



**TERRAVAN**  

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**POWER-HOUSE**

# **POWER YOUR ADVENTURE**



# Charge Me Now

Before using or storing, plug your Eclipse into the wall until it is fully charged. Keep your Eclipse plugged in when not in use to ensure it is always ready. This will NOT cause harm to your battery. For more tips and tricks on keeping your battery healthy, see the BATTERIES 101 section.

# Important Safety Instructions

Read all instructions and cautions carefully before use to avoid personal injury or damage to the unit and any connected products

**Observe all Input/Output connectors ratings:** To avoid fire or electrical shock hazard, observe all ratings on unit, and products you intend to use; check manuals for more information.

**Use in a ventilated area:** Ensure proper ventilation while in use and do not obstruct fan openings on unit. Inadequate ventilation may cause damage to the unit. Do not stack anything on top of the unit in storage or in use.

**Power supplies will get hot when in use:** Keep your Eclipse supply in a dry, well ventilated area when in use.

**DO NOT operate in wet conditions:** In order to avoid short circuits or electric shock do not allow unit to get wet. Let unit dry completely before using.

**Keep the unit clean and dry:** Inspect the unit for dirt, dust, or moisture on a regular basis.

**Shock or Fire Hazard:** This Eclipse generates the same potentially lethal AC power as a normal household wall outlet. Please use it carefully just like using a normal AC outlet on the wall. DO NOT insert foreign objects into outputs or ventilation holes. DO NOT tamper with or attempt to replace your battery. For information about a replacement battery contact the Terravan solutions center. Any manipulation to the unit or its components will void all warranties.

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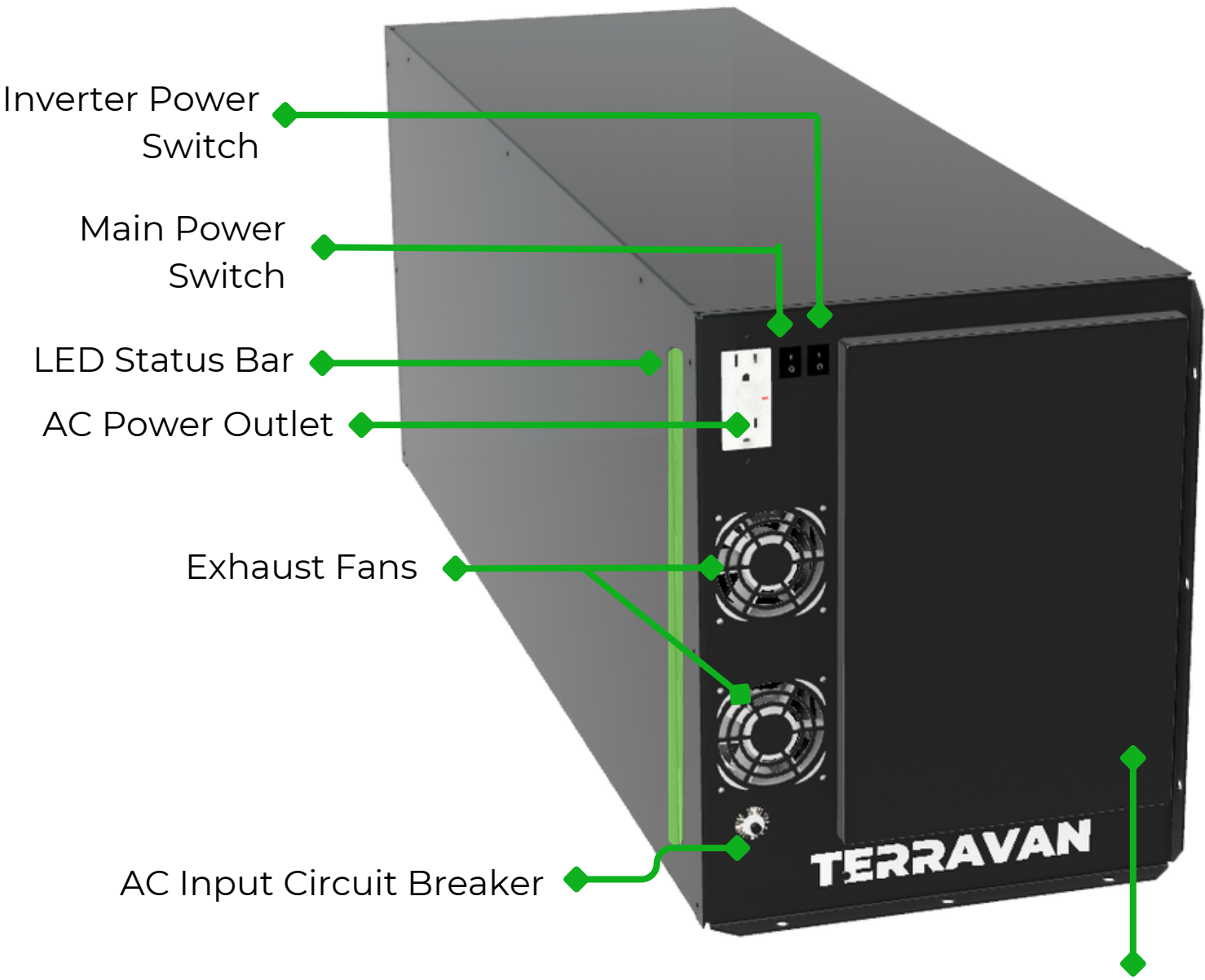
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# Get to Know Your Gear



Inverter Power Switch

Main Power Switch

LED Status Bar

AC Power Outlet

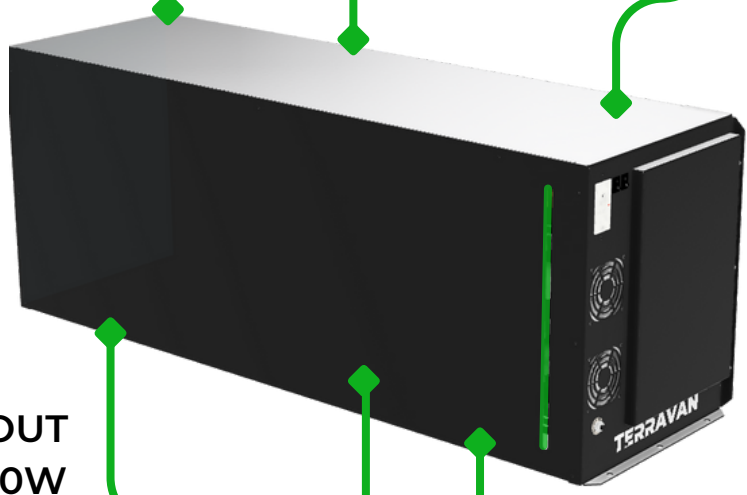
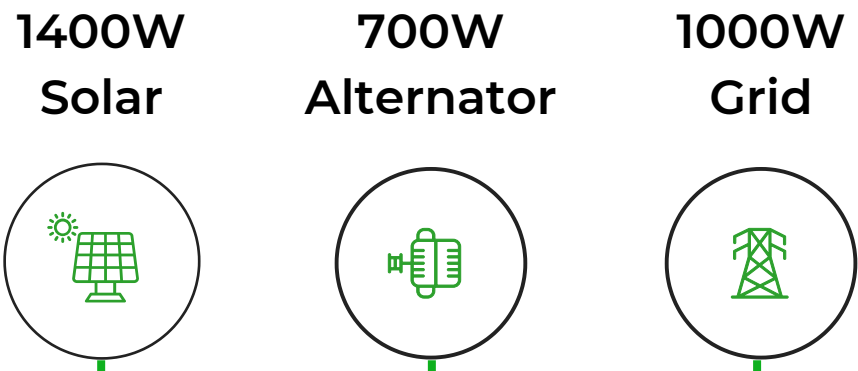
Exhaust Fans

AC Input Circuit Breaker

Customer Connection Point

# How It Works

Charge It

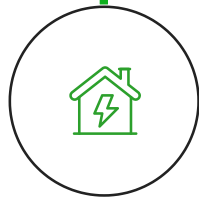


12V DC OUT  
70A / 360W

24V DC OUT  
100A / 2400W

AC 120VAC OUT  
3000W / 30A

Power It



# Charging your Eclipse Unit

**CHARGE ME NOW:** Before using or storing, plug your Eclipse into the wall until it is fully charged. Keep your Terravan Eclipse plugged in when not in use to ensure it is always ready. This will NOT cause harm to your battery. For more tips and tricks on keeping your battery healthy, see the BATTERIES 101 section

## Charging from the Wall

Using the included 120VAC cable, connect your Terravan Eclipse to a standard 120VAC outlet or shore power for a fast charge of up to 40A DC (10AC)

## Charging from Solar

Connect up to 1400W of solar power to the Terravan Eclipse solar input and the internal MPPT charger will charge the Eclipse up to 50A total charge.

## Charging from Alternator

Connect the vehicles alternator/starter battery to the Alternator input of the Terravan Eclipse. The Terravan Eclipse works with both traditional and smart alternators and will automatically detect when the vehicle's alternator is running. No ignition wire required! Get up to 50A total charge from alternator.



# Using your Eclipse Unit

How to use your Terravan Eclipse:

1. First switch the main switch to ON position
2. You'll know the unit is powered on when the LED status bar begins to illuminate green.
3. Plug in your gear for power anywhere life takes you.
4. If possible, keep your Eclipse plugged into a power source when not in use.
5. You can charge your Eclipse and run your gear at the same time.

**Best-Use Strategy:** When charging gear with your Terravan Eclipse, take note of the LED STATUS BAR. If you plug in devices that have a high power requirement (a large ac unit), the charge level of your Terravan Eclipse can drop very quickly and you may not get exactly Wh of capacity. Also, especially when using the AC power output, the Terravan Eclipse will be converting the energy from the DC power of the battery to the AC power needed by your device. Although your Eclipse has a highly efficient inverter, there is still some energy lost in the conversion and you will not get the full rated capacity of the battery. If you're experiencing shorter runtimes, you may want to check the device's power requirements, see TROUBLESHOOTING for help.

# Using your Eclipse Unit

## Cold Weather Usage:

Cold temperatures (below freezing) can impact the Eclipse's battery capacity. If you'll be out living off-grid in sub-zero conditions, we recommend running the inverter and powering something while connected to a charge source. The natural heat generated by the Eclipse will keep battery capacity at its highest. The Eclipse also supports a built-in heater add-on for charging below freezing. The heater will be powered on when the following conditions are met:

1. Battery Temperature is below freezing (0C/32F)
2. A charge source is available

This smart algorithm prevents your Terravan Eclipse from draining needlessly and also protects the batteries from charging below freezing which can cause irreversible damage to the cells.

## LED Status Bar

The LED status bar is used to indicate the current state of charge (SOC) of the battery. It is also used to indicate when the device is in over-the-air update mode with a blue color. It will also indicate when the inverter is running with a blue color.

## Storage and Downtime Maintenance

Having your Terravan Eclipse connected to a power source, like a solar panel or wall plug, between adventures or while in storage keeps its battery healthy and topped off. This prolongs battery life and will ensure your Terravan Eclipse is charged and ready to go all day, every day.

If you can't keep your Terravan Eclipse plugged into a power source during storage, fully-charge your Terravan Eclipse every 3 months and store it in a cool, dry place. If the Eclipse has not been used for several months, it may require several charge cycles to restore accurate results on the battery percent and time remaining values on the mobile app. Failure to maintain your Terravan Eclipse by following these steps can result in battery damage which will void the product warranty.

# Technical Specifications

## INVERTER CHARGER

Max Rated Power	3000VA/3000W
Input Voltage AC (Charging)	120VAC
Input/Output Frequency	50/60 Hz.
Output Voltage	120VAC +/- 5%
Output Waveform	Pure Sine Wave
Peak Efficiency	>95%
Max AC Charging Current	40A

## SOLAR CHARGER

Max PV Input/Output Power	1400W/1400W
MPPT Input Voltage Range	30-85VDC
Max PV Open Voltage	100V
Max Input Current	40A
Max Charge Current	60A

## ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-4 °F to 122 °F
Storage Temperature	32°F - 131°F
Humidity	5%-95%

## 12V AUXILIARY PORT

Nominal Voltage	12V
Max Output Current	100A
Max Output Power	1200W

## ALTERNATOR CHARGER

Max Input/Output Power	760W/760W
Voltage Input Range	10V - 18V
Max Charging Current	30A
Algorithm	Smart Isolator
Smart Alternator Support	Yes

## MECHANICAL SPECIFICATIONS

Dimensions	45" x 13" x 17" (LWH)
Weight	90 - 150 lbs.
Mounting Options	Floor/Wall Mount

## BATTERY SPECIFICATIONS

Chemistry	LifePo4
Nominal Voltage	25.6V
Capacity Standard	170Ah / 4.325kWh
Capacity Extended	340Ah / 8.7kWh
Protection	BMS + Fusing
Voltage Range	20V - 28.8V
Max Continuous Current / Power	200A / 5120W
Cycle Life	4500 Cycles
Battery Heating	Built in auto heater



# Frequently Asked Questions

My Eclipse is not responding or is exhibiting odd behavior what should I do?

Try resetting the unit by switching off the master power and wait 15 seconds before powering back on. Check your Eclipse to see if the issue is resolved after the reset.

My new Eclipse does not initially charge to 100%, it only charges to 95% what's going on?

Cycle the battery a few times and the issue should resolve itself as the Eclipse dials in its charge parameters.

Are there faster ways to recharge my Eclipse?

Yes, check out our full list of charging options at [terravansolar.com](https://terravansolar.com). Here we have options for fast charging.

There is a new version of Firmware available and I want to update my Eclipse how do I do this?

Download the Terravan app from your favorite app store and follow the instructions there for an update to your Eclipse.

Is Eclipse Expandable?

Yes, we offer expansion battery packs. Visit [terravansolar.com](https://terravansolar.com) for more information on them.

# Troubleshooting

If you are not receiving power from the output of your Terravan Eclipse, follow these steps:

1. Ensure the master switch has been turned on. The LED strip should be lit up.
2. Check the LED strip. If it is below 10% and is lit up RED, charge your Terravan Eclipse.
3. Check the LCD Display for warning icons:  
OVERLOAD: Power draw exceeds port's maximum allowance. Indicated by red light in the port's button.
4. Verify your device is suitable for use with the Terravan Eclipse:
  - a. All of the Terravan Eclipse output ports have their own max power capacity. Check the Terravan Eclipse's Tech Specs to ensure your device is compatible.
5. If you are still experiencing trouble with your Terravan Eclipse, please call our Customer Solutions Center at 571-269-0609 or by email at [info@terravansolar.com](mailto:info@terravansolar.com).

# Education

**BATTERIES 101:** Terravan utilizes the latest and greatest in battery technology to accompany you on all life's adventures. From the versatile and lightweight Lithium Ion, to the robust and powerful Lead Acid, we've compiled some helpful tips to keep your Terravan batteries working their best.

i. **Batteries need exercise.** The best thing for any battery is to use it. Don't leave the battery sitting without being charged for extended periods of time. If you will be storing the Terravan Eclipse without a charger, make sure it's fully charged before you put it away.

ii. **The "Battery Memory" myth.** Thanks to old Nickel-Cadmium (NiCd) batteries, there's a myth running around that you should completely drain your batteries before plugging them in for a recharge, called "deep cycling". Although true with NiCd batteries, the typical batteries you'll find in most of your gear today, including the advanced lithium Terravan products, require no such draining. In fact, you should avoid deep cycling your batteries – it does more harm than good in most cases.

iii. **The "Stadium Effect".** The stadium effect occurs when recharging your batteries. You'll notice your battery quickly filling up in the beginning, then slowing down noticeably when trying to charge up the last several percentages. Think of how quickly a stadium fills up when the doors first open – there are hundreds of open seats so it's easy to find the one you want. Eventually there are only a few open seats here and there and people have to maneuver around to find the spot they want and filling those seats takes longer. The same theory applies to recharging batteries. It's easy for energy to flow in and take up empty space in the beginning, and as time goes on and there is less space available, it takes longer for the energy to fill in the holes.

iv. **Read the manual.** Yeah, it might be a long read, but the manual is the best place to find the dos and don'ts for the battery in your specific device. Reading your manual will ensure you're taking steps to keep your batteries happy and healthy.

**SOLAR 101:** Terravan makes it easy to recharge your gear from the sun – we didn't invent solar power, we perfected it. Some things to keep in mind when recharging your gear with solar power:

**i. Solar panels don't store power from the sun, they collect it.**

We teach you to COLLECT – STORE – USE, which is the best way to utilize solar power to recharge your gear. COLLECT the sun's energy with a solar panel. STORE the power in a battery. USE the battery to power your gear, day or night.

**ii. Not all solar charge times are created equal.**

Most solar panel manufacturers calculate their recharge times with the following equation:  $\text{Device Watt Hours} / \text{Solar Panel Watts} = \text{Solar Recharge Times}$ . So theoretically, a 13 watt solar panel would recharge a 50 watt-hour recharger in 3.84 hours ( $50/13 = 3.84$ ) – and this is the number you could find in marketing material for a solar panel. However, in order to standardize results across all manufacturers, these tests are completed in laboratory settings. The truth is, on a good, sunny day, you'll receive about 50-75% of your solar panel's rated wattage, and this is how the engineers at T calculate the solar recharge times you see on our packaging.

**iii. Solar works, even in overcast conditions.**

Solar panels utilize IR, UV, and visible rays from the sun that can penetrate through clouds. Although the efficiency of the solar panel will decrease in cloudy conditions, you'll still be collecting valuable power from the sun.

**iv. Keep away from shade and windows.**

Although you should seek out the shade on sunny days, your solar panels will collect more power when fully exposed to the sunlight. Windows also have a habit of decreasing efficiency. So keep those panels outside and in the bright sunlight.

**v. Proper alignment works wonders.**

Keeping your solar panel angled toward the sun can dramatically increase solar efficiency. Set it up and let Mother Nature do the rest.





# Warranty and Contact

## LIMITED WARRANTY

This LIMITED WARRANTY from Terravan Solar LLC warrants to the original consumer purchaser that this Terravan product will be free from defects in workmanship and material under normal consumer use during the applicable warranty period identified in Paragraph 2, below, subject to the exclusions set forth in Paragraph 5, below. The foregoing provisions state Terravan's entire liability, and your exclusive remedy, for any breach of warranty, express or implied. Terravan will not assume, nor authorize any person to assume for it, any other liability in connection with the sales of Terravan products.

## WARRANTY PERIOD.

The warranty period for Terravan lithium battery based Eclipse products is three (3) years. The warranty period for all other Terravan products and components is one (1) year from the date of original purchase by the original consumer. A sales receipt from the original consumer purchase, or other reasonable documentary proof, is required in order to establish the start of the warranty period. If you completed the online Terravan Product Registration Form within thirty (30) days after purchasing your product, that registration can also establish the start date of the warranty period (but warranty coverage is not conditioned upon such registration).

## REMEDY

Terravan will, at its option, (1) repair the product at no charge, using new or refurbished replacement parts, or (2) exchange the product with a product that is new or which has been manufactured from new or serviceable used parts and is at least functionally equivalent to the original product. A replacement product/part assumes the remaining warranty of the original product or ninety (90) days from the date of replacement or repair, whichever provides longer coverage for you. When a product or part is exchanged, any replacement item becomes your property and the replaced item becomes Terravan's property.

## LIMITED TO ORIGINAL CONSUMER BUYER

This warranty is not transferable to any subsequent owner of a Terravan product

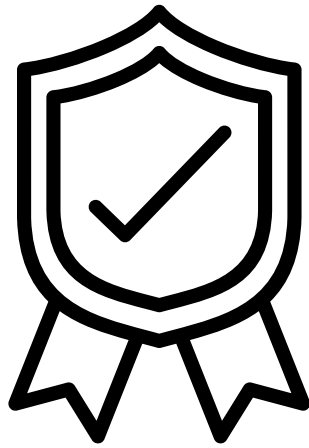
## EXCLUSIONS

This Limited Warranty applies only to hardware products manufactured by or for T that can be identified by the "TERRAVAN" trademark, trade name, or logo affixed to them. The Limited Warranty does not apply to any non-TERRAVAN products, even if packaged or sold with TERRAVAN products. Non-TERRAVAN manufacturers, or suppliers may provide their own warranties. For consumers outside of the contiguous US 48 states, a one (1) year warranty period is enforced for lithium power stations and Boulder solar panels. Claims on lithium power stations and Boulder panels from consumers outside of the contiguous 48 states after the one (1) year warranty period will be handled on a case by case basis, in compliance with local regulatory standards.

This warranty does not apply to: (i) to damage caused by accident, abuse, misuse, misapplication, or non-TERRAVAN products; (ii) to damage caused by service performed by anyone other than TERRAVAN; (iii) to a product or a part that has been modified without the written permission of TERRAVAN; (iv) to a product where any TERRAVAN serial number has been removed or defaced, or (v) to any product purchased through an online auction house. This limited warranty does not apply to any battery cell or product containing a battery cell unless the battery cell has been fully charged by you within seven (7) days after your purchase of the product and at least once every 6 months thereafter.

THIS WARRANTY AND REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, REMEDIES AND CONDITIONS, WHETHER ORAL OR WRITTEN, EXPRESS OR IMPLIED. TERRAVAN SPECIFICALLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IF TERRAVAN CANNOT LAWFULLY DISCLAIM IMPLIED WARRANTIES UNDER THIS LIMITED WARRANTY, ALL SUCH WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY. No TERRAVAN reseller, agent, or employee is authorized to make any modification, extension, or addition to this warranty. IN NO EVENT WILL TERRAVAN BE LIABLE FOR ANY DIRECT, SPECIAL, CONSEQUENTIAL OR INCIDENTAL DAMAGES ARISING FROM ANY USE OR MALFUNCTION OF ANY TERRAVAN PRODUCT, OR FROM ANY BREACH OF WARRANTY, INCLUDING DAMAGE TO OTHER DEVICES. IN NO EVENT WILL TERRAVAN'S LIABILITY FOR ANY CLAIM, WHETHER IN CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY), OR UNDER ANY OTHER THEORY OF LIABILITY, EXCEED THE AMOUNT PAID BY YOU FOR THE TERRAVAN PRODUCT. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

**OBTAINING WARRANTY SERVICE** To obtain warranty service, you must contact our customer service team via telephone at (571) 269-0609, or via email at [support@terravansolar.com](mailto:support@terravansolar.com). If our customer service team determines that this is a warranty matter, they will give you a Return Material Authorization ("RMA") number. You must properly package the product, clearly marking the RMA number on the package and including proof of your purchase date with the product. You must then send the product by mail or courier, with shipping costs paid by you, to Terravan at 235 E Broadway, Long Beach CA 90802. We will process your return and send your repaired or replacement product to you at our expense for product being shipped to locations in North America. For product purchased or being shipped outside of North America, please contact the local distributor from whom you purchased the product, or email [support@terravansolar.com](mailto:support@terravansolar.com) to obtain further distributor information.



**3 YEAR WARRANTY**

WE HOPE  
YOU HAVE  
AN AMAZING  
ADVENTURE!

**TERRAVAN**

