

RL-11

Rechargeable HID Handheld Light - RL-11

Product ID: 316



Larson Electronics LLC manufactures a wide variety of products, including custom built to spec designs. The pictures displayed for this unit are a general representation of form factor for the product line and may not accurately represent this exact configuration in every detail due to custom builds and changes between similar products in our standard catalog. The specifics for this configuration are listed in the specification table and supporting documentation (CAD files, Dimensional Drawing, Name Plate Diagram, Wiring Diagram, etc.). This means that specific details (receptacles, plugs, wires, connections, mounting brackets, external finishes, etc.) may not be accurately represented in images vs specifications. Please review specifications and do not order based solely on images.

The RL-11 from Larson Electronics is a Rechargeable HID Handheld Light that contains a 35 watt HID bulb and produces 3,200 lumens of intense light output. The RL-11 produces a 3000 foot beam in the 4300K color range and in side by side tests, outperforms the \$4,000+ Surefire Hellfighter™ in brightness and distance. This high power HID light reaches full power in less than 2 seconds, is waterproof, and will run for 90 minutes on a single charge of its 14.4V, 5,000mAh rechargeable lithium-ion battery.

The RL-11 is a High Intensity Discharge (HID) light with a 35 watt HID lamp producing 3200 lumens (approximately 15 million candlepower in a retail setting). In a side by side test, it outperforms the \$4000+ Surefire Hellfighter™ in brightness and distance. The RL-11 produces a 3000 foot beam in the 4300K color range (daylight color). A snap on diffuser lens is included in the blow mold style carrying case that enables the operator to convert the light to a soft, wide flood beam that covers an area 200 feet long and 200 feet wide. The 35 Watt Philips Xenon HID bulb does not contain a breakable filament and is rated for 2500 hours of life. The RL-11 HID light is "instant on" and takes less than 2 seconds to come to full power and color.



12V/24V Power Input



Spot to Flood Lens

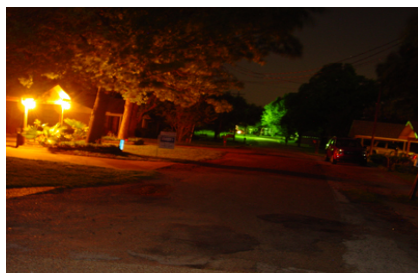


14.4V 5,000mAh Lithium-ion Battery



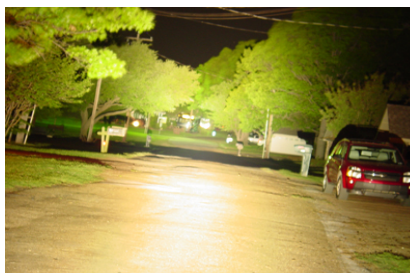
In comparisons against the Surefire Hellfighter™ (\$4000+), the RL-11 clearly reaches a longer distance with a brighter beam. The Surefire Hellfighter™ has some other unique features that make it applicable for crew served weapons which accounts for some of the price difference. The RL-11 also includes a 90 minute run-time 14.4V, 5,000mAh rechargeable lithium ion battery, which the Surefire Hellfighter™ does not include. We mention simply to illustrate the performance, quality and value aspect of this light against a very high quality tactical solution like the Hellfighter™. The RL-11 is assembled in the United States and carries a 3 year warranty.

This rechargeable HID light is weatherproof and resists the intrusion of water and dust. A booted push button switch on the top and a flat bottom surface makes the GL a popular handheld, weatherproof work light for indoor and outdoor use.



2800 foot street with normal lighting.

[Click Photo to Enlarge](#)



2800 foot street with RL-11 HID light.

[Click Photo to Enlarge](#)

The 5000mAH lithium-Ion battery in this unit is charged via an included 120 Volt AC wall charger and charging cord. This unit is charged in approximately 4 hours and has a runtime of 90 minutes on a single charge. An integral micro-relay enables the user to power this HID light from 12/24V vehicle or boat cigarette plug socket directly. Once disconnected, the light will automatically switch to the lithium-ion battery. These lithium ion batteries require no special charging procedures and have no charge memory issues. Using the latest lithium ion battery technology allows this unit to be recharged regardless of current charge levels, so there is no need to fully discharge the light before recharging. The battery will hold its charge for 16 months, even when on the shelf.

The RL-11 HID light is configured to deliver a spot beam in excess of 3000 feet. A snap on diffuser lens is included in the blow mold style carrying case that enables the operator to convert the light to a soft, wide flood beam that covers an area 200 feet long and 200 feet wide. The 35 Watt Philips HID bulb does not contain a breakable filament and is rated for 2500 hours of life.

The light comes with a blow mold carrying case, HID light, 5000 mAh battery, flood

lens, shoulder strap and wall charger. The case has room to store a spare battery and accessory vehicle coil cord with cigarette plug. Spare batteries are available and easily changed by unscrewing the round screw on tail cap at the back of the light to access the battery which slides out. A second battery can be used while another discharged battery is charging. The light can also be used without a battery, by simply attaching the optional accessory coil cord to the plug in the back of the light. The GL HID light will run indefinitely from an alternate 12/24V power source, including vehicle, boat and ATV cigarette plug sockets. The light can be attached via accessory cord to any power source ranging from 9-32 volts. THERE IS NO VEHICLE CHARGER FOR THE BATTERY. The battery is charged via the included wall outlet charging unit. For vehicle charging of the battery, a 75 Watt inverter is required.



TOP

[Click Photo to Enlarge](#)



BOTTOM

[Click Photo to Enlarge](#)

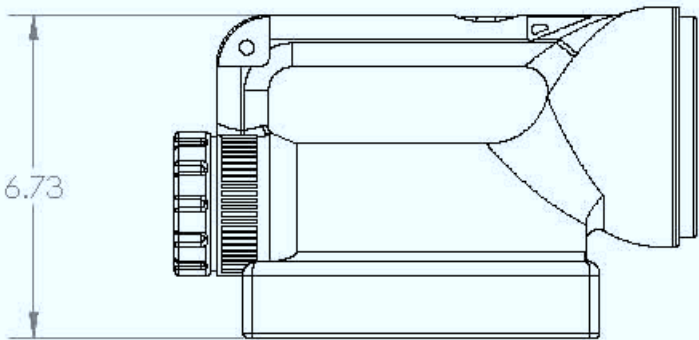
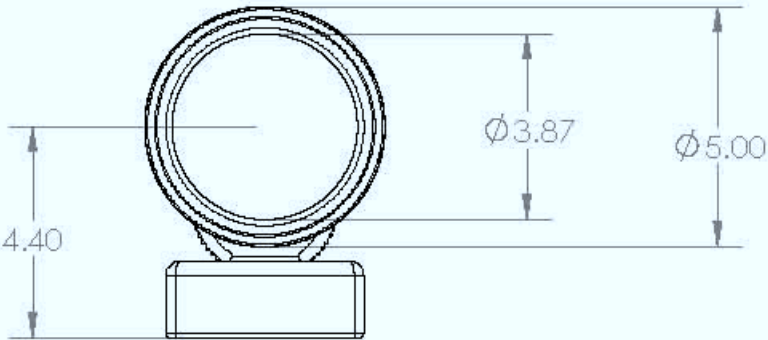
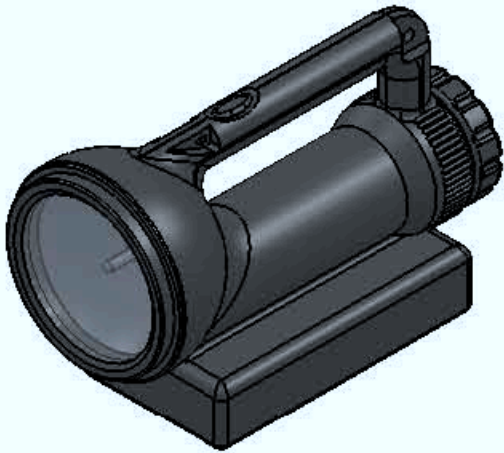
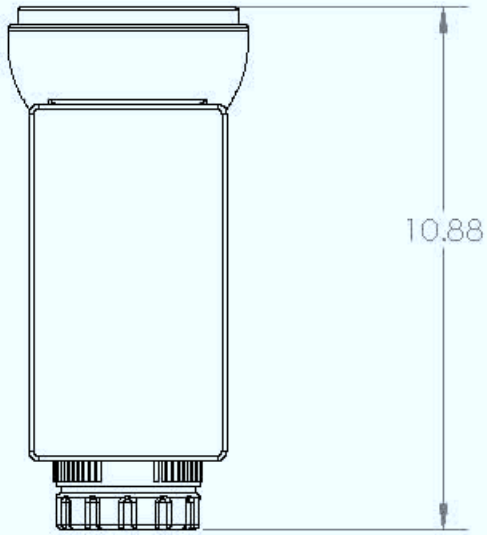


Shoulder Strap

Accessories: The most popular accessory is the [RL-11-MB](#) which is a swiveling, tilting magnetic base that is removable. This enables the operator to attach the light to any steel surface and position the beam. It is also popular for non-metallic surfaces, because the same beam positioning ability works on non-metallic surfaces as well. Basically, the operator can set the light down and the swiveling and tilting base holds the beam position that the operator establishes for the light. The magnetic base can be unscrewed and removed so that the GL is more portable for traditional handheld use. Other popular accessories include the [covert IR lens](#), snap on [red hunting lens](#), snap on amber lens for fog/smoke, and the [accessory coil cord with cigarette plug](#). At Larson Electronics, we do more than meet your lighting needs. We also provide replacement, retrofit, and upgrade parts as well as industrial grade power accessories. Our craftsmen can custom build any lighting system and/or accessories to fit the unique demands of your operation. A commitment to honesty, quality, and dependability has made Larson Electronics a leader in the lighting and electronics business since 1973. Contact us today at 800-369-6671 or message sales@larsonelectronics.com for more information about our custom options tailored to meet your specific industry needs.

High Quality Construction

1. High Power HID Lamp - 3200 Total Lumens 15 Million candlepower.
2. Heavy duty weatherproof housing with booted switch.
3. 3,000 foot beam.
4. Lithium-Ion battery.
5. Durable HID bulb has no filament.
6. 90 minute Runtime on single charge.
7. 120V AC Wall outlet charger / Optional 12/24V DC power connector.
8. Included diffuser lens for flood beam configuration.



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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	Magnalight.com	
		DIMENSIONS ARE IN INCHES	DRAWN			TITLE: RL-11	
		TOLERANCES:	CHECKED				
		FRACTIONAL ±	ENG APPR.				
		ANGULAR: MACH ± BEND ±	MFG APPR.				
		TWO PLACE DECIMAL ±	Q.A.			SIZE	DWG. NO
		THREE PLACE DECIMAL ±	COMMENTS:			B	REV
		INTERPRET GEOMETRIC TOLERANCING PER:				SCALE: 1:4 WEIGHT:	
		MATERIAL				SHEET 1 OF 1	
		FINISH					
NEXT ASSY	USED ON						
APPLICATION		DO NOT SCALE DRAWING					









Safety data sheet for product

1. PRODUCT AND COMPANY IDENTIFICATION

- Product name: Lithium ion rechargeable battery cell
- Product code: None
(All models Sanyo manufactured and whose capacity is less than or equal to 5.4Ah, including the cell branded as Panasonic, excluding the cell whose shape is prismatic and two or more side of short / middle / long side excess 12mm/85mm/110mm.)
- Company name: Sanyo Electric Co., Ltd., Panasonic group
- Address: 222-1 , Kaminaizen, Sumoto City, Hyogo, Japan
- Telephone number: +81-799-24-4111
- Fax number: +81-799-23-2879
- Emergency telephone number: [Weekday] +81-799-23-3931 [Night and holiday] +81-799-24-4131

2. HAZARDS IDENTIFICATION

For the battery cell, chemical materials are stored in a hermetically sealed metal or metal laminated plastic case, designed to withstand temperatures and pressures encountered during normal use. As a result, during normal use, there is no physical danger of ignition or explosion and chemical danger of hazardous materials' leakage.

However, if exposed to a fire, added mechanical shocks, decomposed, added electric stress by miss-use, the gas release vent will be operated. The battery cell case will be breached at the extreme, hazardous materials may be released.

Moreover, if heated strongly by the surrounding fire, acrid gas may be emitted.

- GHS classification: Not available
(This product is outside the scope of GHS system since it's considered as an "article".)
- Most important hazard and effects
Human health effects:
 - Inhalation: The steam of the electrolyte has an anesthesia action and stimulates a respiratory tract.
 - Skin contact: The steam of the electrolyte stimulates a skin. The electrolyte skin contact causes a sore and stimulation on the skin.
 - Eye contact: The steam of the electrolyte stimulates eyes. The electrolyte eye contact causes a sore and stimulation on the eye. Especially, substance that causes a strong inflammation of the eyes is contained.Environmental effects: Since a battery cell remains in the environment, do not throw out it into the environment.
- Specific hazards:
 - If the electrolyte contacts with water, it will generate detrimental hydrogen fluoride.
 - Since the leaked electrolyte is inflammable liquid, do not bring close to fire.

3. COMPOSITION / INFORMATION ON INGREDIENTS

- Substance or preparation: Preparation
- Information about the chemical nature of product: *1

Portion	Material name	Concentration range (wt %)
Positive electrode	Lithium transition metal oxidate ($\text{Li}[\text{M}]_m[\text{O}]_n$ *2)	20~60
Positive electrode's base	Aluminum	1~10
Negative electrode	Carbon	10~30
Negative electrode's base	Copper	1~15
Electrolyte	Organic electrolyte principally involves ester carbonate	5~25
Outer case	Aluminum, iron, aluminum laminated plastic	1~30

*1 Not every product includes all of these materials.

*2 The letter M means transition metal and candidates of M are Co, Mn, Ni and Al. One compound includes one or more of these metals and one product includes one or more of the compounds. The letter m and n means the number of atoms.

4. FIRST-AID MEASURES**Spilled internal cell materials**

- Inhalation:
Make the victim blow his/her nose, gargle. Seek medical attention if necessary.
- Skin contact:
Remove contaminated clothes and shoes immediately. Wash extraneous matter or contact region with soap and plenty of water immediately.
- Eye contact:
Do not rub one's eyes. Immediately flush eyes with water continuously for at least 15 minutes. Seek medical attention immediately.

A battery cell and spilled internal cell materials

- Ingestion:
Make the victim vomit. When it is impossible or the feeling is not well after vomiting, seek medical attention.

5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media: Plenty of water, carbon dioxide gas, nitrogen gas, chemical powder fire extinguishing medium and fire foam.
- Specific hazards: Corrosive gas may be emitted during fire.
- Specific methods of fire-fighting: When the battery burns with other combustibles simultaneously, take fire-extinguishing method which correspond to the combustibles. Extinguish a fire from the windward as much as possible.
- Special protective equipment for firefighters:
 - Respiratory protection: Respiratory equipment of a gas cylinder style or protection-against-dust mask
 - Hand protection: Protective gloves
 - Eye protection: Goggle or protective glasses designed to protect against liquid splashes
 - Skin and body protection: Protective cloth

6. ACCIDENTAL RELEASE MEASURES

Spilled internal cell materials, such as electrolyte leaked from a battery cell, are carefully dealt with according to the followings.

- Precautions for human body:
Remove spilled materials with protective equipment (protective glasses and protective gloves). Do not inhale the gas as much as possible. Moreover, avoid touching with as much as possible.
- Environmental precautions: Do not throw out into the environment.
- Method of cleaning up: The spilled solids are put into a container. The leaked place is wiped off with dry cloth.
- Prevention of secondary hazards: Avoid re-scattering. Do not bring the collected materials close to fire.

7. HANDLING AND STORAGE

- Handling suggestions

- Do not connect the positive terminal to the negative terminal with electrical wire or chain.
- Avoid polarity reverse connection when installing the battery to an instrument.
- Do not wet the battery with water, seawater, drink or acid; or expose to strong oxidizer.
- Do not damage or remove the external tube.
- Keep the battery away from heat and fire.
- Do not disassemble or reconstruct the battery; or solder the battery directly.
- Do not give a mechanical shock or deform.
- Do not use unauthorized charger or other charging method. Terminate charging when the charging process doesn't end within specified time.
- Storage
 - Do not store the battery with metalware, water, seawater, strong acid or strong oxidizer.
 - Make the charge amount 30~50% then store at room temperature or less (temperature= -20~35 degree C) in a dry (humidity: 45~85%) place. Avoid direct sunlight, high temperature, and high humidity.
 - Use insulative and adequately strong packaging material to prevent short circuit between positive and negative terminal when the packaging breaks during normal handling. Do not use conductive or easy to break packaging material.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION (WHEN THE ELECTROLYTE LEAKS)

- Control parameters
 - ACGIH has not been mentioned control parameter of electrolyte.
- Personal protective equipment
 - Respiratory protection: Respirator with air cylinder, dust mask
 - Hand protection: Protective gloves
 - Eye protection: Goggles or protective glasses designed to protect against liquid splashes
 - Skin and body protection: Working clothes with long sleeve and long trousers

9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance
 - Physical state: Solid
 - Form: Cylindrical or Prismatic or Pouch (laminated)
 - Color: Metallic color or black(without tube if it has tube)
 - Odor: No odor

10. STABILITY AND REACTIVITY

- Stability: Stable under normal use
- Hazardous reactions occurring under specific conditions
 - Conditions to avoid: When a battery cell is exposed to an external short-circuit, crushes, deformation, high temperature above 100 degree C, it will be the cause of heat generation and ignition. Direct sunlight and high humidity.
 - Materials to avoid: Conductive materials, water, seawater, strong oxidizers and strong acids.
 - Hazardous decomposition products: Acrid or harmful gas is emitted during fire.

11. TOXICOLOGICAL INFORMATION

Organic Electrolyte

- Acute toxicity:
 - LD₅₀, oral - Rat 2,000mg/kg or more
- Irritating nature: Irritative to skin and eye

12. ECOLOGICAL INFORMATION

- Persistence/degradability:
 - Since a battery cell and the internal materials remain in the environment, do not bury or throw out into the environment.

13. DISPOSAL CONSIDERATIONS

- Recommended methods for safe and environmentally preferred disposal:
Product (waste from residues)

Specified collection or disposal of lithium ion battery is required by the law like as "battery control law" in several nations. Collection or recycle of the battery is mainly imposed on battery's manufacturer or importer in the nations recycle is required.

Contaminated packaging

Neither a container nor packing is contaminated during normal use. When internal materials leaked from a battery cell contaminates, dispose as industrial wastes subject to special control.

14. TRANSPORT INFORMATION

In the case of transportation, avoid exposure to high temperature and prevent the formation of any condensation. Take in a cargo of them without falling, dropping and breakage. Prevent collapse of cargo piles and wet by rain. The container must be handled carefully. Do not give shocks that result in a mark of hitting on a cell. Please refer to Section 7-HANDLING AND STORAGE also.

UN regulation

- UN number: 3480 (3481 when the battery is contained in equipment or packed with equipment)
- Proper shipping name:
Lithium ion batteries ("lithium ion batteries contained in equipment" or "lithium ion batteries packed with equipment")
- Class: 9 *
- Packing group:

** Although this product meets the criteria of "dangerous goods" and are classified as "lithium ion batteries", depending on the battery's total capacity in the packaging, etc., they may not be subject to the fully regulated provisions.*

Regulation depends on region and transportation mode

- Worldwide - Air transportation:
ICAO/IATA-DGR [packing instruction 965 section IB or II]
(When shipping batteries "packed with" or "contained in" equipment, use packing instruction 966 or 967 as appropriate.)
- Worldwide - Ocean transportation:
IMO-IMDG Code [special provision 188]
- Europe - Ground transportation:
ADR [special provision 188]

** Instructions or provisions in the box brackets are conditions to make the battery cell exempted from full regulation.*

15. REGULATORY INFORMATION

- Regulations specifically applicable to the product:
Wastes Disposal and Public Cleaning Law [Japan]
Law for Promotion of Effective Utilization of resources [Japan]
US Department of Transportation 49 Code of Federal Regulations [USA]

** About overlapping regulations, please refer to Section 14-TRANSPORT INFORMATION.*

16. OTHER INFORMATION

- This safety data sheet is offered an agency who handles this product to handle it safely.
- The agency should utilize this safety data sheet effectively (put it up, educate person in charge) and take proper measures.
- ***The information contained in this Safety data sheet is based on the present state of knowledge and current legislation.***
- This safety data sheet provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.

Reference

Dangerous Goods Regulations – 57th Edition Effective 1 January 2016: International Air Transport Association (IATA)

IMDG Code – 2014 Edition: International Maritime Organization (IMO)

The European Agreement concerning the International Carriage of Dangerous Goods by Road – 2015:

The United Nations Economic Commission for Europe (UNECE)

First edition: Apr. 28, 2010

Prepared and approved by: Technology Planning Department
Rechargeable Battery Business Division
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Panasonic group

Frequently Asked Questions (FAQ)