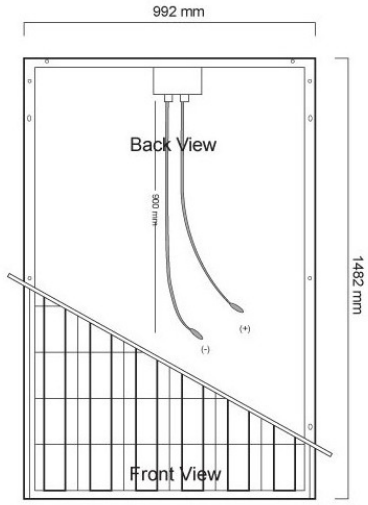
Specifications

Cells	Polycrystalline silicon solar cells 156mm x 156mm
Cells Number	54(6 x 9)
Dimension(mm)	1482 x 992
Weight(kg)	17.5



Mechanical Data

Front Glass	3.2mm(1/8in.) tempered
Junction Box	IP-65 rated and with 6 bypass diodes
Output Cables	900mm length cable($4mm^2$) for PV system /MC IV compatible connectors
Frame	Anodized aluminum alloy type 6063
Encapsulation Material	EVA(0.5±0.1mm thickness)
Back Foil	TPT(0.35±0.15mm thickness)
Temperature Range	-40°C to + 90°C
Max Load	2400 Pa
Impact Resistance	Hail - ø25mm at 23 m/s

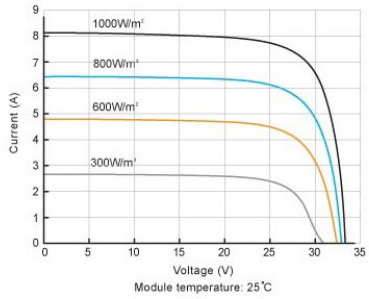
NOTE: **1**. STC: Irradiance 1000W/m^2, Module temperature 25°C, AM=1.5
2. Nominal Operating Cell Temperature above data is only for reference
3. Deviation of Vm(V), Im(A), Voc(V) and Isc(A) of ±10%

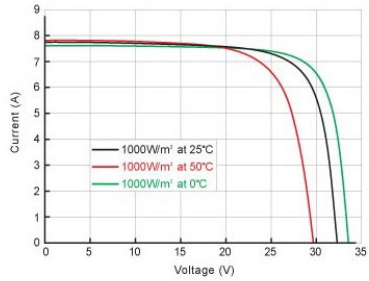
Polycrystalline PV module 54 cells

Electrical Characteristics

Model	UP-M180P	UP-M190P	UP-M200P	UP-M210P
Max Power P_m(w)	180	190	200	210
Max-Power Voltage V_m(V)	26.5	26.8	27.2	27.5
Max-Power Current I_m(A)	6.80	7.10	7.36	7.63
Open-Circuit Voltage V_{oc}(V)	32.4	32.5	32.7	32.8
Short-Circuit Current I_{sc}(A)	7.60	7.72	7.86	7.98
Cell Efficiency	13.7%	14.5%	15.2%	16.0%
Maximum System Voltage(V)	1000(TUV)/600(UL)			
Power Tolerance	±3%			

Temperature Coefficients





NOCT(℃)	45±2
Current Temperature Coefficient of I_{sc}(%/K)	0.06 ± 0.01
Voltage Temperature Coefficient of V_{oc}(%/K)	-0.34 ± 0.01
Temperature Coefficient of I_m(%/K)	-0.02 ± 0.01
Temperature Coefficient of V_m(%/K)	-0.50 ± 0.01
Temperature Coefficient of P_m(%/K)	-0.48 ± 0.05