








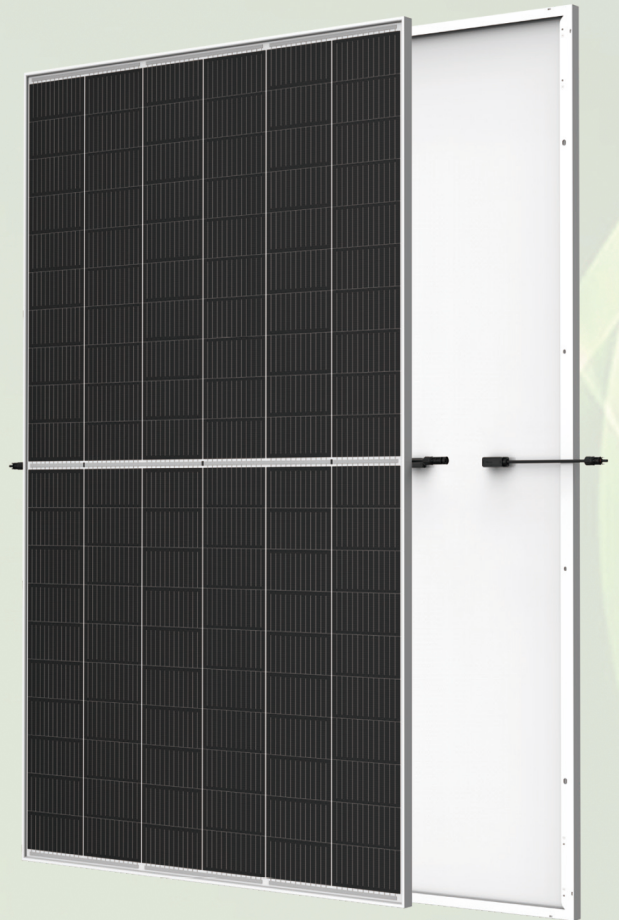




■ P-Type Solar Module

KEY FEATURES

-  Excellent performance in low-light environments
-  High quality junction box and connector systems
-  100% inspection, to guarantee the reliability of solar systems
-  Lower temperature
-  Anti PID
-  Enhanced safety by excellent fire resistance
-  Perfect for sandy, snowy and high latitude regions
-  Lower operating temperature, more reliable
-  Cutcell, Less internal power loss, Less mismatch loss



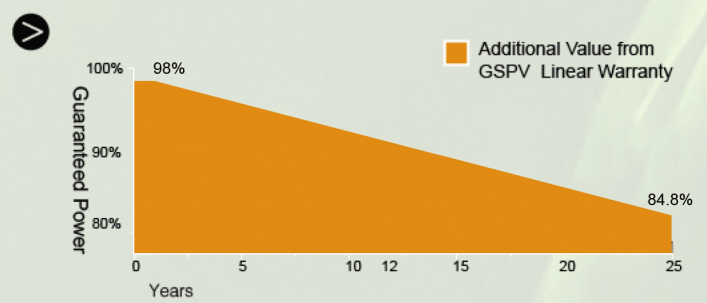
GSPV-M12/120H-590W-610W 590~610 Watt

➤ 210mm 120 Cells PV Solar Module

BLACK *BLACK FRAME/BLACK BACK-SHEET PRODUCTS ARE AVAILABLE UPON REQUEST

➤

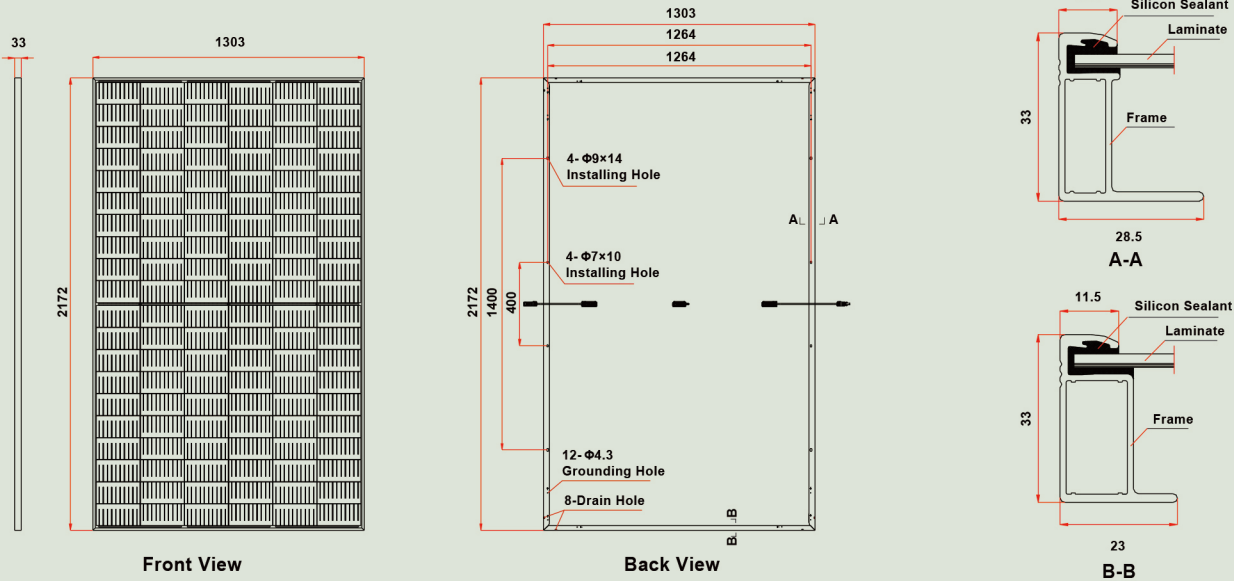
12 years	25 years	0.55%	
Product Warranty	Linear Power Warranty	Annual Degradation over 25 years	



IEC61215
IEC61730
UL61215
UL61730



DIMENSIONS OF PV MODULE(mm)



ELECTRICAL DATA (STC)

Peak Power Watts-P _{MAX} (Wp)*	590	595	600	605	610
Power Tolerance-P _{MAX} (W)	0 ~ +5				
Maximum Power Voltage-V _{MPP} (V)	34.0	34.2	34.4	34.6	34.8
Maximum Power Current-I _{MPP} (A)	17.35	17.40	17.44	17.49	17.53
Open Circuit Voltage-V _{OC} (V)	41.1	41.3	41.5	41.7	41.9
Short Circuit Current-I _{SC} (A)	18.42	18.47	18.52	18.57	18.62
Module Efficiency _{STC} (%)	20.8	21.0	21.2	21.4	21.6

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5. *Measuring tolerance: ±3%.

MECHANICAL DATA

Solar Cells	Monocrystalline
No. of cells	120 cells
Module Dimensions	2172×1303×33 mm (85.51×51.30×1.30 inches)
Weight	30.6 kg (67.5 lb)
Glass	3.2 mm (0.13 inches), High Transmission, AR Coated Heat Strengthened Glass
Encapsulant material	EVA/POE
Backsheet	White
Frame	33mm(1.30 inches) Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm ² (0.006 inches ²) Portrait: 350/280 mm(13.78/11.02 inches) Length can be customized
Connector	MC4 EVO2 / TS4*

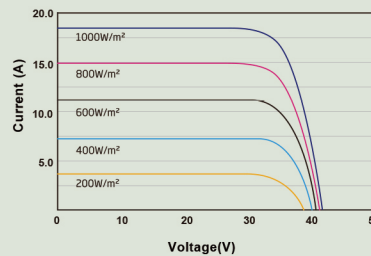
*Please refer to regional datasheet for specified connector.

ELECTRICAL DATA (NOCT)

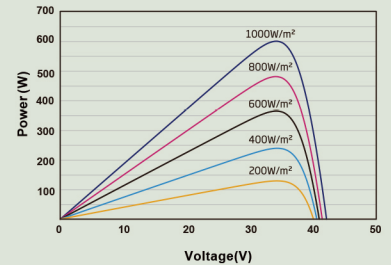
Maximum Power-P _{MAX} (Wp)	447	451	454	458	461
Maximum Power Voltage-V _{MPP} (V)	31.7	31.9	32.0	32.2	32.4
Maximum Power Current-I _{MPP} (A)	14.09	14.13	14.18	14.22	14.25
Open Circuit Voltage-V _{OC} (V)	38.7	38.9	39.1	39.3	39.5
Short Circuit Current-I _{SC} (A)	14.85	14.88	14.92	14.96	15.00

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

I-V CURVES OF PV MODULE(600W)



P-V CURVES OF PV MODULE(600W)



TEMPERATURE RATINGS

NOCT (Nominal Operating Cell Temperature)	43°C (22°C)
Temperature Coefficient of P _{MAX}	-0.34%/°C
Temperature Coefficient of V _{OC}	-0.25%/°C
Temperature Coefficient of I _{SC}	0.04%/°C

MAXIMUM RATINGS

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC (IEC)
	1500V DC (UL)
Max Series Fuse Rating	30A

WARRANTY

12 year Product Workmanship Warranty
25 year Power Warranty
2% first year degradation
0.55% Annual Power Attenuation

(Please refer to product warranty for details)

PACKAGING

Modules per box: 33 pieces
Modules per 40' container: 594 pieces