



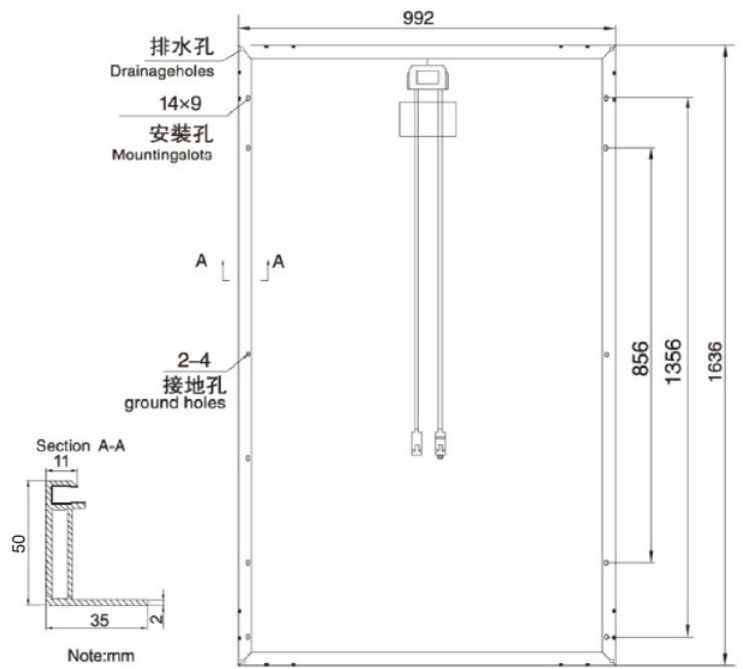
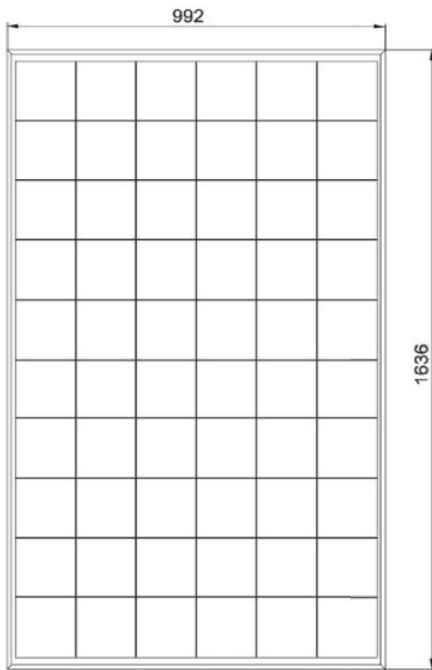
**PV MODULE :**  
**Standard Series : PM220P02** (Tested and certified by the TÜV Rheinland and UL)

Specification	PM220P02		
Typ. Nominal Power $P_N$ @STC*	220 Wp	225Wp	230 Wp
Typ. Module Efficiency	13.60%	13.9%	14.20%
Typ. Nominal Voltage $V_N$ (V) @STC*	29.20	29.30	29.40
Typ. Nominal Current $I_N$ (A) @STC*	7.53	7.68	7.82
Typ. Open Circuit $V_{oc}$ (V) @STC*	36.30	36.30	36.30
Typ. Short Circuit $I_{sc}$ (A) @STC*	7.97	8.16	8.34
Maximum Tolerance of $P_N$ **	0 / +3%		
NOCT***	48±2°C		
Typ. Temperature Coefficient of $P_N$	-0.53%/°C		
Typ. Temperature Coefficient of $V_{oc}$	-0.31%/°C		
Temperature Coefficient of $I_{sc}$	0.06%/°C		
Maximum System Voltage	1000V		
IP Protection Level	IP 65		
Serial Fuse Rating	15A		
Module Technology	Glass-foil-laminate with aluminum frame 3.2mm high transmission, low iron tempered glass		
Module Design	Embedding: EVA Backside Foil : White Frame: Silver		
No. and Type Solar Cells	60 polycrystalline solar cells, 156mm x 156mm (6 inch)		
Cables	Pfg, 1x4 mm <sup>2</sup> , Length : each 0.9m		
Bypass-Diodes	6		
Dimensions (L x W x H)	1636 x 992 x 50 mm (64.41 x 39.08 x 1.97 inch)		
Weight	19.3kg (42.5 lbs.)		
Operating Temperature	-40...+85°C		
Ambient Temperature Range	<50°C		
Qualifications	IEC61215 / IEC61730		

\* STC: Standard Test Conditions, measurement conditions: Radiation strength 1000 W/m<sup>2</sup>, spectral distribution AM 1.5, temperature 25 ± 2°C, in accordance with EN 60904-3

\*\* The given electrical data are nominal values which account for basic measurements and manufacturing tolerances of ±10%, with the exception of  $P_N$ . The classification is performed according to  $P_N$

\*\*\* NOCT: Normal Operation Cell Temperature, Measuring conditions: irradiance 800 W/m<sup>2</sup>, AM 1,5, Air temperature 20°C, wind speed 1m/s



dimension unit: mm