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EnergyPal

Solar Panel Guide Specification Data Sheet

Sky Energy Indonesia

ST48M185-220

ST48M220





Also available on the web at
EnergyPal.com/sky-energy-indonesia-solar-panels/st48m220

SOLAR MODULES

Features & Performance





Our PV modules have been certified by the TUV, CE, CSA; SKY ENERGY is certified by ISO9001, ISO14001, OHSAS18001 etc. As a leading PV manufacturer in Indonesia, our prioritized goal is to keep developing and producing high quality and high efficiency modules.


-  **Maximum Power: 220Wp**
-  **Module Efficiency: 16.84%**
-  **Product Warranty: 10 years**
-  **Power Warranty: 10 years $\geq 90\%$
25 years $\geq 80\%$**

ST48M220/215/210
ST48M205/200/195
ST4M190/185


Mechanical Property

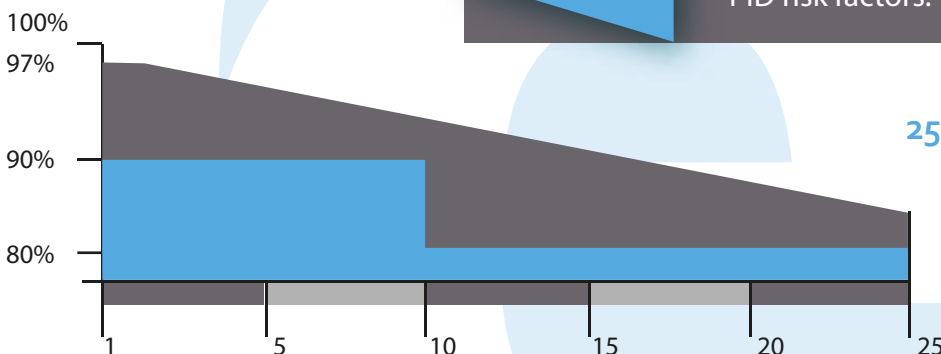
-  Snow loads up to 5400Pa
-  Wind loads up to 2400Pa

Low Light Performance

-  Excellent performance under low light (morning, evening and cloudy days)

High Durability

-  Durable PV modules, independently tested for harsh environmental conditions, such as exposure to salt mist, ammonia and known PID risk factors.



25 Years Linear Warranty



Electrical Performance (STC : AM 1.5, 1000W/m², 25°C)

| Module Type | ST48M220 | ST48M215 | ST48M210 | ST48M205 | ST48M200 | ST48M195 | ST48M190 | ST48M185 |
|---------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| Maximum Power (Pmax / W) | 220 | 215 | 210 | 205 | 200 | 195 | 190 | 185 |
| Power Tolerance | 0 ~ +3% | | | | | | | |
| Maximum Power Voltage (Vm / V) | 25.8 | 25.3 | 25.0 | 24.8 | 24.5 | 24.3 | 24.1 | 23.8 |
| Maximum Power Current (Im / A) | 8.55 | 8.51 | 8.43 | 8.28 | 8.19 | 8.06 | 7.91 | 7.78 |
| Open Circuit Voltage (Voc / V) | 30.6 | 30.3 | 30.2 | 30.0 | 29.9 | 29.7 | 29.6 | 29.2 |
| Short Circuit Current (Isc / A) | 9.21 | 9.07 | 8.97 | 8.86 | 8.82 | 8.77 | 8.70 | 8.68 |
| Module Efficiency (%) | 16.84 | 16.45 | 16.07 | 15.69 | 15.30 | 14.92 | 14.54 | 14.16 |

Electrical Performance (NOCT : wind speed 1m/s, 800W/m², 20°C)

| Module Type | ST48M220 | ST48M215 | ST48M210 | ST48M205 | ST48M200 | ST48M195 | ST48M190 | ST48M185 |
|---------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| Maximum Power (Pmax / W) | 161 | 157 | 153 | 150 | 146 | 142 | 139 | 135 |
| Maximum Power Voltage (Vm / V) | 23.4 | 23.0 | 22.7 | 22.5 | 22.2 | 22.0 | 21.9 | 21.6 |
| Maximum Power Current (Im / A) | 6.86 | 6.83 | 6.76 | 6.64 | 6.57 | 6.46 | 6.34 | 6.24 |
| Open Circuit Voltage (Voc / V) | 28.3 | 27.9 | 27.8 | 27.6 | 27.5 | 27.3 | 27.2 | 26.9 |
| Short Circuit Current (Isc / A) | 7.45 | 7.33 | 7.25 | 7.16 | 7.13 | 7.09 | 7.03 | 7.02 |

Mechanical Properties

| | |
|-------------------------|----------------------------------|
| Dimensions (LxWxH / mm) | 1320x990x35 |
| Weight (Kgs) | 13.6 |
| Solar Cells | Monocrystalline 156x156mm |
| No. of Cells | 48 (6x8) |
| Glass | 3.2mm low-iron tempered glass |
| Frame | Anodized aluminum alloy |
| Junction box | IP 65 above, 3 bypass diode |
| Cables | 4mm ² , length 1000mm |
| Connectors | IP67, MC4 compatible |

Operation Conditions

| | |
|-----------------------------------|-----------------------|
| Maximum System Voltage (VDC) | 1000 (IEC) / 600 (UL) |
| Maximum Series Fuse Rating (A) | 15 |
| Operating Module Temperature (°C) | -40 to +85 |

Temperature Properties

| | |
|-----------------------------------|-------------|
| Normal Operating Cell Temperature | 45±2 °C |
| Temperature Coefficient of Pm | -0.38 %/°C |
| Temperature Coefficient of Voc | -0.356 %/°C |
| Temperature Coefficient of Isc | +0.056 %/°C |

System Design

| | |
|------------------------------|------------------|
| Hail safety impact velocity | D 25mm at 23mm/s |
| Static Load (Front/Back) | 5400Pa/2400Pa |
| Application class | Class A |
| Fire safety class (IEC61730) | Class C |

Packing Configuration

| | | |
|-----------------------|------|-------|
| Container Sizes | 20GP | 40HC |
| Pieces per pallet | 28 | 28/33 |
| Pallets per Container | 16 | 16+16 |
| Total pieces | 448 | 976 |

