use a damaged power cord, a damaged plug, or a loose electrical outlet. Using any of the things listed above can cause an electric shock and/or a fire.
- ⚠ Never handle the power plug with wet hands. Doing so can cause an electric shock.
- ⚠ Do not place the power cord near a heat source. Heat can damage insulation on the wires which may cause a fire and/or an electric shock.
- ⚠ Do not use multiple power plugs in one outlet at the same time. Doing so may lead to overheating and may cause a fire.

/// Safety and Warnings About Battery

- ⚠ Never dismantle or short out the battery. Do not mix with other batteries. Do not charge battery improperly. Doing any of the above may cause a fire and/or an explosion.
- ⚠ When battery warning lamp is blinking, charge the battery immediately. Excessive charging and/or discharging can shorten the life of battery and can cause mechanical malfunctions.
- ⚠ Avoid shock and impact on the battery. Neglecting to do so may cause breakdown leading to a fire and/or an explosion.
- ⚠ Do not place battery in areas with high-temperatures and high humidity. Doing so may cause mechanical malfunction, a fire and/or an explosion.
- ⚠ Please exclusively use the included charger and power connector when charging and lighting. Using non-standard parts may cause mechanical malfunctions, fires and/or explosions.

- ⚠ If you detect strange noise, burning smells or smoke during charging, unplug the power immediately and contact a service center. Neglecting to do so may cause a fire and/or an explosion.
- ⚠ Never put battery into a fire or expose to high temperature. Doing so may cause overheating, a fire and/or an explosion.
- ⚠ Please exclusively use the included charger. Using other chargers can cause overheating and/or explosions.
- ⚠ Do not store or carry a battery together with metal products such as necklaces or hairpins. Doing so may create a short and lead to overheating and/or explosion.
- ⚠ If your eyes come in contact with chemicals leaked out of the battery, wash them immediately with clean water and seek medical attention. If left unwashed the chemicals will cause injury to the eyes.
- ⚠ If your skin or clothing comes in contact with chemicals leaked out of the battery, wash it immediately with clean water. If left unwashed the chemicals will cause injury to the skin and/or damage the clothing.
- ⚠ Do not dismantle the battery case nor damage any parts. Do not use the battery without a case or in a broken case. Doing so may cause overheating and/or an explosion.
- ⚠ If the battery does not complete charging after a prolonged period of time, unplug it immediately. Neglecting to do so may cause overheating and/or an explosion.
- ⚠ Do not wet the battery. Doing so may cause overheating and/or an explosion.
- ⚠ Separate the battery from the device after use. Neglecting to do so may result in overheating or battery fluid leakage.
- 👉 Please discard batteries in accordance with the regulations of the local government after covering the electrical contacts with tape, etc.

/// Safety and Warnings About Light Installation / Maintenance

- ⚠ Do not install in the places with excess oil, smoke, dampness, dust, or rainwater.
- ⚠ If the inside of the device is exposed to oil or dampness, the oil for dampness may cause an electrical shock and/or a fire.
- ⚠ Do not switch on the light close to the eyes on people or animals. Doing so can damage their vision. Be especially careful when filming infants not to point the light directly at their eyes and keep the light at least 2 meters away and always apply the diffuser(ML-DF3).
- ⚠ Do not switch on the light towards vehicle operators. Doing so can distract them which may lead to an accident.
- ⚠ Do not block the front panel or vent of the light. Doing so will degrade the life of LED module by raising the internal temperature and may cause a fire.
- ⚠ Use only designated batteries as the power source. Using other power equipment can cause malfunctions and creates risk of a fire occurring.
- ⚠ After using the light for five or more minutes, do not put your hands on the light for a long time. Doing so you may get a low-temperature burn. Please handle the light after it cools down in the case of overheating.
- ⚠ In case of water damage or case damage, turn off the power and unplug the light. Do not attempt to power on the light again as it may cause an electrical shock and/or fire. Please contact a service center.
- ⚠ Do not dismantle and/or modify the light. Doing so can cause an electric shock and a fire hazard. If in need of repair, call a service center.
- ⚠ Do not store or use explosive sprays or flammable substances near the light. Doing so can create an explosion and is a fire hazard.
- ⚠ Do not insert metal or flammable substances such as chopsticks, wires, gimlets, paper, or matches into cooling vents or DC Power jack. Doing

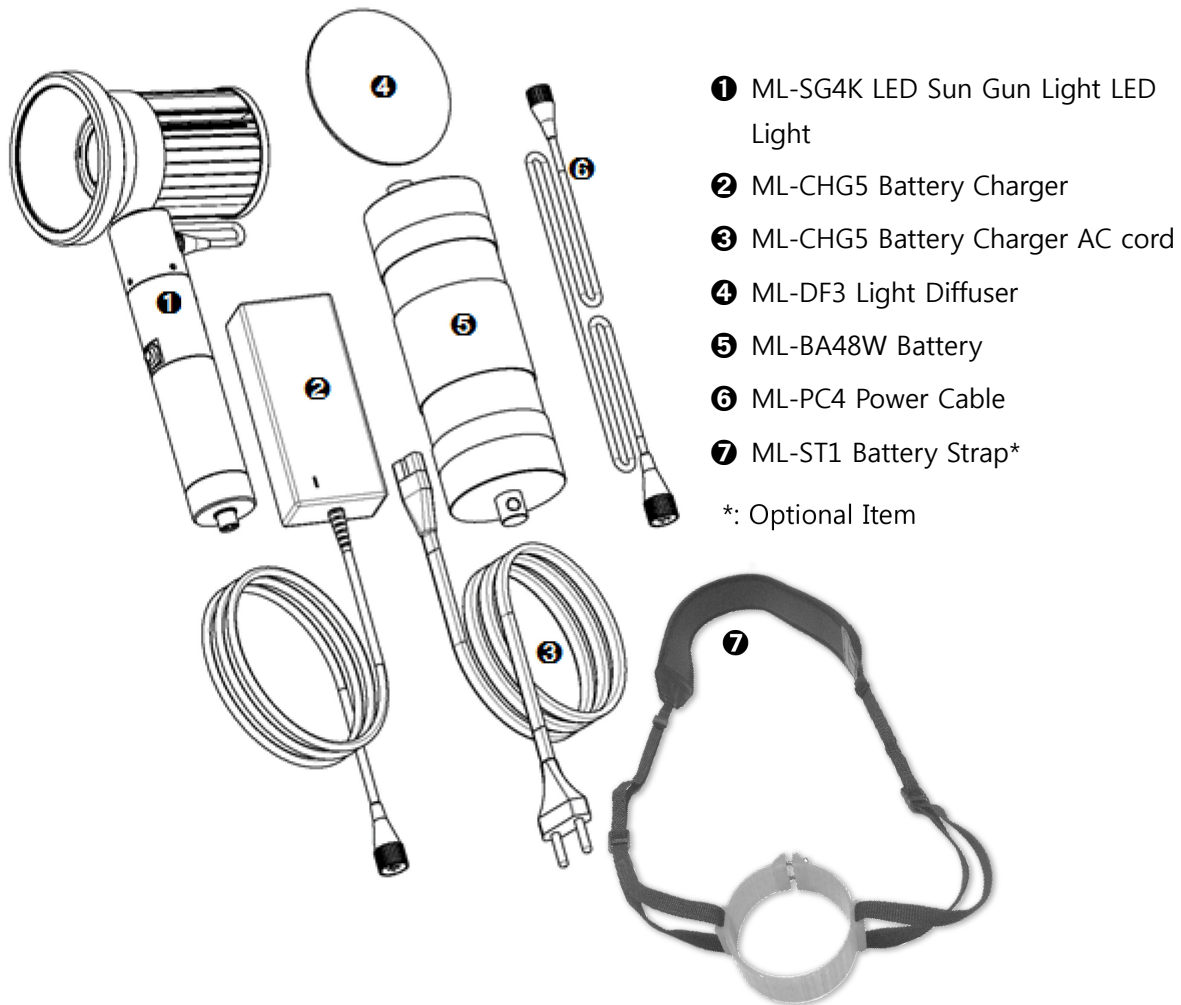
so can cause electric shock and a fire. If any foreign matter enters the light casing, first turn off power, unplug the light, and contact a service center.

- ⚠ Avoid places with high humidity and extreme temperature changes. Extreme temperature changes and humidity can cause mechanical malfunctions and electric shocks. Using the product outdoor in storms can cause mechanical malfunctions and electric shocks.
- ⚠ Do not clean with benzene or paint thinner. Doing so will damage the LED light.
- ⚠ Keep small parts out of reach of children. If they swallowed any part, please consult a doctor immediately.
- ⚠ Do not touch the LED Light with wet hands. Doing so can cause an electric shock.
- 👤 Store in a well-ventilated area after use.

••• Product Features

Product and Accessories •••

Before using the product, make sure that you received all accessories. Depending on the product kit, parts and accessories may be different.



- You can purchase all accessories at dealer shop or Matrix Light customer center.
- Revision of the manual is available for download from Matrix Light home page (www.matrixlight.com).
- Please use only accessories (battery, power supplies, etc.) designated by Matrix Light.

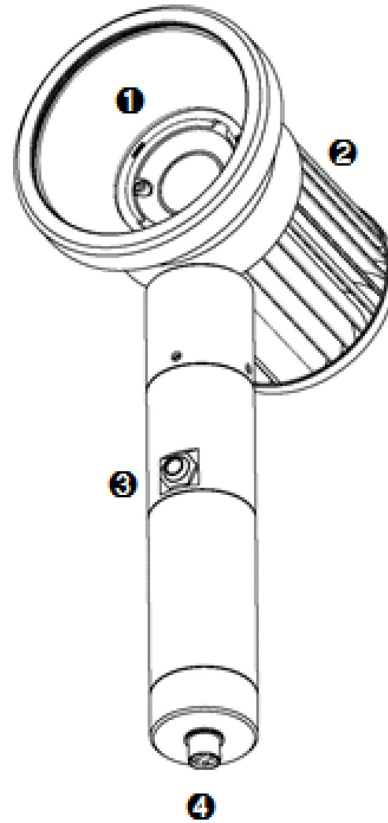
Matrix Light is not responsible for malfunction or reduced life of the light from using unauthorized accessories.

... THE NAME AND FUNCTION OF EACH PART

LED Light ...

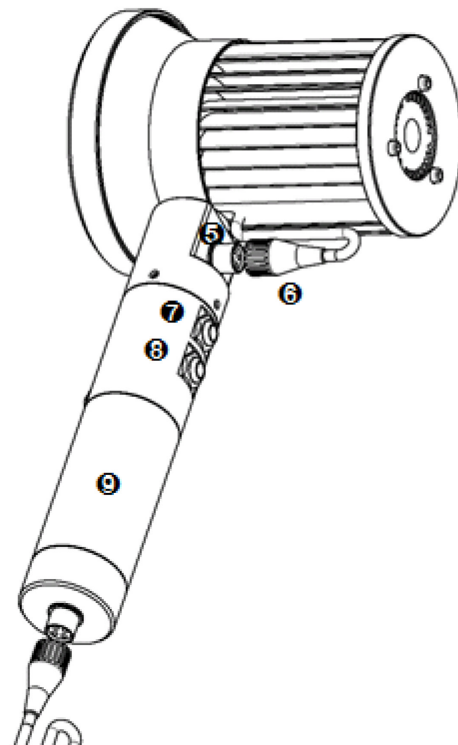
[Front & Bottom Side]

- ❶ ML-SG4K LED Sun Gun Light LED reflector
- ❷ Heatsink
- ❸ Power Button
- ❹ DC-IN Connector

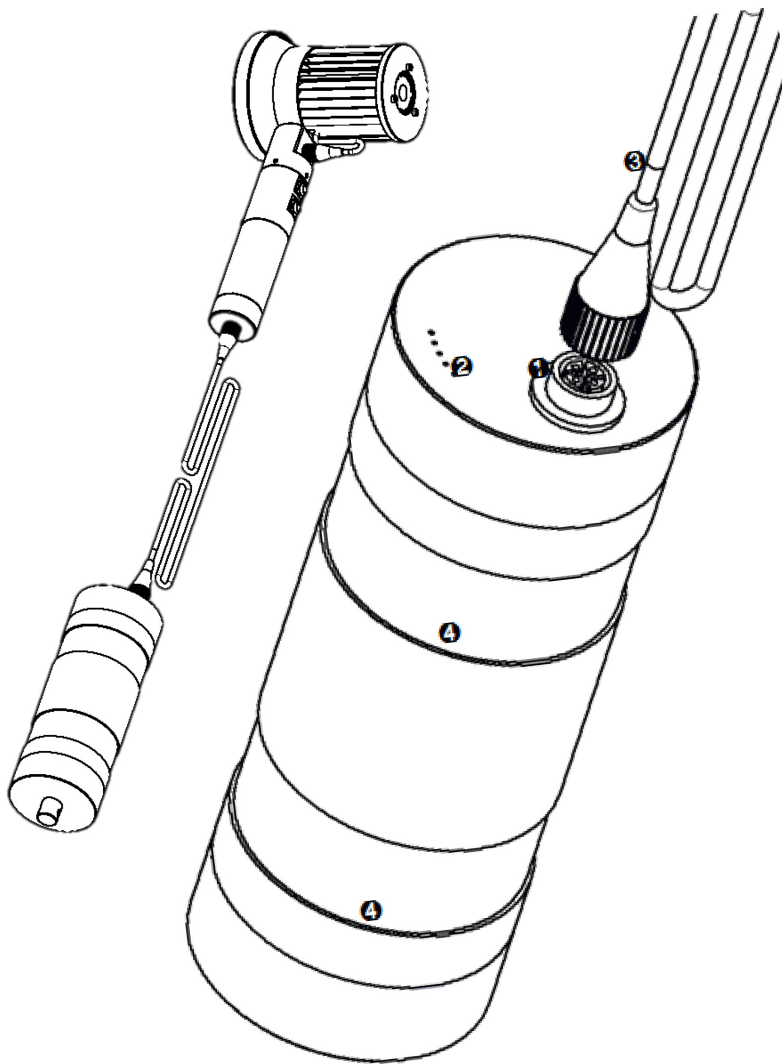


[Back Side]

- ❺ DC-Out Connector (Connect to LED Light)
- ❻ LED Light Power Connector
- ❼ Dimming Control Button (Up)
- ❽ Dimming Control Button (Down)
- ❾ Hand Grip



Battery and Power Cable ...



- ❶ DC-OUT Connector
- ❷ Battery indicator
- ❸ ML-PC4 Power Cable
- ❹ Groove for ML-ST1 Battery Strap

* ML-BA48W Battery with ML-ST1 Battery Strap



••• CONTROL AND USAGE

Control and Usage •••

1. Power ON/OFF & indicator LED

- Press once to turn product on, press again to turn off
- Power button indicator LED becomes red when the light is connected with the battery, indicating it is ready, and the LED turns off when the power is on.

2. Dimming control button & indicator LED

- Press upper button to increase brightness by 10%, and press lower button to decrease by 10%
- Upon pressing the button, the indicator LED blinks in blue.
- Keep pressing the upper or the lower button to adjust brightness quickly.

3. Previous settings

- When turning on the light, the previously used brightness comes on.

4. Battery level warning indicator

- When the battery level drops below 10%, warning indicators blink and also indicators of the dimming buttons blink as well to alert users to change the battery.

5. Power Button Locking

- Press the dimming down button and the power button for 3 seconds. Then the power button is locked. In this locking mode, the power button's indicator LED blinks continuously. (In this mode you can't turn on the LED

light.)

- To unlock the power button, press dimming up button and power button for 3 seconds.
- This function prevents the product from accidentally turning on, conserving battery life and preventing the product from damage caused by overheating.

⚠ After using in case of rain, please wipe the light and battery with a dry cloth.

⚠ In case of immersion in the sea waters, please rinse the light and battery with clean water and wipe with a dry cloth.

Battery Charging and Usage ●●●

1. Charging the battery

- ML-BA48W Li-ion battery must be charged only by the designated battery charger (ML-CHG5). Using other chargers can damage the battery and is an explosion hazard.
- When charging the battery the charger's indicator turns red, and when fully charged, the indicator turns green.

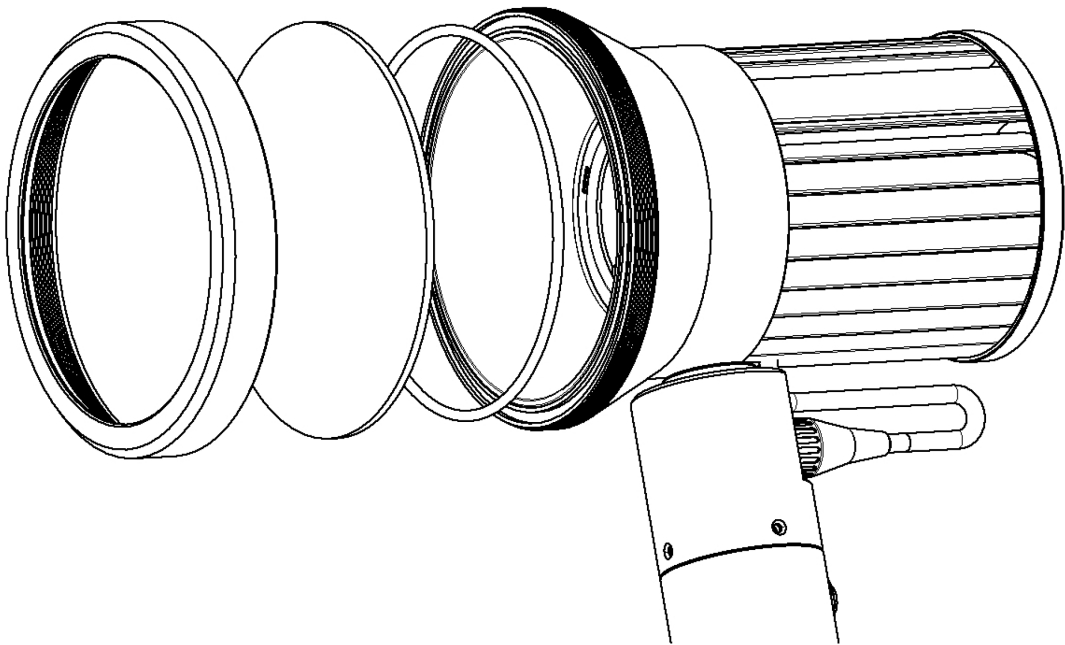
⚠ Caution: ML-BA48W Li-ion battery does not suffer from a memory effect, so frequent charging is recommended. Completely discharging the battery will drastically reduce the capacity of the battery and should be avoided. When the battery warning indicator is on, please charge the battery immediately.

⚠ Caution: If the battery's DC terminals are shorted out by a metallic object, the battery's short circuit protection system cuts off the battery's power immediately. To reactivate the battery, simply charge the battery for a few seconds.

Diffuser Usage •••

1. How to use the Diffuser

- Detach the ML-SG4K LED Light's front cap as shown below, replace it with the transparent panel.
- Make sure the waterproof o-ring be in the right place, and then screw the front cap on.




⚠ CAUTION: Silicon O-ring must be in the right place with silicon grease for waterproofing. In case the O-ring is damaged or missing, a new O-Ring is required for perfect waterproofing.

••• TROUBLESHOOTING

Check Points •••

If the Light or battery is not working properly, check the trouble shooting points first. When the problem is not solved, contact the nearest dealer or Matrix Light service center.

Symptoms	Check your symptoms
I cannot turn on the power.	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Is the battery pack connected securely? Check connection to the fully charged battery pack. <input checked="" type="checkbox"/> Is the battery fully charged? Fully charge the battery or replace with a charged battery <input checked="" type="checkbox"/> Is the battery connected properly? Make sure that the power cable (ML-PC1) is connected to the battery's DC power jack and the light properly.  <p>11-12 Page</p>
Light doesn't work even when connected to the charged battery.	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Make sure the switch is turned on. <input checked="" type="checkbox"/> Check if light's internal temperature is too high. Turn it off and let it cool down.
Battery life is very short	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> It may occur if the operating temperature is too low. It is not defective. <input checked="" type="checkbox"/> Battery may not be fully charged. Recharge the battery. If the problem persists, replace the battery with a new one. <input checked="" type="checkbox"/> Battery's useful life is finished? Replace the battery with new one.

••• WARRANTY, STORAGE INSTRUCTIONS & SPECIFICATIONS

Warranty •••

- * Warranty is valid for 1 year after purchase.
- * The warranty does not cover theft, loss, damage from and not limited to accidents, natural disasters, abuse, tampering, normal wear, misuse, or modified products.
- * Please submit the defective product with a receipt showing purchase date to an approved service center or Matrix Light for warranty repair.

Storage Instructions •••

- * Keep in a well-ventilated and dry place.
- * Do not place near naphthalene or magnetic sources.
- * Do not place in high temperatures (in a car in summer, near a stove, etc.)
- * Disconnect and detach the battery from the light after using.
- * When exposed to moisture, wipe it thoroughly with dry towel before use.
- * Rapid change in temperature can cause condensation inside the LED Light Module. To prevent this, carry the equipment in a bag and use them after they are adjusted to temperature.

Specifications •••

- ❖ Type: Current regulated power LED light
- ❖ Light projection range: 0.6 ~ 10M (Effective light projection range)
(depends on shutter speed, aperture levels, and gain control)
- ❖ Light projection angle Horizontal: 60 ° vertical: 60 °
- ❖ Color Temperature: 4,000K
- ❖ Brightness: 10% ~ 100% (Digital variable)
- ❖ Luminance Flux: 4,750lm MAX
- ❖ Illuminance in 1M distance: 4,000lux MAX
- ❖ Power supply: 48V DC
- ❖ Current consumption: 1A/40W(Max)
- ❖ Luminance efficiency: 96lm/W
- ❖ Battery: 48V DC / 2,600mA (Li-ion)
- ❖ Battery running time: 2hrs. (With Maximum Brightness)

☎ Telephone service representatives (+82-2-782-2888 / National and Worldwide)

☺ Please help us serve you better by providing us with the model number and exact mode of failure.

💻 If you have any questions or suggestions, please visit our website
(www.matrixlight.com).

Thank you