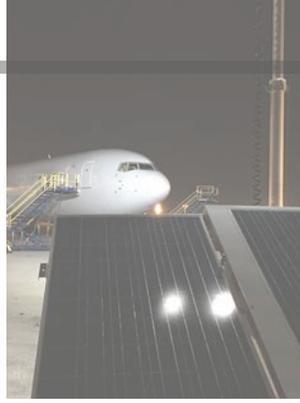




 Greenshine

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 Current	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



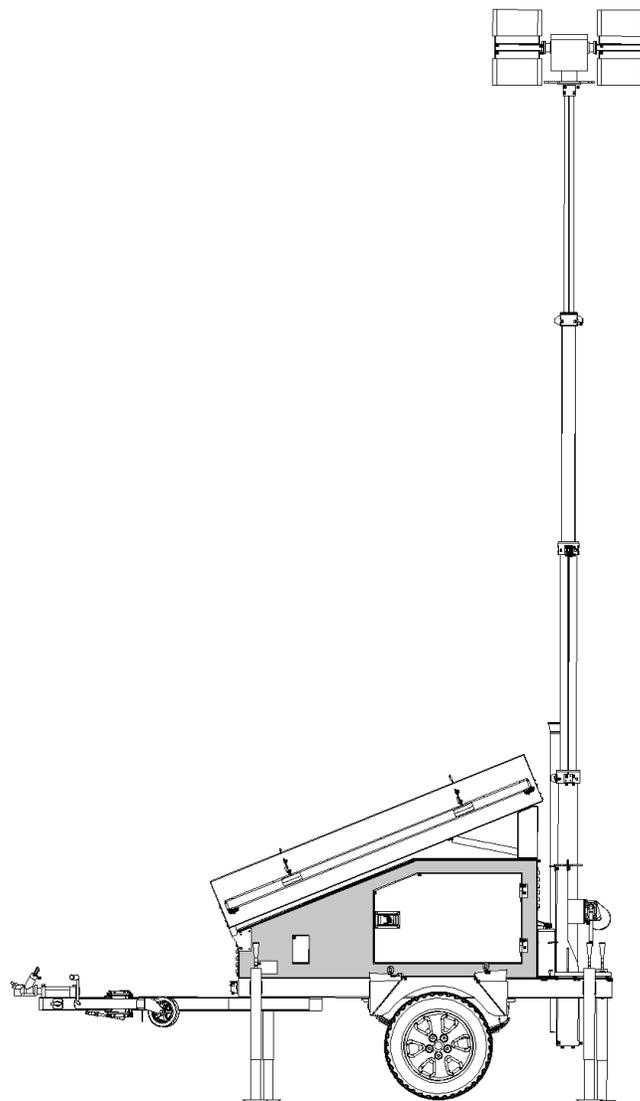
Greenshine

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

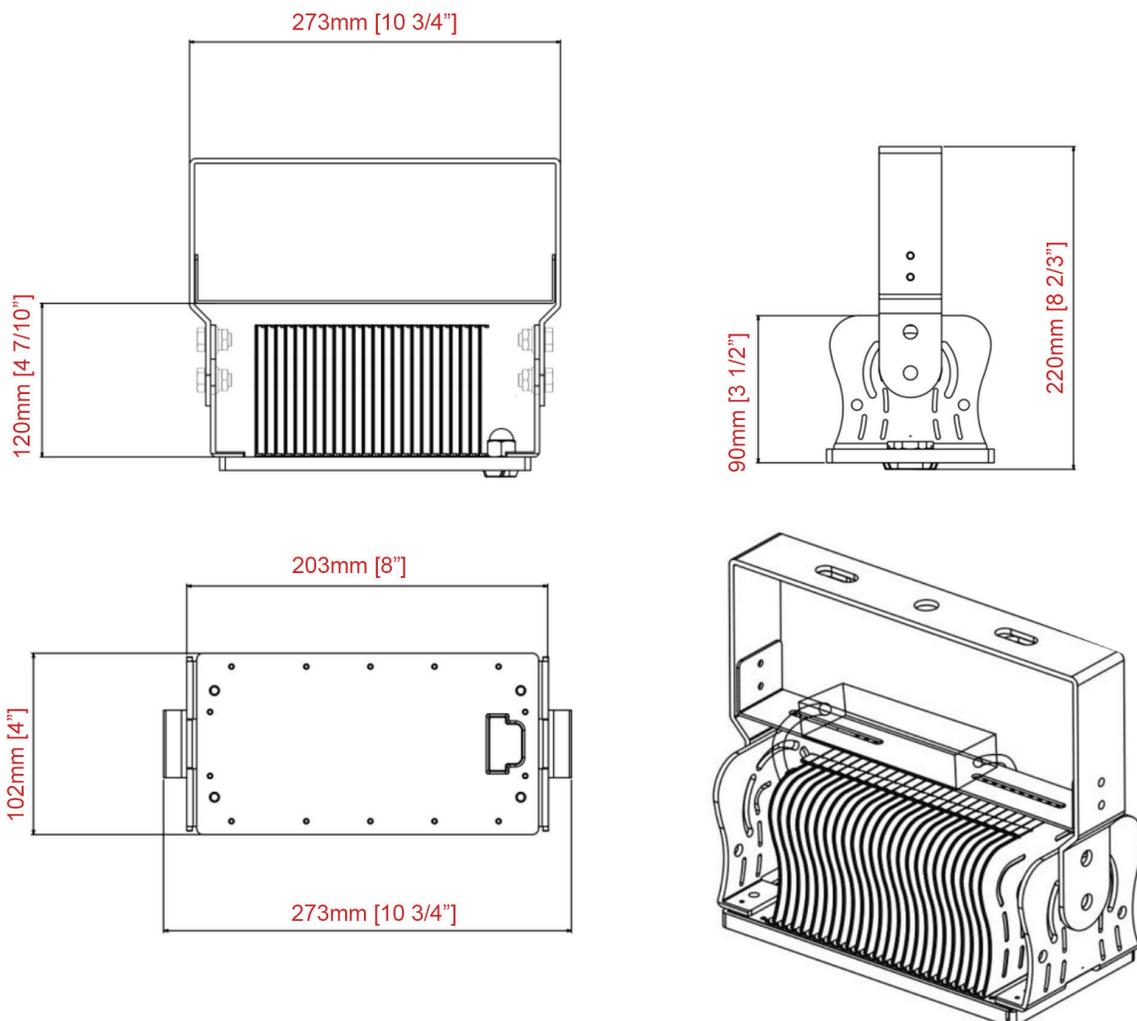


Greenshine

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



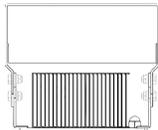
OVERVIEW

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.

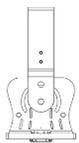
PART NUMBER: GS-LT-200

FIXTURES

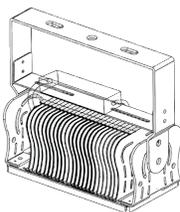
Flood Lights



FRONT VIEW
50W-100W



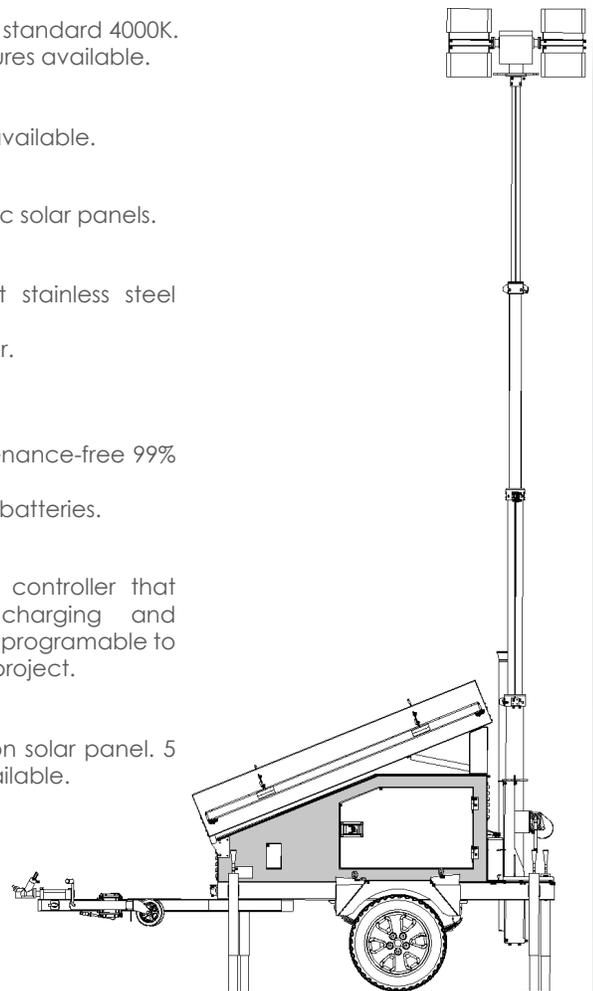
SIDE VIEW



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

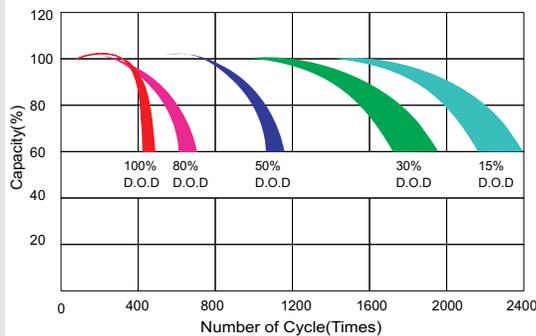
Cells per unit	6
Voltage per unit	12V
Capacity	150Ah @ 20hr-rate to 1.75V per cell @ 25°C / 77°F
Weight	46kg / 100lb
Dimensions L x W x H	483 x 170 x 240(mm) 19" x 6.7" x 9.5"
Max Discharge Current	1500A (5 Sec)
Operating Temp. range	-40°C~60°C -40°F~140°F
Flot Charging Voltage	13.6 to 13.8 VDC / unit average at 25°C / 77°F
Recommended max. charging 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 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



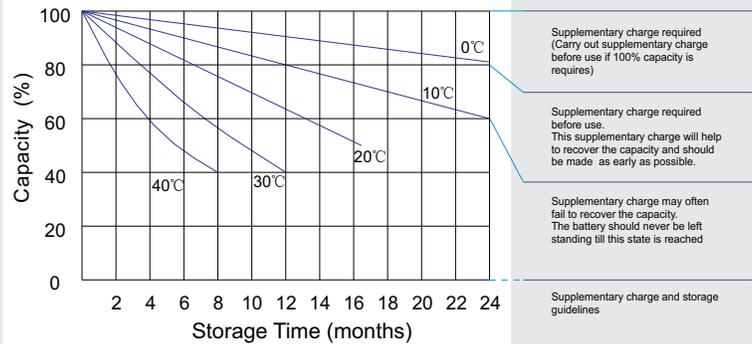
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GREENSHINE GEL-TYPE BATTERY

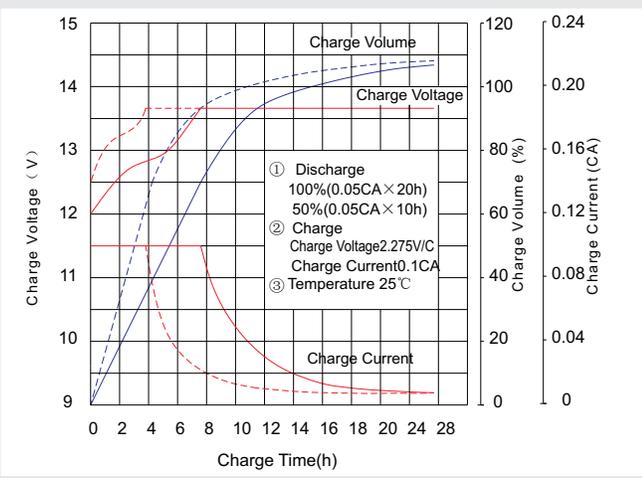
Life characteristics of cyclic use



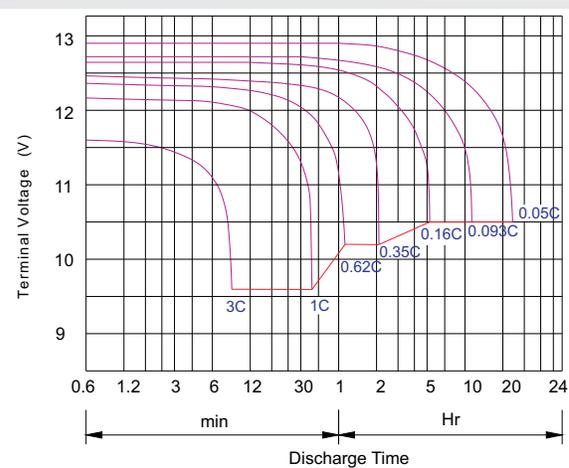
Storage characteristic



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

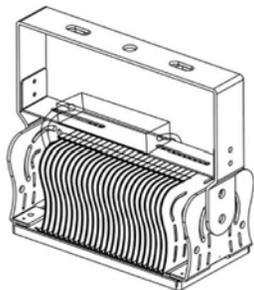
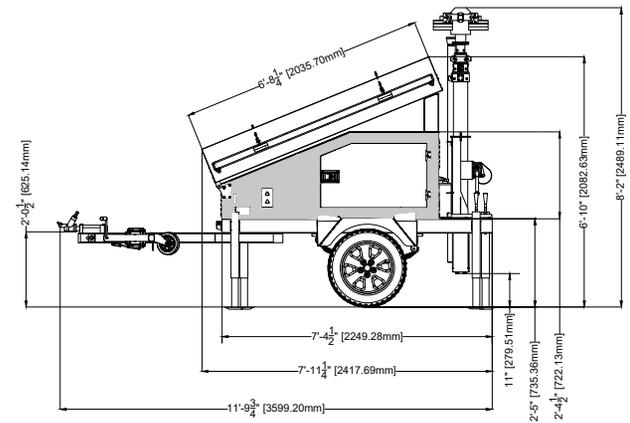
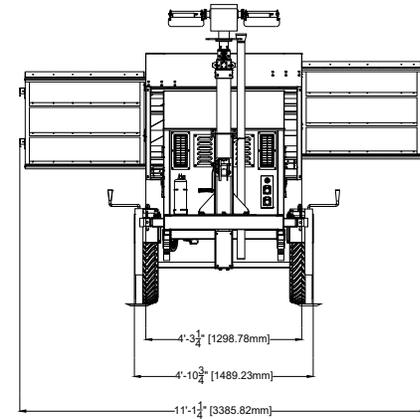
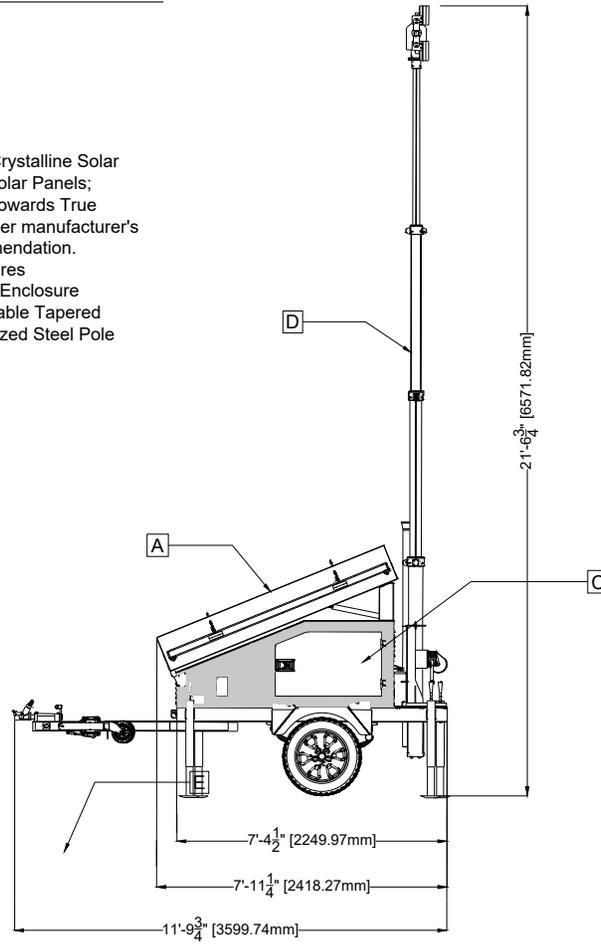
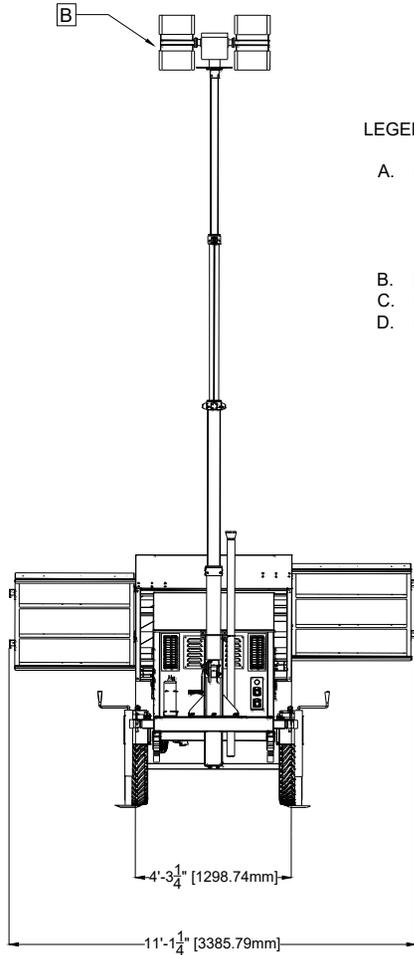
Maintenance & Cautions

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 (ft ²)	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)