

## Electrical Specifications

### KWTXXX – M54 Series

 \*STC : Irradiance 1000W/m<sup>2</sup> AM =1.5 Module Temperature 25 °C

Characteristics	Unit	190	195	200	205	210	215	220	225	230
Rated Power at STC (Pmax)	W	190	195	200	205	210	215	220	225	230
Max. Power Voltage (Vmp)	V	24.8	25.3	25.6	25.9	26.5	27	27.3	28.3	29.2
Max. Power Current (Imp)	A	7.67	7.73	7.85	7.91	7.93	7.98	8.08	7.98	7.93
Open Circuit Voltage (Voc)	V	32.8	32.9	33.1	33.2	33.9	34.1	34.5	34.9	37.1
Short Circuit Current (Isc)	A	8.45	8.47	8.47	8.47	8.52	8.54	8.65	8.54	8.52
Maximum System Voltage	V	1000	1000	1000	1000	1000	1000	1000	1000	1000
Maximum Series Fuse Rating	A	15	15	15	15	15	15	15	15	15

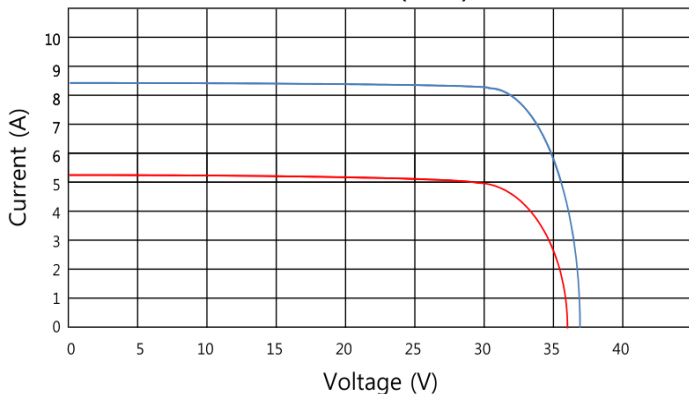
### KWTXXX – M60 Series

Characteristics	Unit	210	215	220	225	230	235	240	245	250
Rated Power at STC (Pmax)	W	210	215	220	225	230	235	240	245	250
Max. Power Voltage (Vmp)	V	26.5	27	27.3	28.3	29.2	29.5	29.8	30.1	30.4
Max. Power Current (Imp)	A	7.93	7.98	8.08	7.98	7.93	7.96	8.08	8.14	8.23
Open Circuit Voltage (Voc)	V	33.9	34.1	34.5	34.9	37.1	37.3	37.6	37.9	38.1
Short Circuit Current (Isc)	A	8.52	8.54	8.65	8.54	8.52	8.61	8.65	8.75	8.91
Maximum System Voltage	V	1000	1000	1000	1000	1000	1000	1000	1000	1000
Maximum Series Fuse Rating	A	15	15	15	15	15	15	15	15	15

## Physical Specification

Characteristics	M54 Series	M60Series
Solar Cell	156 x 156mm(6 inch)Mono	156 x 156mm(6 inch)Mono
No. of Cells	54(6x9) Cells connected in Series	60(6x10) Cells connected in Series
Weight	17kg	19kg
Operation Temperature	-40 °C to +90 °C	-40 °C to +90 °C
Output Cable	1000 mm Length, 4.0mm <sup>2</sup> Cross Section For field connections, use 12 AWG wires insulated for a minimum of 90°C Use copper wire only	

I-V CURVE (230W)



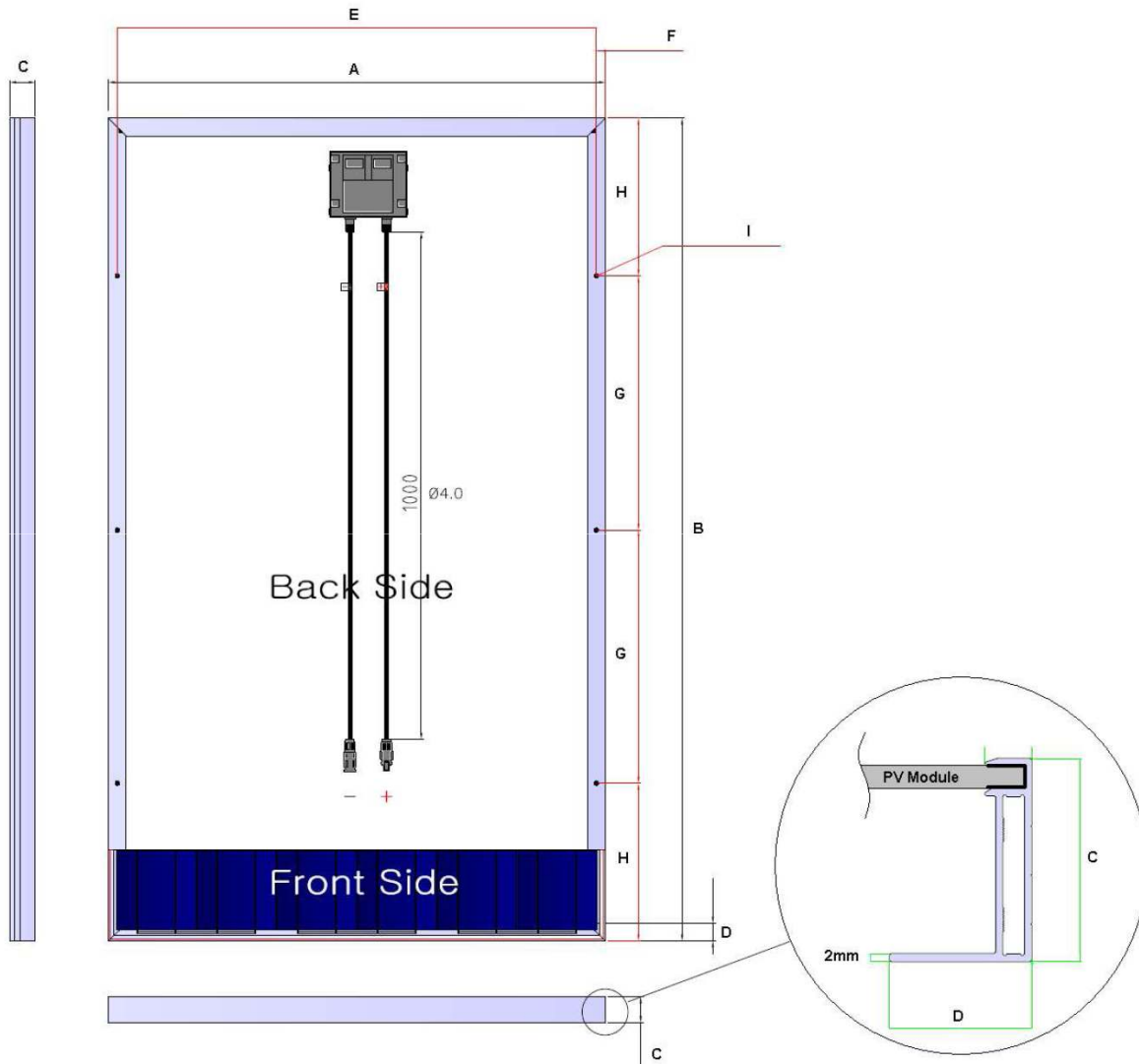
## Temperature Coefficients

Nominal Operating Cell Temp. (NOCT)	47 °C
The coefficient of Pmax	-0.405±0.05%/°C
The coefficient of Voc	-0.312±0.015%/°C
The coefficient of Isc	+0.075±0.015%/°C



- Periodic inspection
- Qualified, IEC 61215
- Safety tested, IEC 61730

Module Diagram



Dimensions Specifications(mm)

[Unit : mm]

	M54 Series	M60Series
A (Width)	979	979
B (Length)	1484	1642
C (Thickness)	38	38
D	28	28
E	944	944
F	17.5	17.5
G	500	500
H	242	321
I (Mounting & Grounding Hole)	Φ8	Φ8

Rated electrical characteristics are within 10% of measured values at Standard Test Conditions of 1000 w/m<sup>2</sup>, AM 1.5 spectrum and cell temperature at 25°C or 77°F. Under normal conditions, a PV module may experience conditions that produce more current and/or voltage than reported at Standard Test Conditions.



- Periodic inspection
- Qualified, IEC 61215
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\* Specifications are subjected to change without further notice