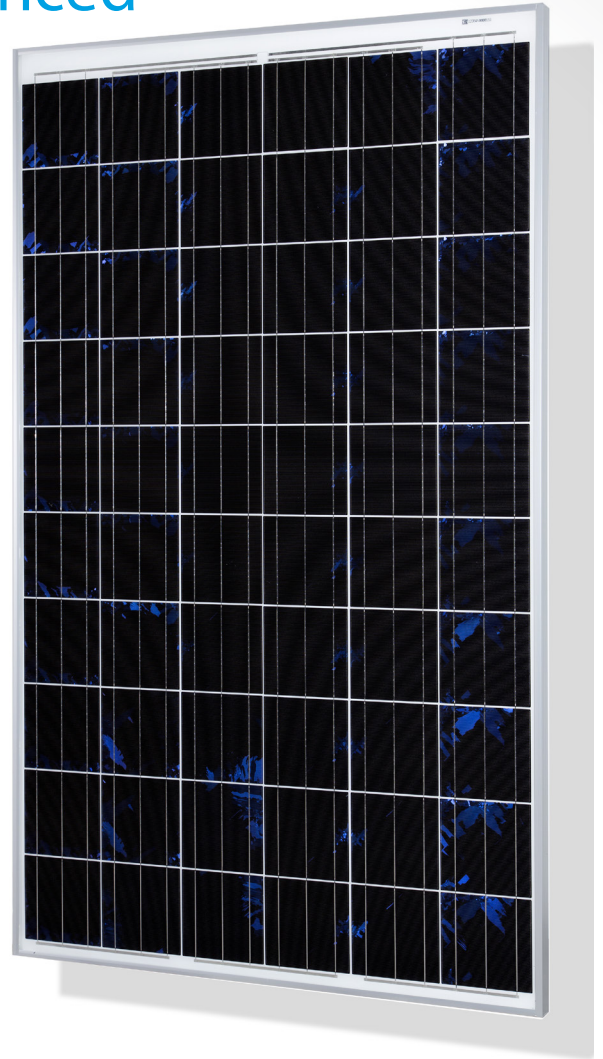


Photowatt® PW2450F

Crystal Advanced®



▶ The high quality photovoltaic module

PW2450F Crystal Advanced® PV module benefits from the latest innovations developed by Photowatt®. This patented Crystal Advanced® technology significantly improves the crystallization process ensuring a best-in-class quality of the solar cells. The major steps of manufacturing are exclusively performed in France, with the most reliable components on the market.

60 CELLS
MULTICRYSTALLINE MODULE



285-265 Wp
TYPICAL POWER



17,2%
TYPICAL EFFICIENCY

CO₂
LOW-CARBON



0/+5 Wp
POWER TOLERANCE



ENVIRONMENTAL STANDARDS

- Meet the most demanding standards of the industry (ISO 14001)
- Co-founder of PV-CYCLE France for recycling used panels
- Priority to drastically limiting the carbon footprint

DURABILITY AND PERFORMANCE

- Modules certified by international laboratories (VDE)
- Anti-reflective coated glass to maximize power output
- Cells' sorting according to reverse current and shunt resistance

RELIABILITY

- 100% electroluminescence (EL) testing process
- Reliability tests extended up to 2 times vs. IEC standards
- Calibration controls performed by independent laboratories

HIGHLY RESISTANT AND LIGHT FRAMING

- High resistance to snow (4500 Pa) and wind load (2400 Pa)
- Module weight for easy handling



MECHANICAL CHARACTERISTICS

| | |
|----------------|--|
| Cell type | Multicrystalline |
| Module size | 1685 x 993 x 40 mm |
| Cell size | 156 x 156 mm (± 1%) |
| Cells number | 60 (6x10) |
| Module weight | 20 kg |
| Front cover | 3.2 mm anti-reflected tempered glass |
| Back cover | With Tedlar* |
| Frame material | Anodized aluminum alloy |
| J-BOX | IP 65 |
| Solar cables | UV resistant, 4.0 mm ² , 1100mm |
| Connector type | MC4 or MC4 compatible |

OPERATING CONDITIONS

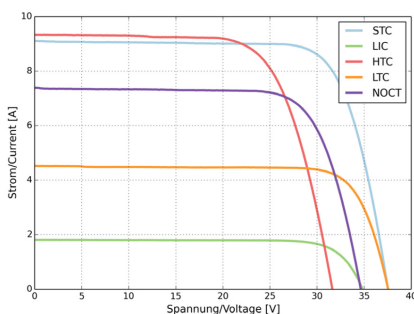
| | |
|---------------------------------------|----------------------------------|
| Operating temperature | -40°C à +85°C |
| High resistance to snow and wind load | 5400 Pa (Snow) 2400 Pa (Wind) |
| Reverse current I _R | 20A |
| Maximum system voltage | 1000V DC (IEC) |
| Maximal serie fuse rating | 15A |
| PID | Free |

TEMPERATURE COEFFICIENT *

| | | |
|--|----|------------|
| Typical cells temperature NOCT | °C | 47,3 (±2) |
| Temperature coefficient P _{max} | γ | -0,42 %/°C |
| Temperature coefficient V _{oc} | β | -0,34 %/°C |
| Temperature coefficient I _{sc} | α | +0,06 %/°C |

*1000 W/m²; temperature 25°C; spectrum AM 1,5

TEMPERATURE CURVES



TECHNICAL CHARACTERISTICS (STC*)

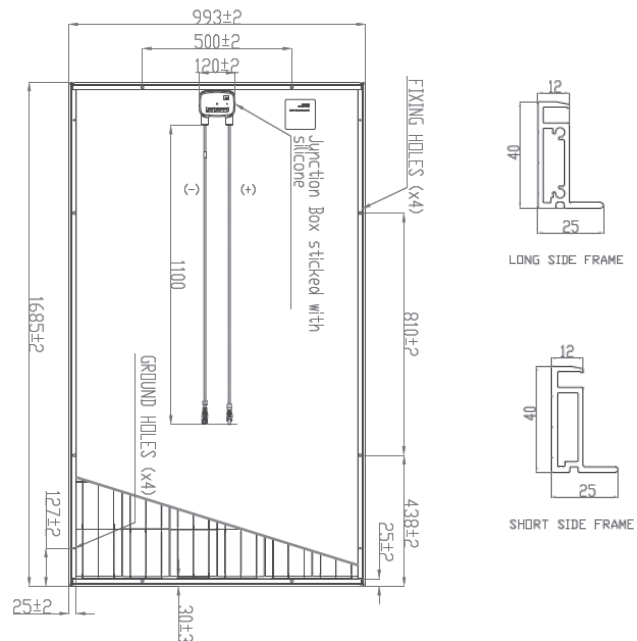
| | | | | | | |
|------------------------------|---|------|------|------|------|------|
| Typical power | W | 285 | 280 | 275 | 270 | 265 |
| Power tolerance | W | 0/+5 | 0/+5 | 0/+5 | 0/+5 | 0/+5 |
| Voltage at typical power | V | 31.4 | 31.0 | 30.9 | 30.8 | 30.8 |
| Current at typical power | A | 9.10 | 9.00 | 8.90 | 8.80 | 8.60 |
| Open circuit voltage | V | 38.6 | 38.4 | 38.2 | 38.1 | 38.0 |
| Short circuit current | A | 9.55 | 9.50 | 9.40 | 9.30 | 9.10 |
| Module conversion efficiency | % | 17.2 | 16.9 | 16.6 | 16.3 | 16.0 |

*Under Standard Test Conditions : STC
(1000 W/m²; spectrum AM 1,5; cells temperature 25°C)

TECHNICAL CHARACTERISTICS (NOCT*)

| | | | | | | |
|--------------------------|---|------|------|------|------|------|
| Typical power | W | 285 | 280 | 275 | 270 | 265 |
| Maximum power | W | 203 | 200 | 197 | 194 | 191 |
| Voltage at maximum power | V | 29.0 | 28.8 | 28.6 | 28.4 | 28.2 |
| Current operating income | A | 7.20 | 7.10 | 7.00 | 6.90 | 6.80 |
| Open circuit voltage | V | 35.2 | 35.1 | 35.0 | 34.9 | 34.8 |
| Short circuit current | A | 7.80 | 7.70 | 7.60 | 7.50 | 7.40 |

*Nominal Operating Cell Temperature : NOCT
(800 W/m²; temperature 20°C; wind speed 1 m/s)



WARRANTY

| | |
|-------------------------------|----------|
| Product warranty | 10 years |
| Linear power output warranty* | 25 years |

*See general warranty terms and conditions

QUALITY CERTIFICATES

