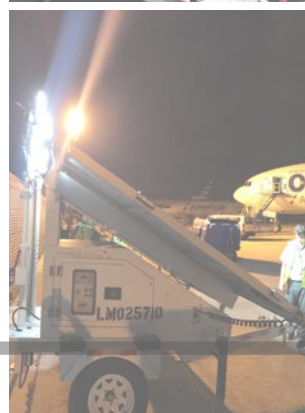
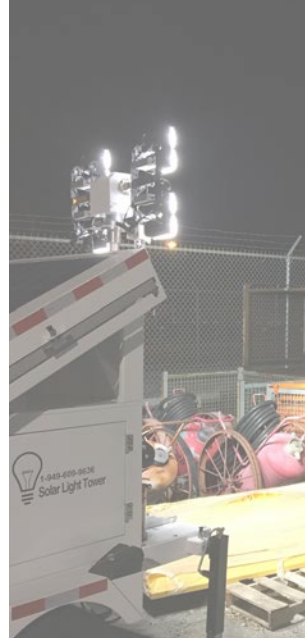
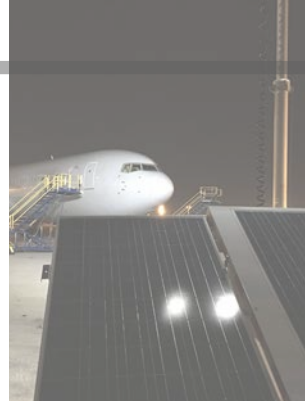




OUTDOOR SOLAR LIGHTING SOLUTIONS



MOBILE SOLAR TOWER

# GS-LT-200 | GENERAL SPECIFICATIONS



Greenshine

## Light Fixture (4\*GS-LED-LT-200)

|                         |                   |
|-------------------------|-------------------|
| Luminaire Input Voltage | DC 12V   24V      |
| Power Consumption       | 4 X 50W           |
| Lumen                   | 4 X 8,000 lumens  |
| Color Temperature       | 5000 K            |
| IES Lighting Type       | Flood Optic   60° |
| Material                | Die-cast aluminum |

## Solar Panel (3 Units) 335W

|                       |                        |
|-----------------------|------------------------|
| Rating Power          | 335 W                  |
| Maximum Power Voltage | 56.16 V                |
| Maximum Power Current | 24.03 A                |
| Open Circuit Voltage  | 67.2 V                 |
| Short Circuit Current | 25.83 A                |
| Size                  | 80.3" x 44.4" (1 Unit) |
| Weight                | 79.5 lb (1 Unit)       |

## Battery (6 Units)

|                   |                          |
|-------------------|--------------------------|
| Battery Type      | GEL Deep Cycle Lead-Acid |
| Operating Voltage | DC 24 V                  |
| Capacity          | 6 x 12 V 150AH           |
| Dimensions        | 16(L)×7(W)×9.2(H) (in)   |
| Expected Life     | 5 ~ 7 years              |

## Operation

|               |                      |
|---------------|----------------------|
| Charging Time | 12 Hours             |
| Operate Time  | 36 hours for 4 x 50W |
| Voltage       | DC 24 V              |

## Mast

|             |                                   |
|-------------|-----------------------------------|
| Type        | Round                             |
| Materials   | 6063 aluminum alloy               |
| Mast Height | 19' (Extended)   6'3" (Retracted) |
| Stage       | 4                                 |
| Mast Raise  | Manual Lift                       |



# GS-LT-200 | GENERAL SPECIFICATIONS



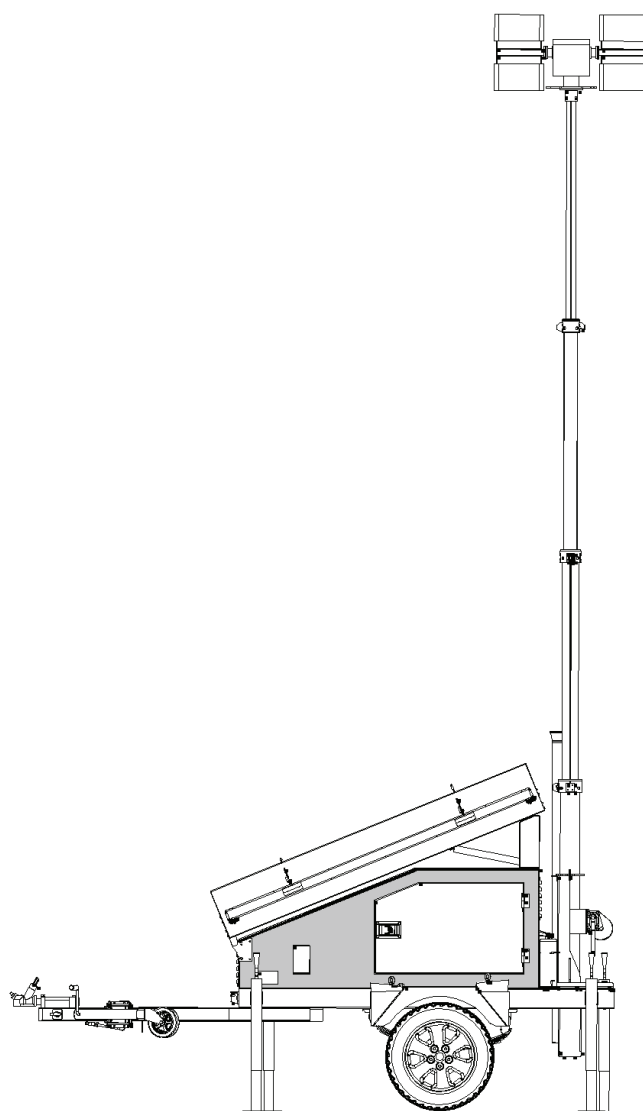
Greenshine

## Canopy

|        |                       |
|--------|-----------------------|
| Type   | 2mm cold-rolled steel |
| Finish | Powder Coating        |
| Color  | White                 |

## Trailer

|                   |                                 |
|-------------------|---------------------------------|
| Type              | Single Axel                     |
| Tire and rim size | 185R 14C                        |
| Stabilizers       | 4 adjustable manual stabilizers |
| Drawbar           | Complies with U.S. D.O.T.       |



# GS-LT-200 | GENERAL SPECIFICATIONS

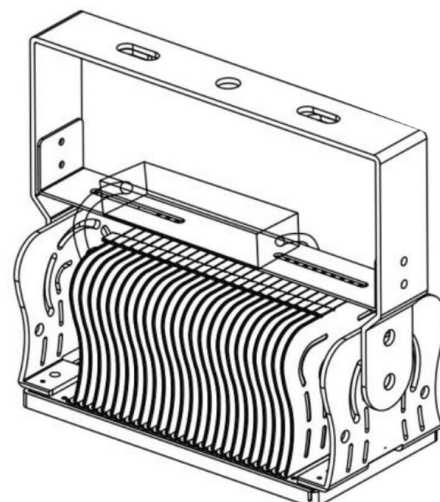
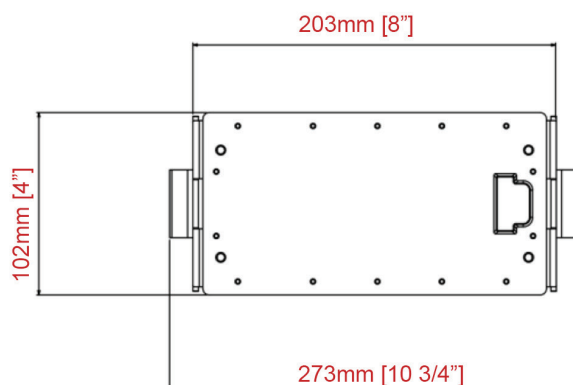
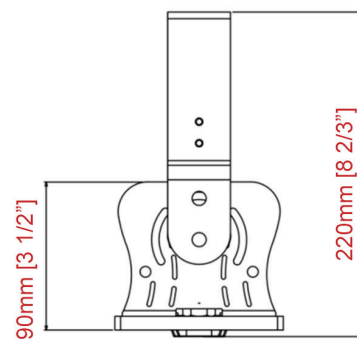
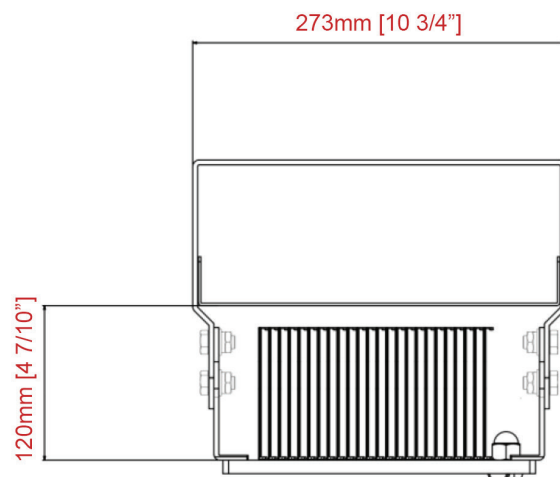


Greenshine

## SPECIFICATIONS

|                         |                             |
|-------------------------|-----------------------------|
| Luminaire Input Voltage | DC 24V                      |
| Power Consumption       | 4 X 50W                     |
| Lumen Output            | 4 X 8,000 lumens            |
| Color Temperature       | 5000 K                      |
| IES Lighting Type       | Flood Optic                 |
| Material                | 6063 Aluminum alloy         |
| IP Class                | IP 65                       |
| Insulation              | Class I                     |
| Operating Temperature   | -30°C ~+50°C/ -22°F ~+122°F |
| CRI                     | ≥70                         |

## DIMENSIONS





# MOBILE SOLAR TOWER SERIES

## Solar Powered LED Lighting System



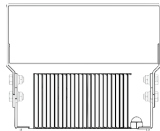
### OVERVIEW

The Mobile Solar Tower Series features customizable outdoor solar light solutions depending on your specific application and an adjustable mounting bracket. Each system is completely customized according to your location, project and lighting requirements; also systems can be configured to run throughout the night or have them dim to save energy when full light is not required and with the option for a motion detection.

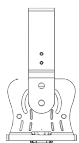
**PART NUMBER: GS-LT-200**

#### FIXTURES

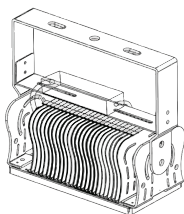
##### Flood Lights



**FRONT VIEW**  
50W-100W



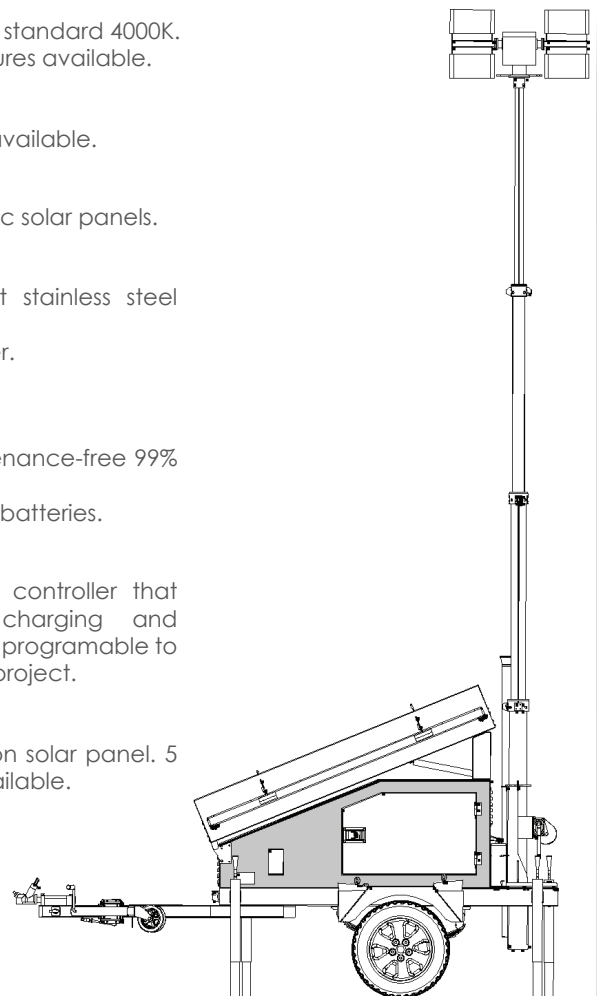
**SIDE VIEW**



**ISOMETRIC VIEW**

#### SPECIFICATIONS

- ▶ **Luminaire**
  - 60,000 hours.
  - 3000K - 5000K available with standard 4000K.
  - Turtle Friendly compliant fixtures available.
- ▶ **Panel Mount**
  - Rated to 145mph. 185mph available.
- ▶ **Solar Panel**
  - Mono-crystalline Photovoltaic solar panels.
- ▶ **Battery Enclosure**
  - Vented, corrosion resistant stainless steel battery box.
  - Holds battery and controller.
  - Includes lock.
- ▶ **GEL-Type Battery**
  - Greenshine Battery - Maintenance-free 99% recyclable.
  - 150Ah - 200Ah seal GEL Cell batteries.
- ▶ **Smart Controller**
  - Controller - Solar Charge controller that monitors and regulates charging and discharging of batteries. Also, programmable to specific operating profile for project.
- ▶ **5 Year Limited Warranty**
  - Includes 10 year warranty on solar panel. 5 and 10 Year Full Warranty available.



# GREENSHINE GEL-TYPE BATTERY

Solar Powered LED Lighting System



Greenshine

## OVERVIEW

GEL deep cycle battery with a 12 years floating design life is especially designed for frequent cyclic discharge under extreme temperature.



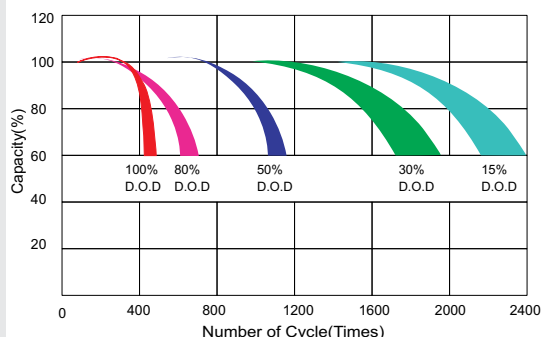
### GS-GEL-H150

|   |  |
|---|--|
| Cells per unit                          | 6  |
| Voltage per unit                        | 12V  |
| Capacity                                | 150Ah @ 20hr-rate<br>to 1.75V per cell @<br>25°C / 77°F  |
| Weight                                  | 46kg / 100lb   |
| Dimensions<br>L x W x H                 | 483 x 170 x 240(mm)<br>19" x 6.7" x 9.5"   |
| Max Discharge<br>Current                | 1500A (5 Sec)  |
| Operating Temp.<br>range                | -40°C~60°C   -40°F~140°F   |
| Flot Charging<br>Voltage                | 13.6 to 13.8 VDC / unit average at 25°C / 77°F   |
| Recommended<br>max. charging<br>current | 30A  |
| Self-discharge                          | Valve Regulated Lead Acid can be stored for more than 6 months at 25°C/77°F. Self-discharge ratio less than 3% per month at 25°C/77°F. Please charge batteries before using. |
| Equalization and<br>cycle service       | 14.6 to 14.8 VDC / unit average at 25°C / 77°F   |
| Terminal type                           | 5ft cooper wire leads from the battery case  |

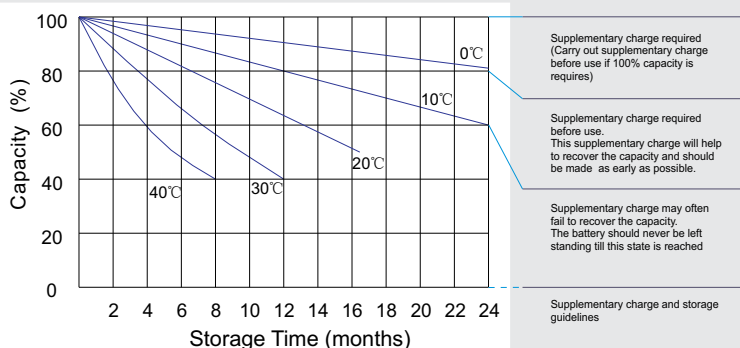
# GREENSHINE GEL-TYPE BATTERY



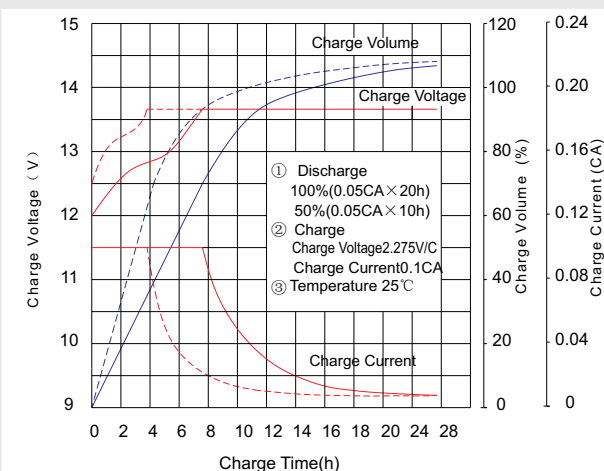
Life characteristics of cyclic use



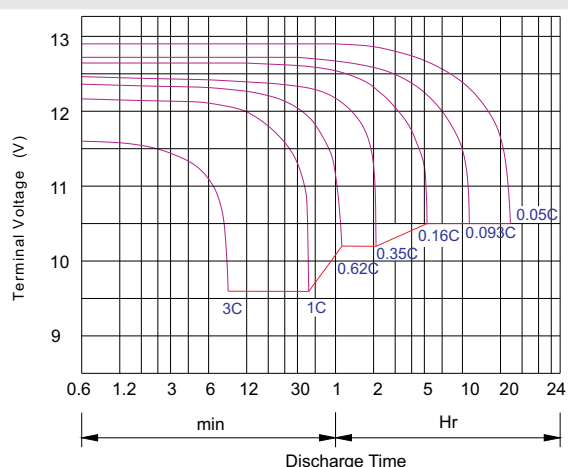
Storage characteristic



Charge characteristic curve for cyclic use



Discharge characteristic curve



## Capacity Factors With Different Temperature

| Battery Type |        | -20°C | -10°C | 0°C | 5°C | 10°C | 20°C | 25°C | 30°C | 40°C | 45°C |
|--------------|--------|-------|-------|-----|-----|------|------|------|------|------|------|
| GEL Battery  | 6V&12V | 50%   | 70%   | 83% | 85% | 90%  | 98%  | 100% | 102% | 104% | 105% |
|              | 2V     | 60%   | 75%   | 85% | 88% | 92%  | 99%  | 100% | 103% | 105% | 106% |
| AGM Battery  | 6V&12V | 46%   | 66%   | 76% | 83% | 90%  | 98%  | 100% | 103% | 107% | 109% |
|              | 2V     | 55%   | 70%   | 80% | 85% | 92%  | 99%  | 100% | 104% | 108% | 110% |

## Discharge Current VS. Discharge Voltage

|                                 |            |                   |            |
|---------------------------------|------------|-------------------|------------|
| Final Discharge Voltage V /cell | 1.75V      | 1.70V             | 1.60V      |
| Discharge Current (A)           | (A) ≤ 0.2C | 0.2C < (A) < 1.0C | (A) ≥ 1.0C |

**Charge the batteries at least once every six months, if they are stored at 25°C.**

Charging Method:

|                  |  |
|------------------|--|
| Constant Voltage | -0.2Cx2h+14.4-14.7Vx24h, Max. Current 0.2C |
| Constant Current | -0.2Cx2h+0.1Cx12h                          |
| Fast             | -0.2Cx2h+0.2Cx6h                           |

| Bolt     | M5                    | M6               | M8                    |
|----------|-----------------------|------------------|-----------------------|
| Terminal | F3 F4 F13 F18 T25 T26 | F8 F11 F12-1 F15 | F5 F9 F10 F12 F14 F16 |
| Torque   | 6-7N-m                | 8-10N-m          | 10-12N-m              |

## Maintenance & Cautions

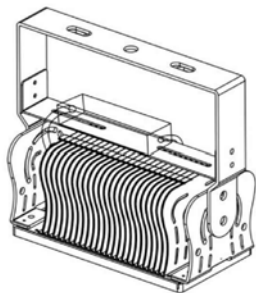
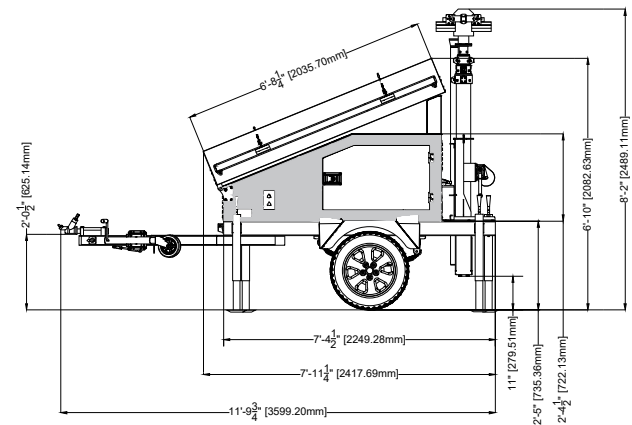
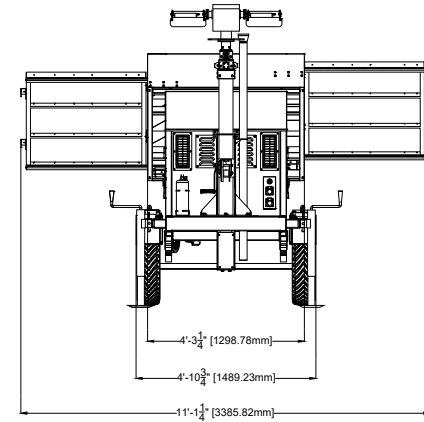
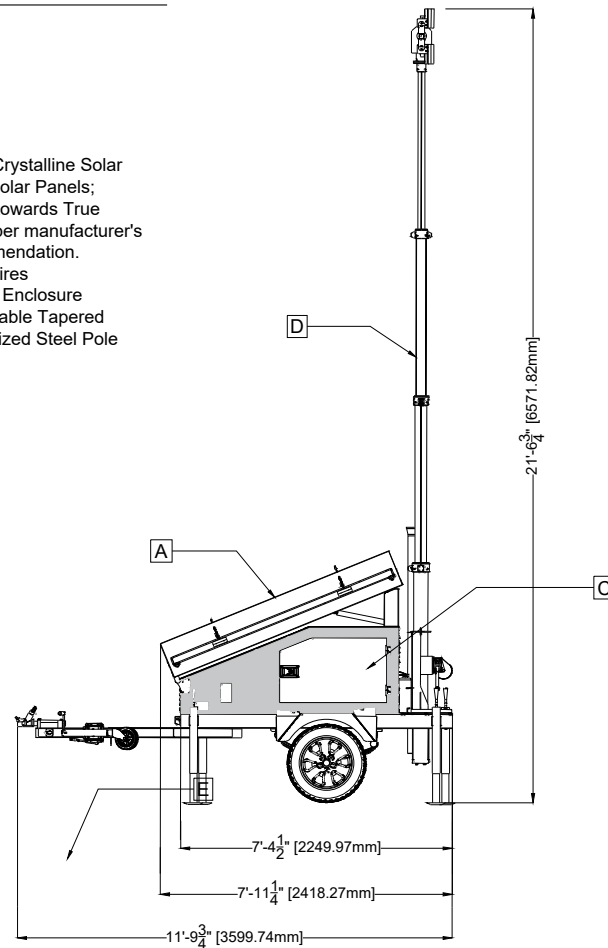
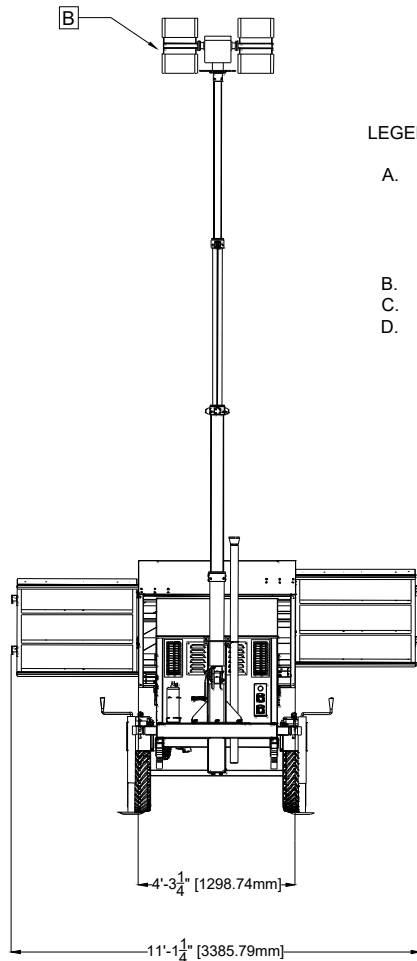
### Cycle service

- ※ Avoid battery over discharge, especially battery series connection use.
- ※ Charged with recommend voltage, ensure battery can be full recharged.
- In general, recharge capacity should be 1.1-1.15 times discharge capacity.
- ※ Effect of temperature on cycle charge voltage: -4mV/°C/Cell.
- ※ There are a number of factors that will affect the length of cyclic service.
- The most significant are depth of discharge, ambient temperature, discharge rate, and the manner in which the battery is recharged.
- Generally speaking, the most important factors is depth of discharge.

# GS-LT-200

## LEGEND

- A. Mono-Crystalline Solar Cell - Solar Panels;  
Orient towards True South per manufacturer's recommendation.
- B. Luminaires
- C. Battery Enclosure
- D. Retractable Tapered Galvanized Steel Pole



- Drawings are based using hot-dipped galvanized steel, powder coating with a thickness of 5  
 - \*EPA of the system exclude the EPA of the pole, includes the solar panels, brackets, arm and LED fixture and battery box.  
 - \*\*Wind resistance of the poles are indicative and further customization can be provided.

|                                |      |
|--------------------------------|------|
| Tilt angle of the solar panels | 30   |
| EPA (ft²)                      | 13.3 |
| Wind resistance** (mph)        | 40   |

|         |                            |
|---------|----------------------------|
| System  | Mobile Solar Tower - 3P    |
| By      | Luis Jimenez               |
| Date    | 6/9/2021                   |
| Website | www.streetlights-solar.com |



# GREENSHINE NEW ENERGY



Greenshine

## 5 YEAR LIMITED WARRANTY

Greenshine New Energy provides a 5 year limited warranty on its solar lighting system. Greenshine will, at its option, repair or replace any Greenshine system that is defective. Additionally, certain components within Greenshine's system have extended warranty protection against failure as defined below:

| COMPONENT                        | WARRANTY |
|----------------------------------|----------|
| *Solar Panel                     | 20 Years |
| Pole and Mounting Brackets       | 5 Years  |
| LED Light Fixture                | 5 Years  |
| Electronics (Controller, driver) | 5 Years  |
| **Battery                        | 5 Years  |

\* Greenshine New Energy warrants that the power output of the PV Modules will be at least 80% of the minimum Peak Power rating for 20 years, and warrants that for 20 years beginning on the Warranty Start Date, its photovoltaic modules, shall be free from defects in materials and workmanship under normal application, installation, use and service conditions.

Specific restrictions may apply due to site-specific conditions, please check quote's details for more information.

This warranty does not cover damage or malfunction, as determined by Greenshine service technicians or engineers, due to abuse, misuse, incorrect installation, or accident such as, but not limited to:

- Failure to follow storage, installation, operation, and maintenance instructions provided by Greenshine
- Vandalism, theft, lightning, flood, "Acts of God", and other problems beyond the control of Greenshine
- Unauthorized or improper repairs or adjustments including use of any replacement parts not provided by Greenshine.
- Deployed in an abnormal or inconsistent manner from Greenshine New Energy written and verbal instructions
- Greenshine New Energy liability and Purchaser's remedy under Greenshine New Energy warranty is limited to the replacement of any defective item, but under no circumstance shall exceed the purchase price of the goods. Other warranties may be available for an additional cost with additional coverage and/or labor allowance included.
- Any repair cost not approved by Greenshine New Energy will not be reimbursed.
- Purchaser is responsible for any and all costs involved to service and/or replace defective good including labor, shipping, and rental of equipment.

\*\*Greenshine New Energy provides a limited warranty for battery replacement with the following prorated coverage:

- 0 to 2 years: 100% credit (user pays 0% of the replacement battery price)
- 2 to 3 years: 60% credit (user pays 40% of the replacement battery price)
- 3 to 4 years: 40% credit (user pays 60% of the replacement battery price)
- 4 to 5 years: 20% credit (user pays 80% of the replacement battery price)