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SPG-200A-600-TJM-ALU-M1

600 Watt Solar Power Generator with Light Tower Mast - T-Head Mounting Bracket Included - 24V

Product ID: 238509

Please see last page for supporting documentation for this product(certificates, CAD files & drawings, IES files, wiring diagrams, etc).



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.

SPG-200A-600-TJM-ALU-M1 Solar Powered Generator w/ Equipment Mast & T-Head

Light Mast Specs

Tower Length: 20`
Materials: Aluminum with Stainless Steel Hardware
Finish: Powder Coated - White
Operation: Air Compressor
Tower Weight Capacity: 198 lbs.
Equipment Mounting: T-Head Mounting Bracket at Top of Mast

Solar Specs

Panes: (2) 300 Watt panels
Panel Dimensions: 3.26` W x 6.43` H
Method of Deployment: Sliding Mount
Panel protection: Fused combiner box
System Protection: Battery over/under and ground fault
System Voltage: 24V DC
Battery Bank: (2) 12V 400aH Batteries
Battery capacity: 400ah total and 200ah usable
Noise Level: Silent
Ouput: Low Voltage 24V DC
Run Time: Depends on equipment selection

Trailer Specs

Materials: Aluminum with Stainless Steel Hardware

Quick Summary

20 Foot Pnuematic Tower
Aluminum Construction, Stainless Steel Hardware
NEMA 3R Weatherproof Rating
(4) 1,000lb Retractable Outriggers
Removeable Hitch
(2) 300 Watt Solar Panels
Fully Solar, No Fuel Needed
Made in the USA

Trailer Dimensions (w/ tongue): 10.23` L x 6.17` W x 10.61` H

Hitch: 2" Ball Coupler

Wiring: 7-Pin Flat

Suspension: 2,700lb Leaf Springs

Outriggers: (4) 1,000 Manual Crack Leveling Jacks - Retractable

Wheels: (2) 15" 5x4.5 Steel Rims

Tires: ST205/75/D15 H188

Finish: Powder Coated

Weight: +-1200 lbs

Shipping: Common Freight

Shipping Dimensions: 6-L x 6.25`-W x 10.62`-H

Shipping Weight: +-1700 lbs

Options: Length- Mounting-Fixtures/ Call Us for Special Requirements

Special Orders - Special Requirements
Contact us for special requirements

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Made in Texas

The SPG-200A-600-TJM-ALU-M1 from Larson Electronics is a 600 Watt Solar Powered Generator with Light Mast Tower and Junction Box that provides an ample power supply for work locations that do not have one readily available. This generator features two 300 watt solar panels to charged the 400aH 24V battery bank with 200aH useable power. The SPG-200A-600-TJM-ALU-M1 has a small footprint that makes it ideal for a wide variety of work locations. The weatherproof pyramid enclosure is aluminum with stainless steel hardware providing protection from the elements and is fully removeable for maintenance. The SSPG-200A-600-TJM-ALU-M1 operates on 24V, and is ideal for security camera, temporary remote wireless internet distribution, lighting and equipment deployment. The SPG-200A-600-TJM-ALU-M1 also includes a T-Head mounting bracket at the top of the mast which enables operators to mount their existing equipment such as junction boxes, lights or cameras.

PLEASE NOTE: ANY FREE SHIPPING OFFERS DO NOT APPLY TO LIGHT MASTS OR LIGHT TOWERS

The SPG-200A-600-TJM-ALU-M1 solar powered generator with pneumatic light mast tower is ideal for operators who have the need to deploy security equipment, cameras, network gear, or other electrical equipment on work sites or job locations where power is not readily available. The towable unit can be transported and deployed by a single operator for increased versatility on the job. The equipment tower is raised and lowered via an included air compressor. The compressor and all other on-board electronics are powered fully by the solar charged battery bank.

Light Mast/Equipment Tower: The SPG-200A-600-TJM-ALU-M1 features an twenty foot tall pneumatic light tower and equipment mast that has a T-Head mounting bracket mounted at the top. The aluminum mast is raised and lowered to its full height via an on-board air compressor. The compressor is operated via controls mounted on the inside of the unit`s access door. Operators make sure the control systems switch is powered on and the mast drain valve is fully closed by turning it completely clockwise before toggling on the air compressor switch. Once the compressor switch is turned on, it will automatically begin to raise the mast and any mounted equipment to a height of twenty feet. The mast lowering process is just as simple. Operators simply confirm that the air compressor power switch is in the off position before opening the mast drain valve by turning it completely counterclockwise. The mast will lower itself back to its lowest position. Once that occurs, operators reclose the mast drain valve completely. All power on the unit can then be shut off for storage or transport. Internal wiring within the pneumatic mast aids in cable management, as well as reducing tampering and vandalism. Another very useful feature of the air compressor is that it will automatically "top off" every few days to ensure that the mast stays in a fully extended position for longer deployment periods.

Trailer: The SPG-200A-600-TJM-ALU-M1 comes mounted on a durable and ruggedly constructed pyramid style trailer constructed of aluminum with stainless steel hardware, that is designed with both toughness and ease of use in mind. The trailer

features a removeable tongue, spring axles and four retractable 1000 pound manual crank leveling outriggers for safe and secure job location deployment. The solar panels are mounted to the powder coated desert tan pyramid enclosure and have a slider system that allows them to be open during operation and slid over each other for safer transit. For long term deployment scenarios, the tongue can be removed by pulling out a retention pin and removing the tow cables before pulling the tongue straight out for a smaller footprint, and to reduce the chance of theft during deployment. The pyramid enclosure also offers operators plenty of room for logos and advertisments if so desired. The pyramid enclosure carries a NEMA 3R weatherproof rating. The top of the pyramid enclosure is fully removeable for easier maintenance access and to allow operators to more easily install their security equipment within the housing.
Batteries: The SPG-200A-600-TJM-ALU-M1 features two 400aH 12V deep cycle acid glass mat rechargeable batteries connected in series for a 24V battery bank maintaining 400aH. Of the 400aH, 200aH are useable while maintaining 50% capacity. It is recommended to not allow the battery bank to deplete below 50% capacity, doing so will reduce longevity of the batteries and reduce consecutive charge cycles.
Deployment: The deployment process on the SPG-200A-600-TJM-ALU-M1 is simple and can be done by a lone operator. Once the trailer is towed to the desired location, it is disconnected from the towing vehicle. The retractable outriggers are then extended and used to level the trailer. The wheels coming off the ground during this process is not unusual. The tongue can also be removed at this point if the unit is being used for a lengthy deployment. Once leveled, the operator then pulls out the safety retention pin on the solar panel slider and slides the front solar panel all the way to the right before replacing the pin. The solar panels are angle adjustable and should be adjusted to an angle that will allow them to absorb the most sun light at this point.
Once the trailer is leveled and the solar panels are successfully deployed, the operator will open the access door on the compartment and turn the system controls switch to the on position after making sure the mast drain valve is closed. Once the unit is powered on and the drain valve is closed, the operator can turn the air compressor switch to the on position to raise the equipment mast.


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In situations such as entertainment events, remote work areas, security and other applications where the lighting, security cameras, or network equipment must be placed close to the benefactors, the elimination of noise and fumes typically associated with diesel generators is a great benefit. The silent operation also aids in high profile security applications. Solar power generators offer a low maintenance alternative to traditional diesel powered generators that require refueling and a qualified diesel mechanic to maintain and/or repair them.



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Click Photo to Enlarge



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Solar Charge Controller: In this 24 volt system solar control system, each panel is terminated with a fused combiner box with a single lever action cut-off switch. With the switch set to the `on` position, the combiner box passes power to the 60-amp capacity Morningstar TriStart MPPT solar charge controller. Oddly enough, most charge controllers aren't rated past 104 degrees Fahrenheit despite the fact the will always be close to direct sunlight. In the summer time in Texas, our fabrication shop is normally warmer than that, so this solar light tower uses a charge controller that would support the southern heat. We improve on that capability by shading the charge controller and adding additional air flow from the exhaust of a 1400 CFM component cooling system.
Component Control Center: In order to ensure that the 50% threshold on the batteries is controlled, this solar trailer includes a system of min/max voltage sensors and relays that monitor the voltage produced by the batteries and will automatically shut off power distribution when the battery capacity falls below 50%. This protects the batteries from failure. We also include ground fault protection and an Morningstar RM-2 remote digital monitoring system to track and log all activities related to the charger controller and battery health. In the event there is an issue with the solar trailer, the SD card can be removed from the Morningstar RM-2 and sent to Larson Electronics for analysis.
All the electrical components, including the combiner panel, charge controller, over/under battery monitoring and ground fault isolation are encapsulated in a NEMA 3R pyramid enclosure that is bolted to the trailer. Since most of these components are not rated for high heat, our component cooling system circulates air within the job box at 1400 CFM when the ambient temperature exceeds 90° Fahrenheit. The component control center also includes a terminal block so that customers can mount additional electronic gear without interfering with the charging systems. The pyramid system includes a locking access door for security purposes. The SPG-200A-600-TJM-ALU-M1 also includes a T-Head mounting bracket at the top of the mast for mounting user-provided equipment.

Solar Tower Runtime

Operation	**Hours****
5 Watt Device	208 hrs
13 Watt Device	80 hrs
25 Watt Device	41.5 hrs
42 Watt Device	24.5 hrs
60 Watt Device	17.3 hrs
72 Watt Device	14.5 hrs
85 Watt Device	12.2 hrs
100 Watt Device	10.4 hrs

*Device wattage does not factor in warm up periods, which may have larger amperage draws for short periods of time. This is common in HID lighting.
**Hour runtime based on maintaining 50% battery capacity and are continuous hours of operation without charge. A safety factor of 6.5aH is included in these calculations to account for unforeseen loss in real world scenarios to provide accurate runtime without damaging the battery bank of the unit.

We offer a wide variety of options to customize this solar generator driven light plant, including 120/240V outlets, LED light heads, cameras, antennas, access points, network equipment, additional battery and panel capacity. We also offer other customizations including taller masts and stainless steel assemblies for saltwater

applications.
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.

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Frequently Asked Questions (FAQ)

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Export Control Classification Number (ECCN): EAR99

Links (Click on the below items to view):

- **HigResPic1**
- **ISO 9001 Certification**
- **Business Certificate**
- **Shipping Time Map**