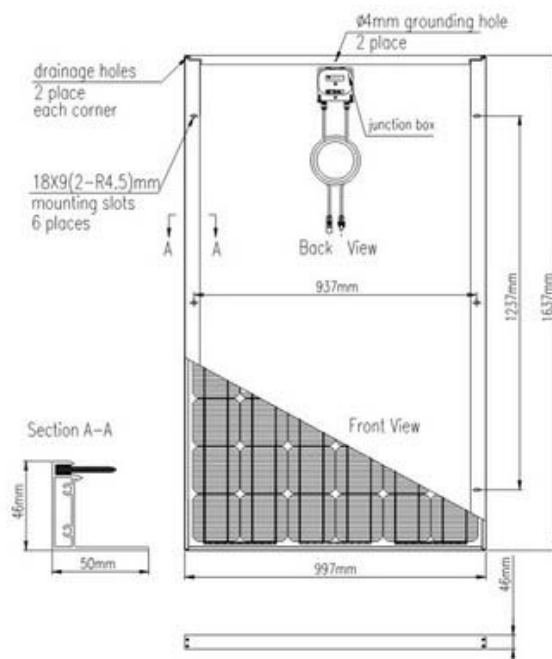


# Monocrystalline Solar Module 156X156mm 6x10 Cells

## Electrical Characteristics

TUV-Model	UL-220D-60	UL-225D-60	UL-230D-60	UL-235D-60	UL-240D-60	UL-245D-60	UL-250D-60
UL-Model	UL-220D	UL-225D	UL-230D	UL-235D	UL-240D	UL-245D	UL-250D
Max Power Pm(W)	220	225	230	235	240	245	250
Max Power Voltage Vm(V)	30.0	30.1	30.2	30.3	30.3	30.4	30.5
Max Power Current Im(A)	7.34	7.48	7.62	7.76	7.92	8.06	8.20
Open-Circuit Voltage Voc(V)	36.6	36.8	36.9	37.0	37.1	37.2	37.3
Short-Circuit Current Isc(A)	8.10	8.16	8.31	8.42	8.52	8.60	8.70
Cell Efficiency	15.3%	15.7%	16.0%	16.4%	16.7%	17.1%	17.4%
Module Efficiency	13.5%	13.8%	14.1%	14.4%	14.7%	15.0%	15.3%
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/mm<sup>2</sup>; solar spectrum: AM1.5; cell temperature: 25°C



## Mechanical Characteristics

Module Dimension (mm)	1637x997x46
Cell Dimension (mm)	156x156
Array (PCS)	6x10
Weight(Kg)	19.5

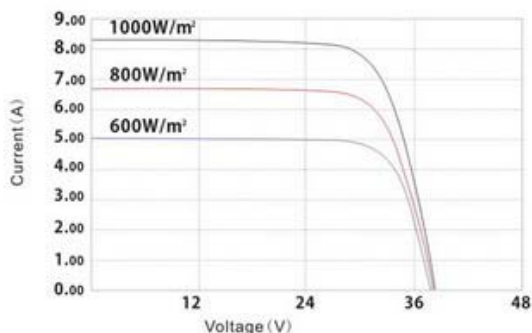
## GUARANTEE

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

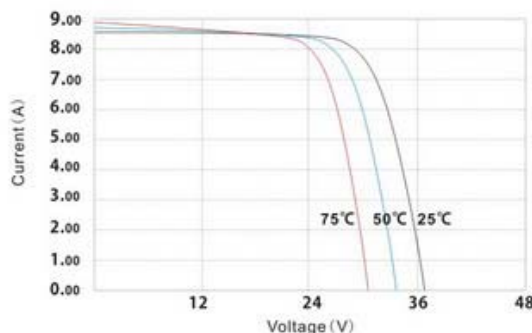
## NOTE

- 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