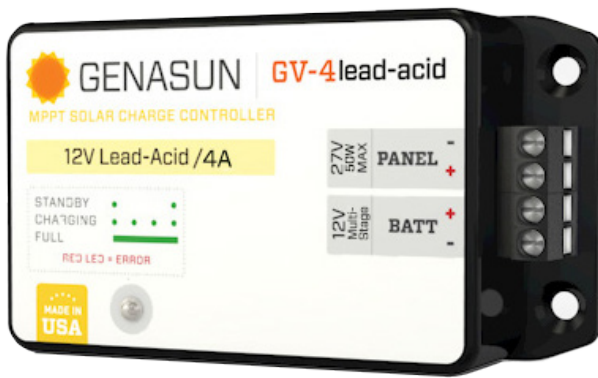




# Reliability & efficiency down to a science.

Marine | RV | Industrial | Military | Off-Grid



**Get your money's worth with Genasun.** This 50 W, 4 A, 12 V MPPT controller is small, critically efficient, and cost-effective. The GV-4 extracts more power from any given panel than a PWM controller. And though PWMs may offer a lower controller cost, Genasun MPPT controller delivers more power – reducing the cost per watt by 10%-30% and giving you more bang for your buck. Its extremely low self-consumption makes it perfect for waiting out a few bad weeks of clouds.

**GV-4**

**4 A @ 12 V MPPT 50 W**

- 99.85% peak efficiency
- No radio frequency noise
- Ultra-fast true MPP Tracking
- Excellent low-light performance
- Compact for easy installation

Take advantage of Genasun's advanced MPPT technology and enjoy more reliable power from smaller panels.



**+10%**

additional power  
in the summer.  
No panel is too  
hot to handle.



**+30%**

more power on  
those shorter,  
colder winter days.



**+50%**

increase in  
energy harvest  
from partially  
shaded panels.

Typical power gains from Genasun MPPT controllers vs the best PWM controllers available.



# Specifications:

## GV-4-Pb-12V

|                                                   |                                                |
|---------------------------------------------------|------------------------------------------------|
| Maximum Recommended Panel Power:                  | 50 W                                           |
| Rated Battery (Output) Current:                   | 4 A                                            |
| Nominal Battery Voltage:                          | 12 V                                           |
| Maximum Input Voltage:                            | 27 V                                           |
| Recommended Max Panel Voc at STC:                 | 22 V                                           |
| Minimum Battery Voltage for Operation:            | 7.2 V                                          |
| Input Voltage Range:                              | 0-27 V                                         |
| Maximum Input Short Circuit Current: <sup>1</sup> | 4 A                                            |
| Maximum Input Current: <sup>2</sup>               | 7 A                                            |
| Charge Profile:                                   | Multi-Stage with Temperature Compensation      |
| Bulk Voltage                                      | 14.4 V                                         |
| Absorption Voltage:                               | 14.2 V                                         |
| Absorption Time:                                  | 2 Hours                                        |
| Float Voltage:                                    | 13.8 V                                         |
| Re-Absorb (Re-Bulk): <sup>3</sup>                 | 12.5 V                                         |
| Charging Output Voltage Range:                    | 7.2-18 V                                       |
| Battery Temperature Compensation:                 | -28 mV/°C (referred to 25 °C)                  |
| Operating Temperature:                            | -40 °C – 85 °C                                 |
| Maximum Full Power Ambient: <sup>4</sup>          | 45 °C                                          |
| Electrical Efficiency:                            | 96% - 99.85% typical                           |
| Tracking Efficiency:                              | 99% typical                                    |
| MPPT Tracking Speed:                              | 15 Hz                                          |
| Operating Consumption:                            | 0.125 mA (125 uA)                              |
| Standby Consumption:                              | 0.09 mA (90 uA)                                |
| Connection:                                       | 4-position terminal block for 12-30 AWG wire   |
| Weight: <sup>5</sup>                              | 2.8 oz. (80 g)                                 |
| Dimensions: <sup>5</sup>                          | 4.3" x 2.2" x 0.9" (11 cm x 5.6 cm x 2.5 cm)   |
| Environmental Protection: <sup>5</sup>            | IP40, Nickel-Plated Brass & Stainless Hardware |
| Certifications:                                   | cETLus, CE, FCC, RoHS                          |
| Warranty:                                         | 5 years                                        |

(1) Panel Isc. Maximum input power and maximum input voltage requirements must also be respected.

(2) Maximum current that the controller could draw from an unlimited source. This specification is not intended for determining PV input.

(3) If the battery voltage drops below this point, the controller will attempt to run an absorption cycle. Otherwise, it will charge to the float voltage.

(4) Max ambient temperature for full operating power. Test conditions: 16 V input, 13 V output, GV-4 vertically (wall) mounted.

(5) This specification does not apply to the GV-4-PCB. The GV-4-PCB specifications are as follows: Weight: 1.02 oz (29 g); Dimensions: 3.3" x 1.9" x 0.9" (8.3 cm x 4.8 cm x 2.3 cm); Environmental Protection: IP00.