

**For a Free Quote:**

**Web: [EnergyPal.com/solar](http://EnergyPal.com/solar)**

**Call: 1-800-990-3725**

**Email: [contact@energypal.com](mailto:contact@energypal.com)**

# **EnergyPal**

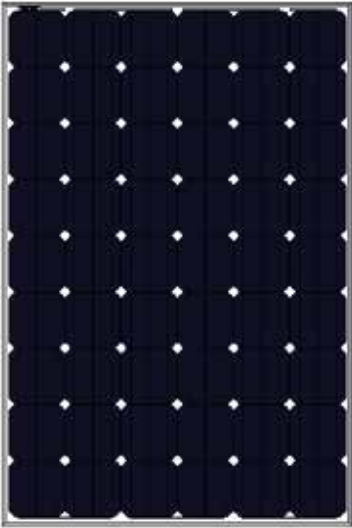
## **Solar Panel Guide Specification Data Sheet**

**Sky Energy Indonesia  
ST54M210-245  
ST54M220**





Also available on the web at  
[EnergyPal.com/sky-energy-indonesia-solar-panels/st54m220](http://EnergyPal.com/sky-energy-indonesia-solar-panels/st54m220)

## 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: 245Wp**
-  **Module Efficiency: 16.72%**
-  **Product Warranty: 10 years**
-  **Power Warranty: 10 years  $\geq 90\%$   
25 years  $\geq 80\%$**

ST54M245/240/235  
ST54M230/225/220  
ST54M215/210


#### Mechanical Property

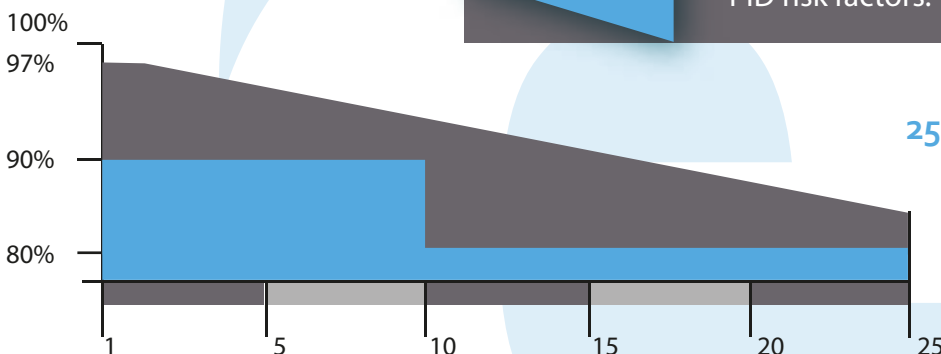
-  Snow loads up to 5400Pa
-  Wind loads up to 2400Pa

#### 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/m<sup>2</sup>, 25°C)

Module Type	ST54M245	ST54M240	ST54M235	ST54M230	ST54M225	ST54M220	ST54M215	ST54M210
Maximum Power (Pmax / W)	245	240	235	230	225	220	215	210
Power Tolerance	0 ~ +3%							
Maximum Power Voltage (Vm / V)	28.7	28.4	28.1	27.8	27.5	27.4	27.2	27.0
Maximum Power Current (Im / A)	8.55	8.47	8.39	8.28	8.19	8.06	7.91	7.79
Open Circuit Voltage (Voc / V)	34.1	34.0	33.9	33.8	33.6	33.4	33.2	33.1
Short Circuit Current (Isc / A)	9.21	9.02	8.93	8.86	8.82	8.77	8.70	8.64
Module Efficiency (%)	16.72	16.38	16.04	15.70	15.36	15.02	14.67	14.33

### Electrical Performance (NOCT : wind speed 1m/s, 800W/m<sup>2</sup>, 20°C)

Module Type	ST54M245	ST54M240	ST54M235	ST54M230	ST54M225	ST54M220	ST54M215	ST54M210
Maximum Power (Pmax / W)	179	175	172	168	164	161	157	153
Maximum Power Voltage (Vm / V)	26.1	25.8	25.5	25.3	25.0	24.9	24.7	24.5
Maximum Power Current (Im / A)	6.86	6.79	6.72	6.64	6.57	6.46	6.34	6.25
Open Circuit Voltage (Voc / V)	31.4	31.3	31.2	31.1	30.9	30.7	30.6	30.4
Short Circuit Current (Isc / A)	7.45	7.29	7.21	7.16	7.13	7.09	7.03	6.98

### Mechanical Properties

Dimensions (LxWxH / mm)	1480x990x35
Weight (Kgs)	15.5
Solar Cells	Monocrystalline 156x156mm
No. of Cells	54 (6x9)
Glass	3.2mm low-iron tempered glass
Frame	Anodized aluminum alloy
Junction box	IP 65 above, 3 bypass diodes
Cables	4mm <sup>2</sup> , 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	14	15+15
Total pieces	392	915

