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EPL-24-2L-LV-SOL

Solar Powered Explosion Proof LED Lighting - C1D1 - 2ft, Dual Lamp Fixture - Day/Night Sensor

Product ID: 71208



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.

EPL-24-2L-LV-SOL Explosion Proof Solar Powered LED Light Fixture
Lamp Type: Solar Powered LED Lamp
Solar Panel Dimensions: 11 3/8" x 15 3/4"
Lamp Dimensions: 8.5" x 27.5" x 11.25"
Voltage: 12V DC

Amperage: 2.3A @ 12V DC

Battery: (4) 8aH Sealed Lead Acid Batteries
Charging Time: 5 Hours
Runtime: 7 Hours
Operation: Day/Night Detection, Motion, On/Off
Lamp Configuration: (2) 2-foot LED Lamps
Total Watts: 28W (14W per Lamp)
Lumens: 3,500
Luminous Efficacy: 125 Lm/W
Color Temp: 5300K
Color Rendering Index: >80
Beam Angle: 150°
Lighting Configuration: Wide Flood Beam
Power Efficiency: 90%
Power Factor: >0.85
LED Lamp Life Expectancy: 50,000+ Hours
Operating Temp Range: -40°C to +65°C
Operating Temp Rating: T6
Housing Material: Cast Aluminum
Lens Material: Tempered Glass
Wiring: ½" NPT Hub - 30` 16/3 SOOW Cord
Mounting: Bracket Standard - Pendant Optional
Weight: 32 lbs

Ratings/Approvals
Class I, Div 2, Groups A, B, C, D
Class II, Div 1 & 2, Groups E, F, G
Class I, Div 1, Groups C & D
NRTL Certified to UL 1598 Marine Type
NRTL Certified to UL 595 Outdoor Marine Type (Saltwater)
Day/Night Sensor
On/Off Switch Activation
NRTL Certified to UL 844
NRTL Listed for United States & Canada

Special Orders - Special Requirements
Contact us for special requirements
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Made in Texas

The EPL-24-2L-LV-SOL Explosion Proof Solar Power LED light fixture from Larson Electronics is an ideal lighting solution for remote areas and standalone applications where connection to external power is either impractical or unavailable. Charged by a 30-watt solar panel, four 8aH sealed lead acid batteries provide constant, reliable power to the two 28-watt LED fixtures. This unit ships with 30' of 16/3 SOOW cord, connecting the solar panel to the light fixture which allows operators to position the panel where the most ambient light is available. When ordering the solar powered luminary, please select the preferred mounting option and light handling mechanism.

This explosion proof fixture features 2-foot long LED tubes in a dual, side-by-side lighting configuration. Powering the LED lamps are four, 8aH sealed lead acid batteries. These power packs are contained within the solar panel (not the light) and offer up to 7 hours of continuous operation on a full charge with a 5-hour charge time. To ensure consistent operation during nighttime conditions, a built-in day/night feature, coupled with an on/off switch is available. This fixture ships with 30 feet of 16/3 SOOW cord that connects the light fixture to the solar panel. As with all solar powered equipment, charging time is affected by the amount of available ambient light. When ambient light levels drop below a certain level, such as on cloudy days, the unit will not recharge as quickly. The day/night sensor is programmed to activate the solar panel in the evening and shut off during the day, while the motion sensor will activate the panel upon detecting motion. An on/off switch activates/shuts off the solar panel according to the operator`s preferences. The operator can switch between modes with a toggle switch.

Durability: The EPL-24-2L-LV-SOL features our second generation LED T-series 14-watt, T17 style lamps which produce 15% more illumination at 8 feet, compared to standard T8 lamps when measured with an Extech light meter. Our LED-T series bulbs are visibly brighter than standard T8s and have consistently surprised many of our customers with their unexpectedly high light output levels. We have eliminated the ballast box normally associated with fluorescent fixtures which reduces overall weight, creates a slimmer unit profile, and helps this LED fixture maintain a T6 temperature rating. The solid state design of the LED lamps gives this fixture superior resistance to damage from vibrations and extremes in temperature as well as a lamp service life over twice that of standard T8 bulbs.

LED Benefits: Unlike gas burning and arc type lamps that have glass bulbs, LEDs have no filaments or fragile housings to break during operation and/or transportation. Instead of heating a small filament or using a combination of gases to produce light, light emitting diodes (LEDs) use semi-conductive materials that illuminate when electric current is applied, providing instant illumination with no warm up or cool down time before re-striking. Because there is no warm up period, this light can be cycled on and off with no reduction in lamp life.

LED lights run at significantly cooler temperatures than traditional metal halide and high pressure sodium lights and contain no harmful gases, vapors, or mercury, making them both safer and more energy efficient. No extra energy is wasted in cooling enclosed work areas due to external heat emissions from bulb type lights, and the operator risks associated with traditional lighting methods, such as accidental burns and exposure to hazardous substances contained in the glass bulbs, are eliminated. Solid state LED lighting is also safer for the environment as LEDs are 100% recyclable. And recycling simultaneously reduces operating costs by eliminating the need for the expensive special disposal services required with traditional gas burning and arc type lamps.

Mounting: Unless otherwise specified, our standard, most popular configuration is the bracket end mounting shown above. We also offer a pendant mount for those needing to suspend the fixture away from the ceiling surface (suspended from pipe or conduit). For standard bracket mounts, each bracket is cinched to the bracket mounting peg on each side of the light. The angle of the bracket is set by tightening two cap screws on either side of the bracket. The cap screws act as a set screw. The bracket itself is mounted via a single bolt hole at the top of the

bracket. There are two brackets, one on each end of the light. Once the brackets are mounted to a surface (ceiling, floor or wall), the light fixture can be removed from the brackets by loosening the cap screws that hold the bracket to the mounting peg.
Applications: Paint spray booths, aircraft maintenance, oil drilling rigs, refineries, solvent and cleaning areas, gas processing plants, chemical manufacturing, waste treatment plants and remote hazardous locations compatible with the unit.
NOTE: Larson Electronics has further upgraded the options available with this light. We expect the light to be mounted separately from the panel. This means the solar panel can be mounted in direct sunlight (not in the hazardous area) while the light is mounted in a hazardous area workspace. Standard installation for explosion proof lighting, including threaded rigid pipe to the LED light fixture and appropriate seal-offs, etc. are required.
Larson Electronics offers a Class I, Division 2 rated panel solution for an additional cost. This incorporates a class rated panel, charge controller, and sealed battery solution. This allows the panel to be installed within C1D2 environments. No C1D1 rated solar panels exist, so the panel must be located outside the C1D1 environment in either panel solution offered.
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 Features

1. Each unit dialectically tested.
2. Fixture arrives assembled and lamped to reduce installation time and cost. Adjustable mounting brackets enable the operator to choose any mounting angle for the fixture.
3. Fixture constructed of extruded corrosion resistant copper free aluminum alloy
4. No ballast box. No ballast to replace. We simply run the black wire to one end of the bulb and white wire to the other.
5. Heavy gauge extruded aluminum reflectors with high gloss reflective finish. Resists dents and corrosion.
6. A wrench is used to unscrew the end caps for relamping the fixture, while some competitive models require the end tap and knock off method to loosen the end cap.
7. Explosion proof, impact and heat resistant Pyrex tubes provide lamp protection.

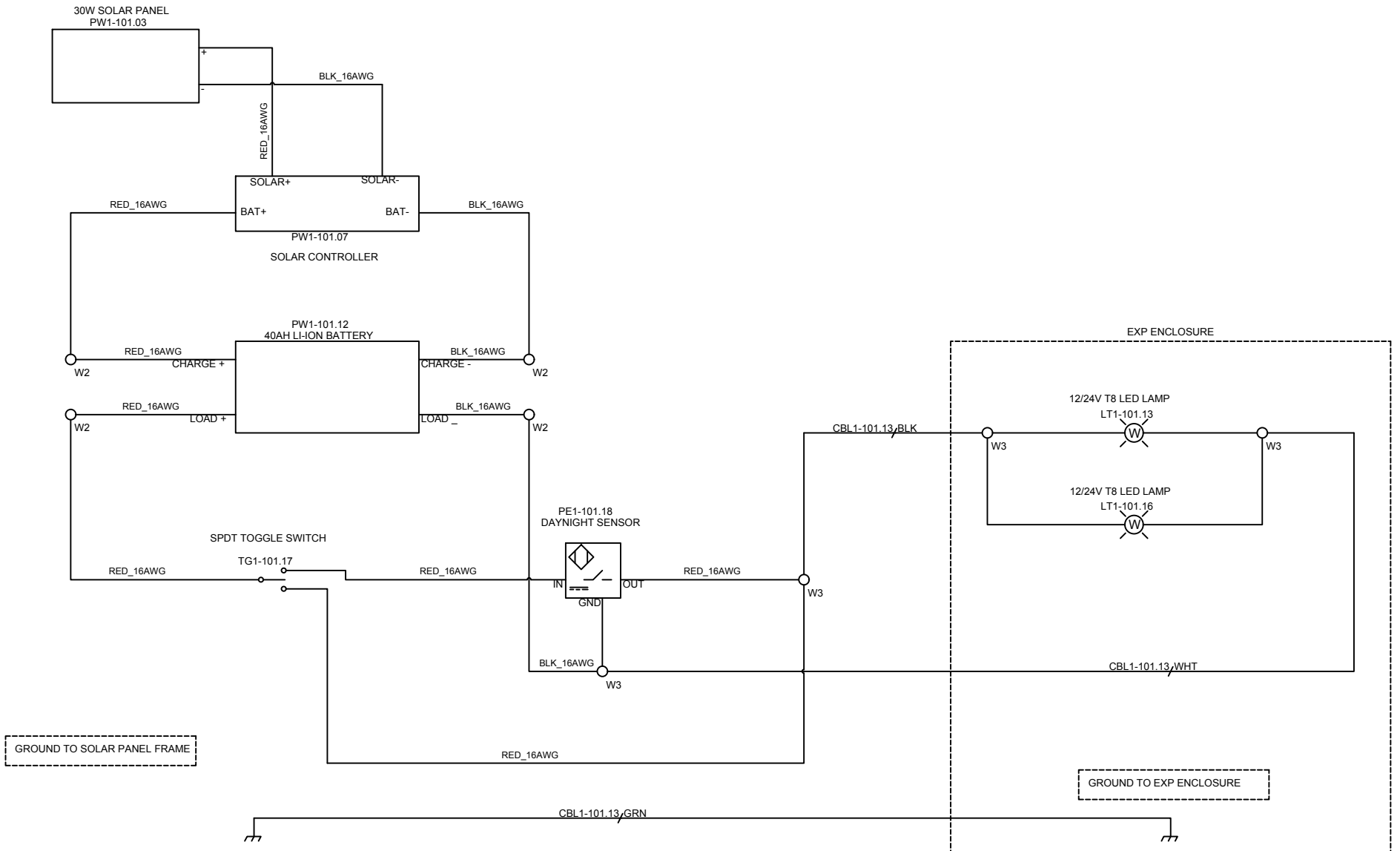
Superior LED Benefits

1. 50,000 hour lifespan.
2. Can SAVE 50% or more on energy.
3. Qualifies retrofit projects for financial incentives, including utility rebates, tax credits and energy loan programs.
4. Reduces energy use and prolongs life-spans of peripheral cooling units (A/C, refrigeration)
5. 100% recyclable.
6. No toxins-lead, mercury.
7. No UV light, infrared radiation or CO2 emissions.
8. Qualifies buildings for LEED and other sustainable business certifications.
9. Bright, even light maintains consistent color over time.
10. Instant on/off - No flickering, delays or buzzing.
11. Very good color rendering.
12. Vibration/impact resistant.
13. Significantly cooler operation.
14. Less frequent outages, higher output improves workplace safety.

REV	DESCRIPTION	DATE
A	PRODUCTION RELEASE	7-28-2020

EPL-24-2L-LV-SOL-XX-DAYNIGHT

LARSON ELECTRONICS®



TAGS	QTY	CATALOG	DESCRIPTION
PE1-101.18	1	UNV00006499	12VDC STEM MOUNT PHOTO CONTROL
PW1-101.03	1	UNV00001328	SOLAR PANEL - 30W
PW1-101.07	1	UNV00012607	10A SOLAR CHARGE CONTROLLER
PW1-101.12	1	UNV00011977	40AH BATTERY - 12.6V - LI-ION
TG1-101.17	1	UNV00001906	SPDT TOGGLE SWITCH - ON OFF ON
W2	4	UNV00009802	2 CONDUCTOR LEVER CLAMP WAGO
W3	4	UNV00011954	3 CONDUCTOR LEVER CLAMP WAGO
CBL1-101.13	1	UNV00007524	CORD 16/3 SOOW UL 90C BLK

LARSON ELECTRONICS
9419 E US HWY 175,
KEMP, TX 75143

TITLE: EPL-24-2L-LV-SOL-XX-DAYNIGHT

DRAWN BY	DATE	REV
P.CRYER	07-28-2020	A
CHECKED BY	SHEET #	DRAWING #
K.NGUYEN	1 OF 1	101









MSDS for SLA Batteries

SECTION 1: PRODUCT NAME

Valve regulated lead-acid batteries.

SECTION 2: HAZARDOUS COMPONENTS

COMPONENTS	%WEIGHT	TLV	LD50 ORAL	LC50 INHALATION	LC50 CONTACT
Lead (Pb, PbO, PbSO) 24	About 70%	N/A	(500) mg/Kg	N/A	N/A
Sulfuric Acid	About 20%	1 mg/m^3	(2.140) mg/Kg	N/A	N/A
Fiberglass Separator	About 5%	N/A	N/A	N/A	N/A
ABS or PP	About 5%	N/A	N/A	N/A	N/A

SECTION 3: PHYSICAL DATA

COMPONENTS	DENSITY	MELTING POINT	SOLLUBILITY (H2O)	ODOR	APPEARANCE
Lead	11.34	327.4°C (Boiling)	None	None	Silver-Grey Metal
Lead Sulfate	6.2	1070°C (Boiling)	40 mg/L(15°C)	None	White Powder
Lead Dioxide	9.4	290°C (Boiling)	None	None	Brown Powder
Sulfuric Acid	About 1.3	About114°C (Boiling)	100%	Acidic	Clear Colorless Liquid
Fiberglass Sep.	N/A	N/A	Slight	Toxic	White Fibrous Glass
ABS or PP	N/A	N/A	None	No Odor	Solid

SECTION 4: PROTECTION

EXPOSURE	PROTECTION	COMMENTS
SKIN	Rubber gloves, Apron, Safety shoes	Protective equipment must be worn if battery is cracked or otherwise damaged.
RESPIRATORY	Respirator (for lead)	A respirator should be worn during reclaimation operations if the TLV is exceeded.
EYES	Safety goggles, Face Shield	

SECTION 5: FLAMMABILITY DATA

COMPONENTS	FLASHPOINT	EXPLOSIVE LIMITS	COMMENTS
Lead	None	None	
Sulfuric Acid	None	None	
Hydrogen	259?	4% - 74.2%	Batteries can emit hydrogen only if over charged (float voltage> 2.4 VPC). The gas enters the air through the vent caps. To avoid the chance of a fire or explosion, keep sparks and other sources of ignition away from the battery. Extinguishing Media: Dry chemical, foam, CO_2.
Fiberglass Sep.	N/A	N/A	Toxic vapors may be released. In case of fire: wear self-contained breathing apparatus.
478 Polystyrene	None	N/A	Temperatures over 300 °C (572°F) may release combustible gases. In case of fire: wear positive pressure self-contained breathing apparatus.

SECTION 6: REACTIVITY DATA

COMPONENT	Lead/lead compounds
STABILITY	Stable
INCOMPATIBILITY	Potassium, carbides, sulfides, peroxides, phosphorus, sulfurs.
DECOMPOSITION PRODUCTS	Oxides of lead and sulfur.
CONDITIONS TO AVOID	High temperature, Sparks and other sources of ignition
COMPONENT	Sulfuric Acid
STABILITY	Stable at all temperatures
POLYMERIZATION	Will not polymerize
INCOMPATIBILITY	Reactive metals, strong bases, most organic compounds
DECOMPOSITION PRODUCTS	Sulfuric dioxide, trioxide, hydrogen sulfide, hydrogen
CONDITIONS TO AVOID	Prohibit smoking, sparks, etc. from battery charging area. Avoid mixing acid with other chemicals.

SECTION 7: CONTROL MEASURES

1. Store lead-acid batteries with adequate ventilation. Room ventilation is required for batteries utilized for standby power generation. Never recharge batteries in an unventilated, enclosed space.

2. Do not remove vent caps. Follow shipping and handling instructions that are applicable to the battery type. To avoid damage to terminals and seals, do not double-stack industrial batteries.

STEPS TO TAKE IN CASE OF LEAKS OR SPILLS

If sulfuric acid is spilled from a battery, neutralize the acid with sodium bicarbonate (baking soda), sodium carbon (soda ash), or calcium oxide (lime).
Flush the area with water. Do not allow unneutralized acid into the sewage system.

WASTE DISPOSAL METHOD:

Neutralized acid may be flushed down the sewer. Spent batteries must be treated as hazardous waste and disposed of according to local state, and federal regulations. A copy of this material safety data must be supplied to any scrap dealer or secondary smelter with battery.

ELECTRICAL SAFETY

Due to the battery's low internal resistance and high power density; high levels of current can be developed across the battery terminals. Do not rest tools or cables on the battery. Use insulated tools only.
Follow all installation instruction and diagrams when installing or maintaining battery systems.

SECTION 8: HEALTH HAZARD DATA

LEAD: The toxic effects of lead are cumulative and slow to appear. It affects the kidneys, reproductive, and central nervous system. The symptoms of lead overexposure are anemia, vomiting, headache, stomach pain (lead colic), dizziness, loss of appetite, and muscle and joint pain. Exposure to lead from a battery most often occurs during lead reclaim operations through the breathing or ingestion of lead dusts and fumes.

THIS DATA MUST BE PASSED TO ANY SCRAP OR SMELTER WHEN A BATTERY IS RESOLD.

SULFURIC ACID: Sulfuric acid is a strong corrosive. Contact with acid can cause severe burns on the skin and in the eyes. Ingestion of sulfuric acid will cause GI tract burns. Acid can be released if the battery case is damaged or if the vents are tampered with.

FIBERGLASS SEPARATOR: Fibrous glass is an irritant of the upper respiratory tract, skin and eyes. For exposure up to 10F/CC use MSA Comfort with type H filter. Above 10F/CC up to 50F/CC use Ultra-Twin with type H filter.
NTP or OSHA does not consider this product carcinogenic.

SECTION 9: SULFURIC ACID PRECAUTIONS

INHALATION: Acid mist may cause respiratory irritation. Remove any individual from exposure, and apply oxygen if breathing is difficult.

SKIN CONTACT: Acid may cause irritation, burns or ulceration. Flush with plenty of soap and water, remove contaminated clothing, and see physician if contact area is large or if blisters form.

EYE CONTACT: Acid may cause severe irritation, burns, cornea damage and blindness. Call physician immediately and flush with water until physician arrives.

INGESTION: Acid may cause irritation of mouth, throat, esophagus and stomach. Call physician. If patient is conscious, flush mouth with water, have the patient drink milk or sodium bicarbonate solution.

DO NOT GIVE ANYTHING TO AN UNCONSCIOUS PERSON.

SECTION 10: TRANSPORTATION REGULATIONS

We hereby certify that all Larson Electronics Valve Regulated Lead-acid Rechargeable batteries conform to the UN2800 classification as "Batteries, wet, Non-Spillable, and electric storage" as a result of passing the Vibration and Pressure Differential Test described in D.O.T., 49 CFR 173.159(d), and IMO/IMDG, and ICAO/IATA packing instruction 872 and note A67.
Batteries having met the related conditions are EXEMPT from hazardous goods regulations for the purpose of transportation by DOT, and IATA/ICAO, and therefore are unrestricted for transportation by any means. For all modes of transportation, each battery outer package is labeled "NON-SPILLABLE". All our Batteries are marked non-spillable.

Updated: Nov. 20, 2012

Frequently Asked Questions (FAQ)