

50W Semi-Flexible Solar Panel with Integrated Charge Controller

Soltronix brings together high-efficiency SunPower monocrystalline solar cells and PowerFilm's 30-plus years delivering custom solar solutions. The 50W solar panel includes semi-flexible fiberglass backing, whole-cell design for maximum power and reliability, and an integrated PowerBoost charge controller to provide the greatest total efficiency available on the market.

The Soltronix PowerBoost series of charge controllers incorporate high efficiency DC-DC converters and a proprietary power point tracking system to optimize power collected from the solar panel and delivered to a traditional 12V battery. Designed specifically for use with solar, PowerBoost charge controllers will not overcharge and reduce the lifetime of connected batteries as do common three-stage chargers connected to solar panels.

Soltronix also provides a proprietary encapsulation stack which includes ETFE for maximum UV protection and a custom layer of four other materials to provide impact resistance and durability far above industry norms. Due to this unique stack Soltronix panels can withstand significant impacts before losing any power.

Leveraging decades of expertise in custom encapsulations and solar electronics, the 50W solar panel provides unsurpassed efficiency and reliability for your applications.

Tips For Best Use:

- Angle the solar panel toward the sun for best results
- Place in a location without shadows or shading
- Routinely clean the solar panel to ensure best performance



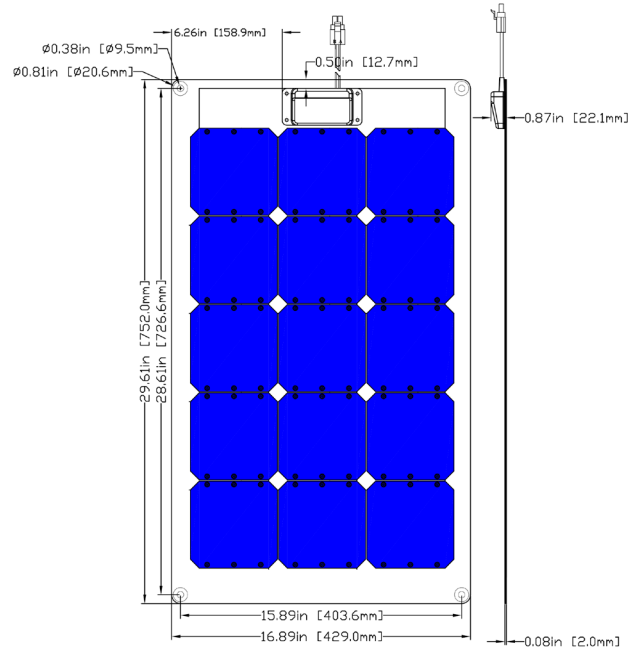
Benefits Include:

- High-efficiency SunPower cells
- Integrated PowerBoost charge controller
- Features Fixed PowerPoint Tracking (FPPT)
- Sustains damage without total power loss
- Over-charge protection
- Semi-flexible design
- Rugged encapsulation

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Electrical Characteristics

| | |
|--|-------------------------------|
| Battery Charge Type | 12V Battery (Flooded and AGM) |
| Charging Voltage | 13.8V (float) 14.5V (max) |
| Charging Efficiency | 88-91% |
| Output To PowerBoost Charge Controller | Nominally 50W |
| Effective Power To Battery | 44.3W |



Physical Characteristics

| | |
|-------------|--|
| Part Number | R3-15F13.7V |
| Dimensions | 29.6 x 17.0 x 0.1 inches 751.8 x 431.8 x 2.5 mm |
| Weight | 3.0 lbs 1.4 kg |

Thermal Characteristics

| | |
|-------------------------------------|--------------|
| Temperature Coefficient for Power | - 0.32 (%/C) |
| Temperature Coefficient for Voltage | -1.8 (mV/C) |

Connectors

Standard Connector:
Aptiv Weather Pack



Custom Connectors:
SAE
Anderson Powerpole
Barrel
Customer Specified



*NOTES:

- Panel manufacturer and advertised panel output. Plot points are calculated outputs from IV curve.
- MPPT / FPPT aren't commonly found with panels under 100W. Mpp is calculated from specs published with panel.
- Largest drop in power to battery when panel voltage is higher than battery requirement. PWM charge controllers discard power above current battery level.

Power Comparison

