

Polycrystalline Solar Module 156X156mm 6x10 Cells



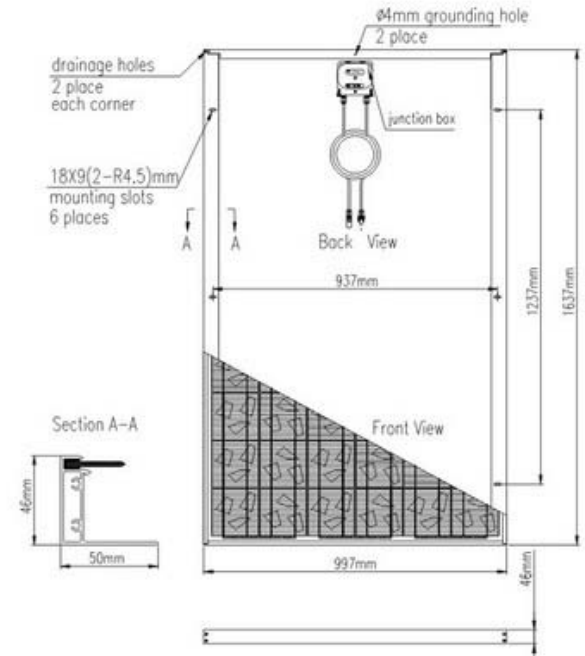
Electrical Characteristics

TUV-Model	UL-220P-60	UL-225P-60	UL-230P-60	UL-235P-60	UL-240P-60	UL-245P-60
UL-Model	UL-220P	UL-225P	UL-230P	UL-235P	UL-240P	UL-245P
Max Power Pm(W)	220	225	230	235	240	245
Max Power Voltage Vm(V)	29.8	29.9	30.0	30.1	30.2	30.3
Max Power Current Im(A)	7.40	7.53	7.67	7.81	7.95	8.08
Open-Circuit Voltage Voc(V)	36.5	36.7	36.8	36.8	37.0	37.1
Short-Circuit Current Isc(A)	8.12	8.18	8.34	8.44	8.54	8.64
Cell Efficiency	15.1%	15.5%	15.8%	16.1%	16.5%	16.8%
Module Efficiency	13.5%	13.8%	14.1%	14.4%	14.7%	15.0%
Power Tolerance	±3%					
Maximum System Voltage(V)	1000(TUV)/600(UL)					
Temperature Coefficient of Isc	0.065%/°C					
Temperature Coefficient of Voc	-0.35%/°C					
Temperature Coefficient of Pmax	-0.40%/°C					
Operating Temperature	-40°C~+85°C					
NOCT	47±2°C					
Series Fuse Rating(A)	15					

STC: irradiance:1000W/mm²; solar spectrum: AM1.5; cell temperature: 25°C

Mechanical Characteristics

Module Dimension (mm)	1637x997x46
Cell Dimension (mm)	156x156
Array (PCS)	6x10
Weight(Kg)	19



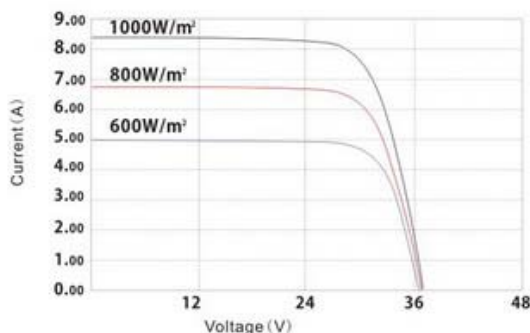
GUARANTEE

- 5-year product guarantee
- 10-year performance guarantee at 90% power output
- 25 year performance guarantee at 80% power output

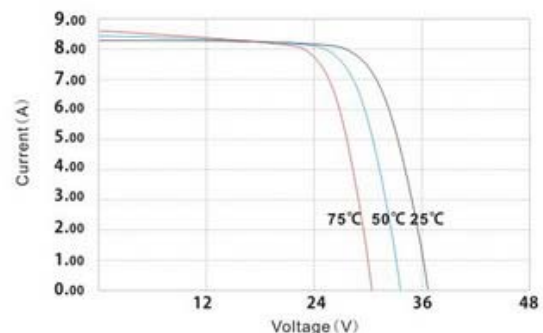
NOTE

- Nominal Operating Cell Temperature above data is only for reference
- Deviation of Vm(V), Im(A), Voc(V) and Isc(A) of ±10%

I-V Curves of UL-230D/UL-230D-60



I-V Curves at different irradiance



I-V Curves at different temperature