SUNRISE

SUNRISE HK INTERNATONAL CORP. LTD

550WMBB

Mono Half-cut Single/Double Glass Module

525-550/MB Series

INTRODUCTION

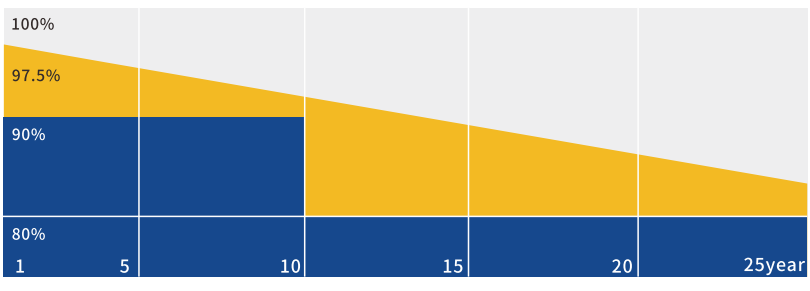
MONO half-cut single / double glass module, assembled with multi-busbar PERC technique and half-cut structure, which can not only absorb the energy from the front of the module, but also absorb the reflected light and the scattered light from the back, offer the advantages of higher power output, reduce shading effect on the energy generation, enhance the mechanical load bearing capacity as well.

LCOE save 6-8%

- ↓6% Saving logistics cost
- ↓7% Saving cable cost
- ↓8% Saving bracket cost
- ↓9% Saving labor cost

First-class Quality Assurance

- 10-year warranty for material and technology
- 25-year linear power output warranty



Comprehensive Certificates

- IEC61215, IEC61730
- ISO9001:2015 Quality management systems
- ISO45001:Environmental management systems
- ISO45001:2018Occupational health and safety management systems

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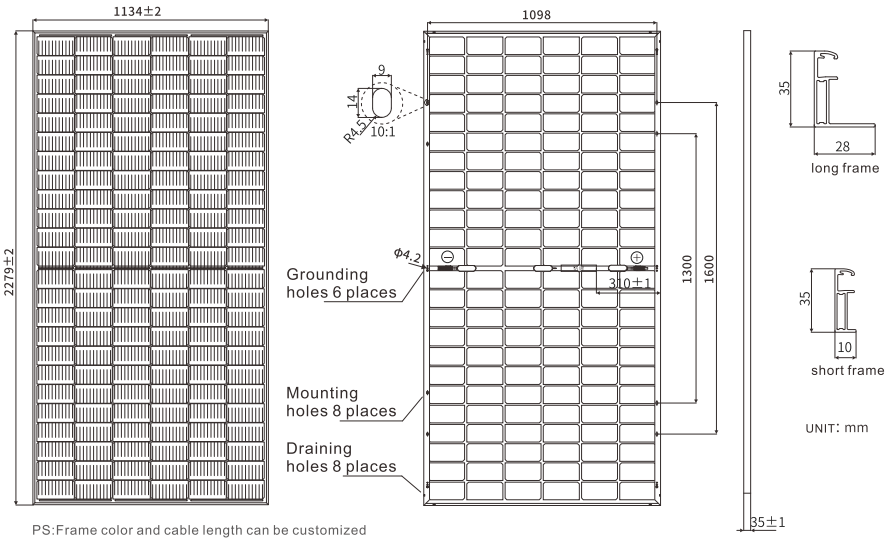
SPN-550M/525-540W Series

Mechanical Diagrams



PS:Frame color and cable length can be customized

Specifications

Cell	Mono
Weight	27.3kg±3%
Dimensions	2279±2mmX1134±2mmX35±1mm
Cable Cross Section Size	4mm² (IEC),12AWG(UL)
Solar Cells	144(6X24)
Junction Box	IP68/FT50XY,3*bypass diode
Connector	RHC2
Cable Length (Including Connector)	300mm
Front Glass	2.0mm
Packaging	31pcs/Pallet, 620 pcs/40HQ

Electrical Parameters at STC

Type	SPN144M/525	SPN144M/530	SPN144M/535	SPN144M/540
Rated Maximum Power (Pmax)[W]	525	530	535	540
Open Circuit Voltage (Voc)[V]	49.15	49.30	49.45	49.55
Maximum Power Voltage (Vmp)[V]	41.15	41.31	41.47	41.62
Short Circuit Current (Isc)[A]	13.65	13.72	13.79	13.89
Maximum Power Current (Imp)[A]	12.76	12.83	12.90	12.98
Module Efficiency[%]	20.3	20.5	20.6	20.8
Power Tolerance	0~+5W			
Temperature Coefficent of Isc(α_Isc)	+0.046%/°C			
Temperature Coefficent of Voc (β_Voc)	-0.276%/°C			
Temperature Coefficent of Pmax(γ_Pmp)	-0.350%/°C			
STC	Irradiance 1000W/m², Cell temperature 25°C, AM1.5			

Remark: Electrical data in this catalogue does not refer to a single module, and it's not part of the offer. It only serves for the comparison among different module types.

Electrical Parameters at NOCT (Suppose 10% Ratio of Solar Irradiance)

Type	SPN144M/525	SPN144M/530	SPN144M/535	SPN144M/540
Rated Maximum Power (Pmax)[W]	562	567	572	578
Open Circuit Voltage (Voc)[V]	49.54	49.67	49.80	49.93
Maximum Power Voltage (Vmp)[V]	41.53	41.77	41.99	42.24
Short Circuit Current (Isc)[A]	14.34	14.39	14.45	14.50
Maximum Power Current (Imp)[A]	13.52	13.58	13.63	13.69

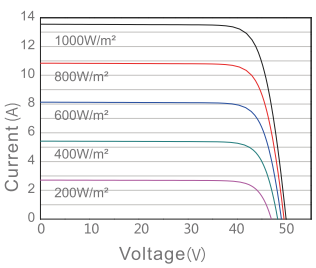
rate of the back of solar panel =peak power of STC /nominal power

Operating Conditions

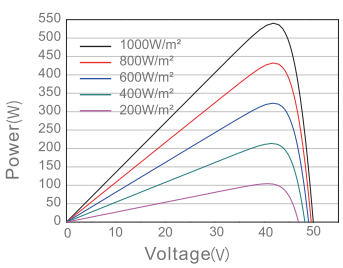
Maximum System Voltage	1500V DC
Operating Temperature	-40°C~+85°C
Maximum Series Fuse	25A
Maximum Static Load, Front Maximum Static Load, Back	5400Pa(112 lb/ft²) 2400Pa (50 lb/ft²)
NOCT	45±2°C
Backside Ratio	70%±10%
Fireproof Performance	UL Type 29

Characteristics

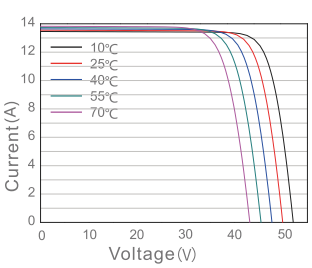
Current Voltage Curve SPN144M/540



Power Voltage Curve SPN144M/540



Current Voltage Curve SPN144M/540



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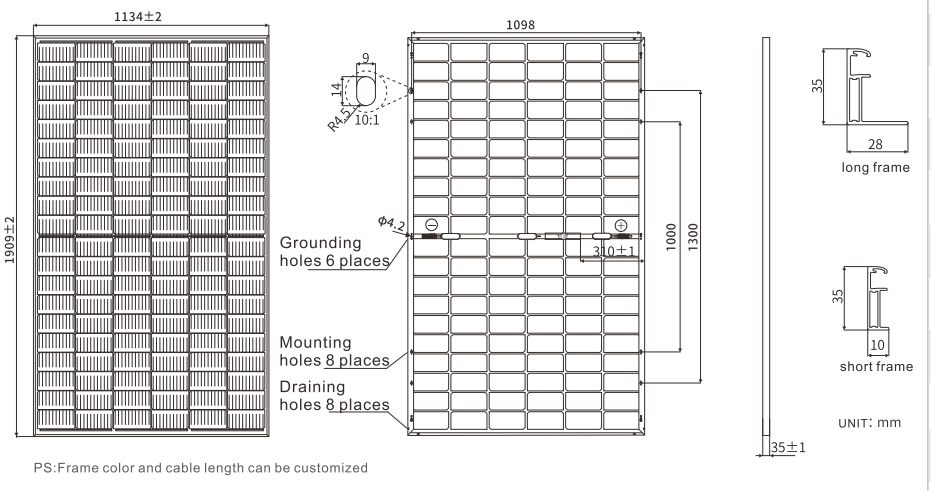
SUNRISE HK INTERNATIONAL CORP.LTD.

SPN-550M/525-540W Series

Mechanical Diagrams



PS:Frame color and cable length can be customized

Specifications

Cell	Mono
Weight	23.0kg±3%
Dimensions	1909±2mmX1134±2mmX35±1mm
Cable Cross Section Size	4mm² (IEC),12AWG(UL)
Solar Cells	120(6X20)
Junction Box	IP68/FT50XY,3*bypass diode
Connector	RHC2
Cable Length (Including Connector)	300mm
Front Glass	2.0mm
Packaging	31pcs/Pallet,744pcs/40HQ

Electrical Parameters at STC

Type	SPN120M/440	SPN120M/445	SPN120M/450	SPN120M/455
Rated Maximum Power (Pmax)[W]	440	445	450	455
Open Circuit Voltage (Voc)[V]	40.95	41.10	41.25	41.40
Maximum Power Voltage (Vmp)[V]	34.28	34.48	34.67	34.87
Short Circuit Current (Isc)[A]	13.74	13.82	13.89	13.97
Maximum Power Current (Imp)[A]	12.84	12.91	12.98	13.05
Module Efficiency[%]	20.3	20.6	20.8	21.0
Power Tolerance	0~+5W			
Temperature Coefficent of Isc(α_Isc)	+0.046%/°C			
Temperature Coefficent of Voc (β_Voc)	-0.276%/°C			
Temperature Coefficent of Pmax(γ_Pmp)	-0.350%/°C			
STC	Irradiance 1000W/m², Cell temperature 25°C, AM1.5			

Remark: Electrical data in this catalogue does not refer to a single module, and it's not part of the offer. It only serves for the comparison among different module types.

Electrical Parameters at NOCT (Suppose 10% Ratio of Solar Irradiance)

Type	SPN120M/440	SPN120M/445	SPN120M/450	SPN120M/455
Rated Maximum Power (Pmax)[W]	479	484	489	494
Open Circuit Voltage (Voc)[V]	41.60	41.71	41.85	41.89
Maximum Power Voltage (Vmp)[V]	34.87	35.08	35.29	35.44
Short Circuit Current (Isc)[A]	14.57	14.62	14.69	14.76
Maximum Power Current (Imp)[A]	13.74	13.80	13.86	13.94

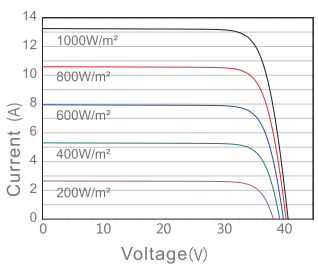
rate of the back of solar panel =peak power of STC /nominal power

Operating Conditions

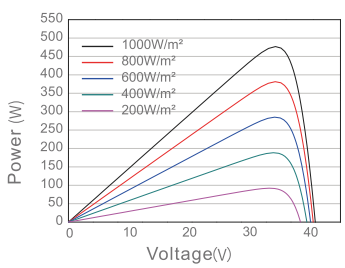
Maximum System Voltage	1500V DC
Operating Temperature	-40°C~+85°C
Maximum Series Fuse	25A
Maximum Static Load, Front Maximum Static Load, Back	5400Pa(112 lb/ft²) 2400Pa (50 lb/ft²)
NOCT	45±2°C
Backside Ratio	70%±10%
Fireproof Performance	UL Type 29

Characteristics

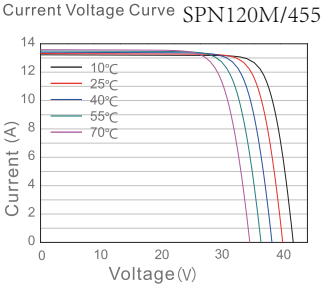
Current Voltage Curve SPN120M/455



Power Voltage Curve SPN120M/455



Current Voltage Curve SPN120M/455



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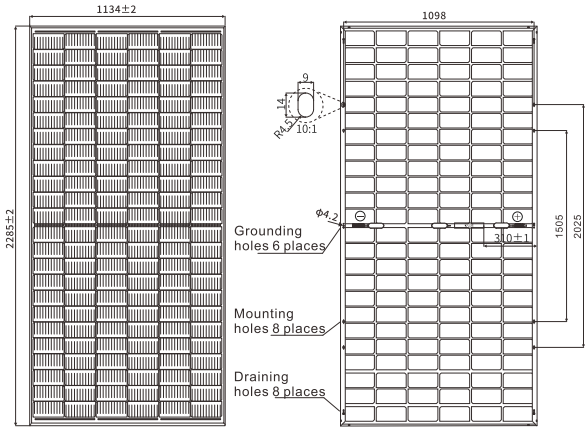
SPN-550M/525-540W Series

Mechanical Diagrams



PS:Frame color and cable length can be customized

Specifications

Cell	Mono
Weight	28.5kg±3%
Dimensions	2285±2mmX1134±2mmX35±1mm
Cable Cross Section Size	4mm² (IEC),12AWG(UL)
Solar Cells	144(6X24)
Junction Box	IP68/FT50XY,3*bypass diode
Connector	RHC2
Cable Length (Including Connector)	300mm
Front / Back Glass	2.0mm/2.0mm
Packaging	31pcs/Pallet,620pcs/40HQ

Electrical Parameters at STC

Type	SPN144M/535	SPN144M/540	SPN144M/545	SPN144M/550
Rated Maximum Power (Pmax)[W]	535	540	545	550
Open Circuit Voltage (Voc)[V]	49.35	49.55	49.75	49.95
Maximum Power Voltage (Vmp)[V]	41.45	41.62	41.80	41.97
Short Circuit Current (Isc)[A]	13.82	13.89	13.97	14.05
Maximum Power Current (Imp)[A]	12.91	12.98	13.05	13.11
Module Efficiency[%]	20.7	20.9	21.1	21.3
Power Tolerance	0~+5W			
Temperature Coefficent of Isc(α_Isc)	+0.046%/°C			
Temperature Coefficent of Voc (β_Voc)	-0.276%/°C			
Temperature Coefficent of Pmax(γ_Pmp)	-0.350%/°C			
STC	Irradiance 1000W/m², Cell temperature 25°C, AM1.5			

Remark: Electrical data in this catalogue does not refer to a single module, and it's not part of the offer. It only serves for the comparison among different module types.

Electrical Parameters at NOCT (Suppose 10% Ratio of Solar Irradiance)

Type	SPN144M/535	SPN144M/540	SPN144M/545	SPN144M/550
Rated Maximum Power (Pmax)[W]	572	578	583	588
Open Circuit Voltage (Voc)[V]	49.35	49.55	49.75	49.95
Maximum Power Voltage (Vmp)[V]	41.45	41.62	41.80	41.97
Short Circuit Current (Isc)[A]	14.64	14.72	14.79	14.87
Maximum Power Current (Imp)[A]	13.81	13.88	13.95	14.02

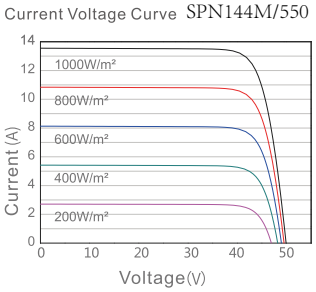
rate of the back of solar panel =peak power of STC /nominal power

Operating Conditions

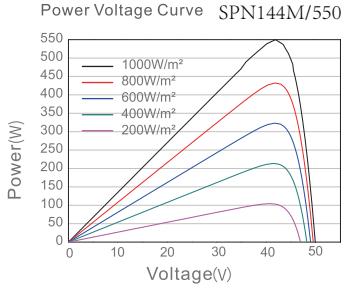
Maximum System Voltage	1500V DC
Operating Temperature	-40°C~+85°C
Maximum Series Fuse	25A
Maximum Static Load, Front Maximum Static Load, Back	5400Pa(112 lb/ft²) 2400Pa (50 lb/ft²)
NOCT	45±2°C
Backside Ratio	70%±10%
Fireproof Performance	UL Type 29

Characteristics

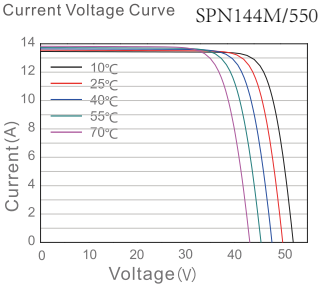
Current Voltage Curve SPN144M/550



Power Voltage Curve SPN144M/550



Current Voltage Curve SPN144M/550



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