

ABOUT PHONO SOLAR

Phono Solar Technology Co., Ltd. is one of the world's leading renewable energy product manufacturers and a well-trusted provider. The Phono Solar brand has become synonymous with high performing, top quality photovoltaic panels that are ideal for use in large scale power plants, commercial and residential installations.

The Enphase Microinverter is a compact unit that connects directly to Phono Solar PV modules, converting DC to AC power at source. The microinverter also sends vital health and performance information to the Enphase Envoy communications gateway.



Diamond Series

Onyx Series

HIGH PERFORMANCE AC SOLAR MODULE

250W-270W

PRODUCTIVE

- High efficiency solar module integrated with an Enphase microinverter, the world's most efficient microinverter
- High output due to excellent performance in weak-light conditions
- Each module is individually optimized
- Eliminates module mismatch loss
- Shading affects only the shaded panel, not the entire system
- M215: Peak efficiency 96.3%, CEC efficiency 96%, Euro efficiency 95.4%
- M250: Peak efficiency 96.3%, CEC efficiency 96%, Euro efficiency 96.5%

INTELLIGENT

- Performance monitoring on every module
- Issues with the array are automatically identified, diagnosed and resolved by remote trouble shooting
- Quick and simple design, installation and management
- Provides solar system performance information, analytics and automated alerts

SAFE

- No high voltage DC wiring
- Fire Prevention – no risk of DC arc faults



PV MODULE COMPLIANCE

MICRO INVERTER COMPLIANCE

VDE-0126-1-1, DK5940, C10/11, EN62109-2, G83/1-1, UL1741



MECHANICAL CHARACTERISTICS

| | |
|--------------|---|
| Solar Cells | Monocrystalline 156mm x 156mm square, 6 × 10 pieces in series |
| Dimension | Length: 1640mm (64.6 inch) |
| | Width: 992mm (39.1 inch) |
| | Height: 40mm (1.6 inch) / 75mm (2.95inch) |
| Weight | 21.6kg(47.6lbs) |
| Front Glass | 3.2mm toughened glass |
| Frame | Anodized aluminium alloy |
| Cable | 4mm ² (IEC) / 12AWG(UL), 900mm |
| Junction Box | IP 67 rated |

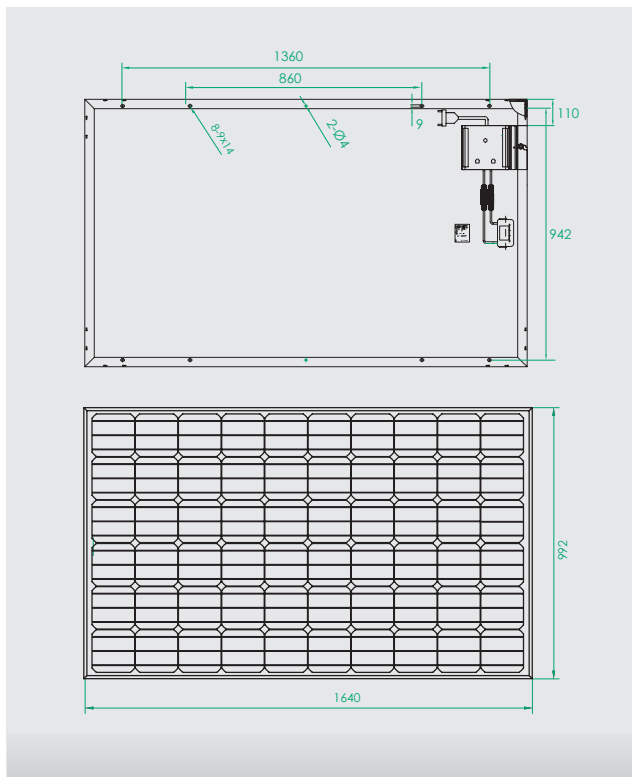
ABSOLUTE MAXIMUM RATING

| Parameter | Values |
|----------------------------------|------------------------|
| Operating Temperature | From -40 to +85°C |
| Hail Diameter @ 80km/h | Up to 25mm |
| Surface Maximum Load Capacity | Up to 5400Pa |
| Maximum Series Fuse Rating | 15A |
| IEC Application Class (IEC61730) | A |
| Fire Rating (UL 1703) | C |
| Maximum System Voltage | DC 1000V(IEC) |
| | DC 600V(UL)/1000V(ETL) |

ELECTRICAL TYPICAL VALUES^{1,2}

| Model | Rated Power (P _{mpp}) | Rated Current (I _{mpp}) | Rated Voltage (V _{mpp}) | Short Circuit Current (I _{sc}) | Open Circuit Voltage (V _{oc}) | Module Efficiency (%) |
|-------------|---------------------------------|-----------------------------------|-----------------------------------|--|---|-----------------------|
| PS250M-20/U | 250W | 8.24A | 30.4V | 8.65A | 37.9V | 15.37 |
| PS255M-20/U | 255W | 8.35A | 30.6V | 8.75A | 38.0V | 15.67 |
| PS260M-20/U | 260W | 8.46A | 30.8V | 8.85A | 38.1V | 15.98 |
| PS265M-20/U | 265W | 8.55A | 31.0V | 8.95A | 38.2V | 16.29 |
| PS270M-20/U | 270W | 8.65A | 31.2V | 9.05A | 38.3V | 16.60 |

DIMENSIONS



AC Electrical Specification

| | | |
|--|--|------------------------------|
| Maximum AC output power (-40 to 65°C) | 215W | 250W |
| Nominal output current | 0.93A | 1A |
| Nominal voltage | 230V | 240V |
| Nominal frequency | 50.0Hz | 60.0Hz |
| Power Factor | >0.95 | >0.95 |
| Maximum units per 20A branch circuit | 17 (Ph + N); 27 (3Ph + N) | 16 (Ph + N); 24 (3Ph + N) |
| Maximum output fault current | 1.05 Arms, over 3 cycles; 25.2 Apeak, 1.74ms duration | 850 mArms for 6 cycles |
| EN 50530 (EU) efficiency | 95.40% | 96.50% |
| Static MPPT efficiency (weighted, reference EN50530) | 99.60% | 99.40% |
| Communication | Power line | Power line |
| Night time power consumption | 50mW | 65 mW max |
| Operating temperature range (internal) | -40°C to + 85°C | -40°C to + 85°C |
| Cooling | Natural convection - No fans | Natural convection - No fans |
| Enclosure environmental rating | Outdoor – IP67 | Outdoor – NEMA 6 |

WEAK LIGHT PERFORMANCE

| Intensity [W/m ²] | I _{mpp} | V _{mpp} |
|-------------------------------|------------------|------------------|
| 1000 | 1 | 1 |
| 800 | 0.8 | 0.996 |
| 600 | 0.6 | 0.99 |
| 400 | 0.4 | 0.983 |
| 200 | 0.2 | 0.952 |
| 100 | 0.1 | 0.921 |

WARRANTY

MODULE-25 YEARS

INVERTER-25 YEARS (UK 20 YEARS)

Note: This publication summarizes product warranty and specifications, which are subjected to change without notice. Additional information can be found on website: www.phonosolar.com

1. Defined as standard deviation of thousands measurements. Absolute power values depend on the measuring system. They can differ by +/-5% from one measuring system to another.
2. Measurement conditions under irradiance level of Standard Test Conditions(STC): 1000W/m², Air mass 1.5 Spectrum, cell temperature of 25°C.

www.phonosolar.com

PARTNER INFORMATION

