



## PSM Series - 215 W - 225 W polycrystalline

### High Efficiency

Cell efficiency of 15.75% and more is giving high commercial value available for all applications.

-0/+5 % PowerOutput Tolerance.

### Attractive Design

Unique BlackStar Design and optimized panel technology will fit perfectly to your home or industrial buildings.

### Reliable and Robust Technology

Proven materials, tempered front glass, and a black anodized frame allow panel to operate reliably in multiple mounting configurations.

## ELECTRICAL CHARACTERISTICS

Type		PSM215P	PSM220P	PSM225P
Maximum Power	P <sub>mp</sub>	215 W	220 W	225 W
Open Circuit Voltage	U <sub>oc</sub>	36.5 V	37.0 V	37.0 V
Short Circuit Current	I <sub>sc</sub>	8.03 A	8.10 A	8.17 A
Maximum Power Voltage	U <sub>mp</sub>	29.3 V	29.5 V	29.6 V
Maximum Power Current	I <sub>mp</sub>	7.24 A	7.45 A	7.60 A
T-Coefficient of P <sub>mp</sub>	α		-0.38 %/K	
T-Coefficient of U <sub>oc</sub>	χ		-0.32 %/K	
T-Coefficient of I <sub>sc</sub>	β		+0.08 %/K	
T-Coefficient of U <sub>mp</sub>	ε		-0.32 %/K	
T-Coefficient of I <sub>mp</sub>	σ		+0.08 %/K	
Maximum System Voltage	V		1000 V	
Maximum Series Fuse Rating	A		15 A	
Cell Efficiency	η <sub>cell</sub>	15.30 %	15.55 %	< 15.75 %
Module Efficiency	η <sub>mod</sub>	133 W/m <sup>2</sup>	135 W/m <sup>2</sup>	139 W/m <sup>2</sup>
Nominal Operation Cell Temperature	NOCT*		46°C +/- 2 °C	
Output Power Tolerance			-0 % / +5 %	
Tolerance Electrical Characteristics			-10 % / +10 %	

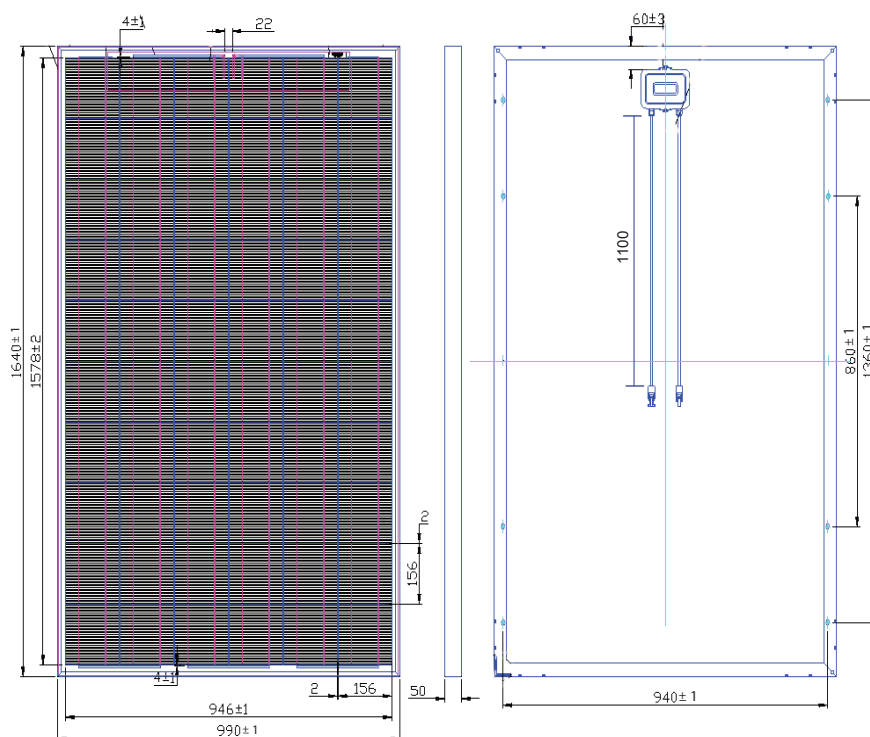
STC - Standard Testing Conditions 1000 W/m<sup>2</sup> | AM 1.5 | 25 °C

\*NOCT - Normal Operating Cell Temperature 800 W/m<sup>2</sup> | 20 °C | 1m/s windspeed

# MECHANICAL CHARACTERISTICS

Type	PSM215P	PSM220P	PSM225P
Cell Technology	156 mm x 156 mm polycrystalline high efficient silicon cell		
Number of Cells (Pcs)	60 (6x10)		
Dimensions	1640 mm x 990 mm x 50 mm		
Cables	1100 mm / 4 mm <sup>2</sup>		
Connectors	MC-T4		
Junction Box	IP65		
Solar Glass	3.2 mm, low iron tempered solar glass		
Weight	19.5 kg		
Bypass Diodes	6 (3 x 2 in parallel)		
Frame	aluminium 6063-T5 black		
Backing	EVA / TPT		

## TECHNICAL DRAWINGS



## WARRANTY & CERTIFICATES

Product Warranty	3 years
Output Warranty on 90% P <sub>max min</sub>	10 years
Output Warranty on 80% P <sub>max min</sub>	25 years
Certification	CE, IEC 61215
Certification Institute	ASU-PTL (USA), TUV Rheinland (Germany) available beginning April 2009

In the interest of product improvement specifications are subject to change without prior notice.