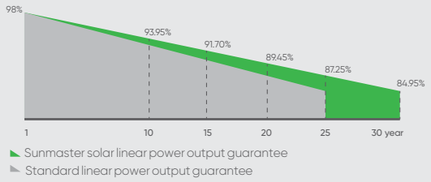
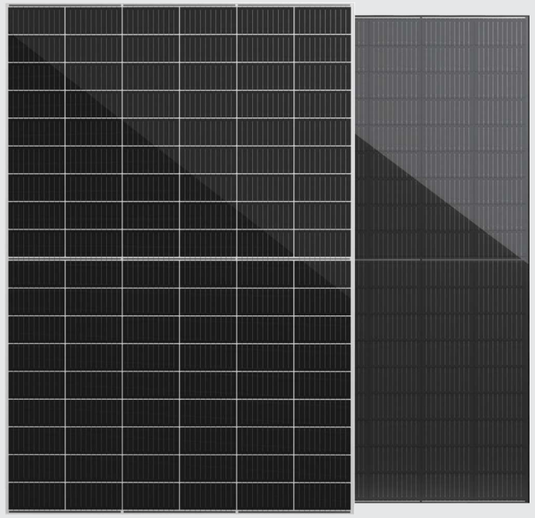
SunMaster 5

SM520-545W(108)

210mm Cells Mono PERC with MBB & Half-cut Technology

Quality Guarantee





Standard All Black

520-545W

-0.55% power attenuation

30years Power warranty

Comprehensive Products and System Certificates

IEC 61215 / IEC 61730 / CE / INMETRO

ISO 9001-

2015/Quality management system

ISO 14001-

2015/Standards for environmental management system

ISO 45001-

2018/International standards for occupational health & safety

Key Features

Optimal Process Design
166mm+9BB+Half-cut, higher power output

Select Grade A Crystalline Silicon Solar Cells
Grade A crystalline silicon solar cells make high-power output with cost-effective

Stable Generation Performance
Power attenuation:first year ≤2%, 0.55% per year from 2-25

Process Upgraded
Lower risk of hot spot and stronger anti-PID ability

Higher Power Gains and Lower Losses
Excellent low irradiance performance and low shadow loss

Strong Environmental Adaptability and Great Durability
Certified by Dust-Sand, Salt-Mist, Ammonia etc. weather resistance tests and enhanced mechanical load: wind load (2400 Pa) and snow load (5400 Pa)

Mechanical Characteristic

Cell type	Monocrystalline PERC 210*105mm
Number of cells	108 (6*18)
Module dimensions	1960x1303x35mm (77.17x51.30x1.38inches)
Weight	26kg (57.72lbs)
Front cover	3.2mm(0.13inches) tempered glass with AR coating
Frame	Anodized aluminum alloy
Junction box	≥IP68 & UL
Cable	4mm² (0.006inches²), Portrait: 300mm (11.81inches); Landscape: 1200mm (47.24inches)
Connector	MC4 or MC4 compatible

Temperature Characteristics

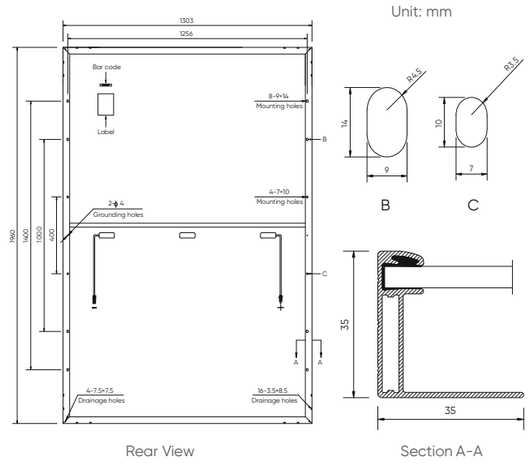
Nominal Operating Cell Temperature (NOCT)	43°C±2°C
Temperature Coefficients of Pmax	-0.36% /°C
Temperature Coefficients of Voc	-0.28% /°C
Temperature Coefficients of Isc	0.05% /°C

Packaging

Standard packaging	31pcs/pallet
Module quantity per 20'container	248pcs
Module quantity per 40'container	527pcs(HQ)

Engineering Drawings

Unit: mm



Specifications in this datasheet are subject to change without prior notice.

Electrical Characteristics at STC

Maximum Power (Pmax)	520W	525W	530W	535W	540W	545W
Open Circuit Voltage (Voc)	36.9V	37.1V	37.3V	37.5V	37.7V	37.9V
Short Circuit Current (Isc)	18.2A	18.25A	18.30A	18.35A	18.40A	18.45A
Voltage at Maximum Power (Vmp)	30.5V	30.7V	30.9V	31.1V	31.3V	31.5V
Current at Maximum Power (Imp)	17.05A	17.11A	17.16A	17.21A	17.26A	17.31A
Module Efficiency(%)	20.36	20.56	20.75	20.95	21.14	21.34
Operating Temperature	-40°C to +85°C					
Maximum System Voltage	1000V DC/1500V DC					
Fire Resistance Rating	Type 1(in accordance with UL1703)/Class C(IEC61730)					
Maximum Series Fuse Rating	30A					

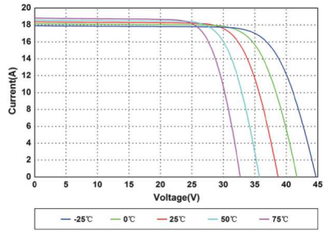
STC Irradiance 1000W/m2, Cell temperature 25°C, AM1.5; Tolerance of Pmax ±3%; Measurement Tolerance ±3%

Electrical Characteristics at NOCT

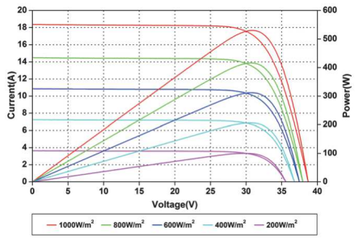
Maximum Power (Pmax)	390W	394W	398W	402W	406W	410W
Open Circuit Voltage (Voc)	34.0V	34.2V	34.4V	34.6V	34.8V	35.0V
Short Circuit Current (Isc)	14.75A	14.79A	14.83A	14.87A	14.91A	14.95A
Voltage at Maximum Power (Vmp)	27.8V	28.0V	28.2V	28.4V	28.6V	28.8V
Current at Maximum Power (Imp)	14.03A	14.08A	14.12A	14.16A	14.20A	14.24A

NOCT: Irradiance 800W/m2, Ambient temperature 20°C, Wind Speed 1m/s

IV Curves



Current-Voltage and Power-Voltage Curves at Different Irradiances



Current-Voltage Curves at Different Temperatures