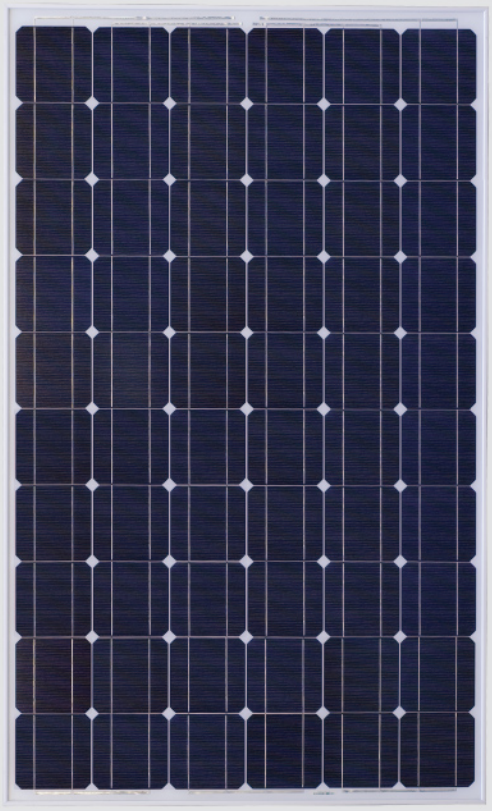
SINODEU 中德

ZD250-20M
ZD245-20M
ZD240-20M
ZD235-20M
ZD230-20M
ZD225-20M

# 230 Watt
## MONO-CRYSTALLINE SOLAR PANEL

### Features

- High conversion efficiency based on innovative photovoltaic technologies
- Withstands high wind-pressure and snow load, and extreme temperature variations
- Low voltage-temperature coefficient allows higher power output at high-temperature condition
- Outstanding low-light performance



### Quality and Safety

- 25-year power output transferable warranty
- ISO 9001:2000 (Quality Management System) and ISO 14001:2004 (Environmental Management System) certified factories manufacturing world class products
- Proven materials, tempered front glass, and a sturdy anodized aluminum frame allow modules to operate reliably in all kinds of complex configuration
- Ultra reliable bypass diodes prevent damage through overheating due to shaded or defective cells
- Innovative, environmentally packing method ensures modules arrived in perfect condition

### Recommended Applications

- Residential roof top systems
- On-grid utility systems
- On-grid commercial systems

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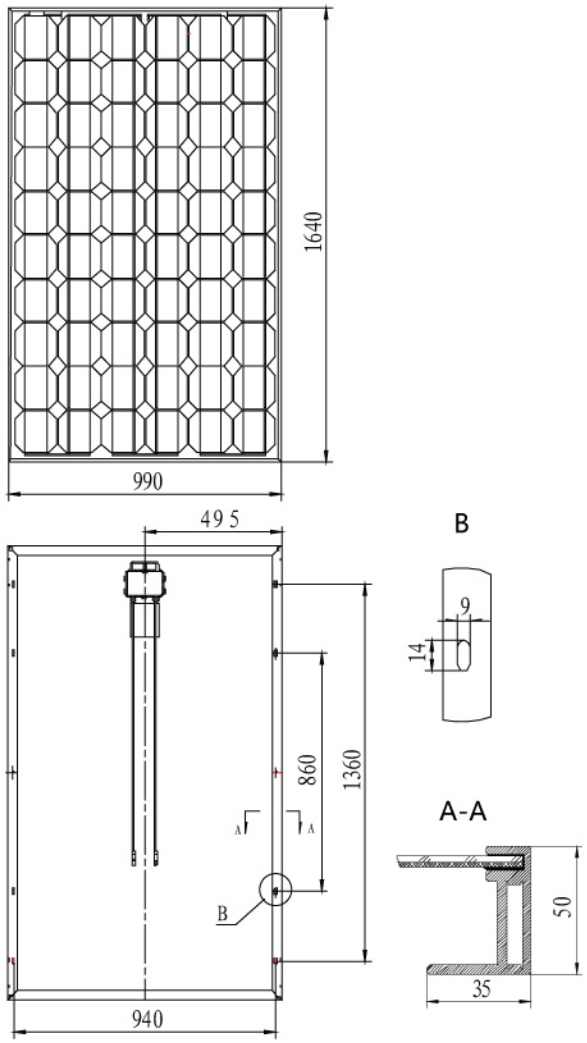
| Type | ZD250-20M | ZD245-20M | ZD240-20M | ZD235-20M | ZD230-20M | ZD225-20M |
|---|---|---|---|---|---|---|
| Maximum Power at STC (Pmax) | 250Wp | 245Wp | 240Wp | 235Wp | 230Wp | 225Wp |
| Open Circuit Voltage(Voc) | 37.3V | 37.2V | 37V | 36.8V | 36.8V | 36.7V |
| Short-Circuit Current(Isc) [A] | 8.78A | 8.69A | 8.62A | 8.54A | 8.45A | 8.36A |
| Optimum Operating Voltage(Vmp) [V] | 30.1V | 30V | 29.8V | 29.6V | 29.5V | 29.3V |
| Optimum Operating Current(Imp) [A] | 8.31A | 8.17A | 8.06A | 7.94A | 7.8A | 7.68A |
| Temperature range | – 40 °C to + 90 °C | – 40 °C to + 90 °C | – 40 °C to + 90 °C | – 40 °C to + 90 °C | – 40 °C to + 90 °C | – 40 °C to + 90 °C |
| Maximum system voitage | 1000V | 1000V | 1000V | 1000V | 1000V | 1000V |
| Maximum Series Fuse Rating | 15A | 15A | 15A | 15A | 15A | 15A |
| Power Tolerance | ±3% | ±3% | ±3% | ±3% | ±3% | ±3% |




## Mechanical Characteristics

| | |
|---|---|
| Solar Cell | monocrystalline solar cells (156mm×156mm) |
| No. of Cells | 6×10 pieces |
| Dimension | 1640×990mm (L×W) |
| Front glass | White toughened safety glass, 3.2 mm |
| Frame | Anodised aluminium profile |
| Junction box | with 6 bypass diodes |
| Cable | length 900 mm, 1×4 $mm^2$ |
| Cell encapsulation | EVA (Ethylene-Vinyl-Acetate) |
| Back | composite film |
| Maximum surface load capacity | tested up to 2,400 Pa according to IEC 61215 (advanced test) |
| Hail | maximum diameter of 25 mm with impact speed of 23 $m \cdot s^{-1}$ |

## Temperature Coefficients

| | |
|---|---|
| Nominal Operating Cell Temperature(NOCT) | 45°C±2°C |
| Voltage temperature coefficients | -0.37%/K |
| Current temperature coefficients | +0.03%/K |
| Power temperature coefficients | -0.52%/K |

The electrical data relates to standard test conditions [STC]: 1,000 $W/m^2$; AM 1,5; 25°C.
Performance deviation of Pmpp: -/+ 3%. performance deviation of Voc[V],Isc[A],Vmpp [V] and Impp [A]: -/+ 10%.
Certified in accordance with IEC 61215, and IEC 61730-1/2.

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