

Solar Photovoltaic Modules



M5 & P5 Series



*M5 Series:
Monocrystalline modules*

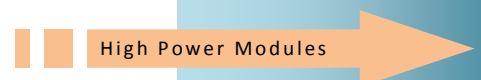
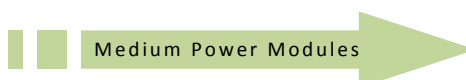
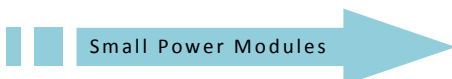


High Performance Solar Cell

The electrical performance of every manufactured solar cell is individually tested and sorted according to very narrow current classes. This means that you get a high performance solar cell with precisely defined characteristics. The performance of the solar cell is measured at Standard Test Conditions (STC): 1000 W/m², AM 1.5, 25 °C



*P5 Series:
Polycrystalline modules*



P_{max}: Maximum power
I_{sc}: Short circuit current

V_{oc}: Open Circuit Voltage
I_{mpp}: Maximum power point current

V_{mpp}: Maximum power point voltage

Small Power

USP5
5W - 6V / 12V

USP10 / USP12 / USP15
10W / 12W / 15W

Model	USP5 (6V)	USP5 (12V)	USP10	USP12	USP15
<i>P_{max}</i>	5 Wp	5 Wp	10 Wp	12 Wp	15 Wp
<i>V_{oc}</i>	10.75 V	21.5 V	21.5 V	21.5 V	21.5 V
<i>V_{mpp}</i>	8.55 V	17.1 V	17.1 V	17.1 V	17.1 V
<i>I_{sc}</i>	0.66 A	0.33 A	0.65 A	0.79 A	0.98 A
<i>I_{mpp}</i>	0.58 A	0.29 A	0.59 A	0.70 A	0.88 A
<i>Tolerance</i>	±10%	±10%	±10%	±10%	±10%
<i>Cell Size (mm)</i>	32 x 62.5	16 x 62.5	41.5 x 62.5	41.5 x 62.5	41.5 x 62.5
<i>No. of cells</i>	18	36	36	36	36
<i>Dimensions (mm)</i>	356 x 166 x 22	356 x 166 x 22	406 x 346 x 38	406 x 346 x 38	406 x 346 x 38

Medium Power

USP20 / USP25 / USP30
20W / 25W / 30W

USP37 / USP40 / USP45
37W / 40W / 45W

USP50 / USP55 / USP60
50W / 55W / 60W

Model	USP20	USP25	USP30	USP37	USP40	USP45	USP50	USP55	USP60
<i>P_{max}</i>	20 Wp	25 Wp	30 Wp	37 Wp	40 Wp	45 Wp	50 Wp	55 Wp	60 Wp
<i>V_{oc}</i>	21.0 V	21.5 V	21.8 V	21.5 V	21.5 V	21.8 V	21.5 V	21.8 V	21.8 V
<i>V_{mpp}</i>	17.0 V	17.1 V	17.3 V	17.1 V	17.1 V	17.3 V	17.1 V	17.3 V	17.3 V
<i>I_{sc}</i>	1.32 A	1.63 A	1.93 A	2.43 A	2.62 A	2.91 A	3.28 A	3.56 A	3.88 A
<i>I_{mpp}</i>	1.18 A	1.46 A	1.73 A	2.17 A	2.34 A	2.60 A	2.93 A	3.18 A	3.47 A
<i>Tolerance</i>	±10%	±10%	±10%	±10%	±10%	±10%	±10%	±10%	±10%
<i>Cell Size (mm)</i>	41.5x125	41.5x125	41.5x125	62.5x125	62.5x125	62.5x125	83.5x125 / 41.5x125	83.5x125 / 41.5x125	83.5x125 / 41.5x125
<i>No. of cells</i>	36	36	36	36	36	36	36 / 72	36 / 72	36 / 72
<i>Dimensions (mm)</i>	550x449x38	550x449x38	550x449x38	635x550x38	635x550x38	635x550x38	825x535x38	825x535x38	825x535x38

High Power

USP75 / USP80 / USP90
75W / 80W / 90W

USP100 / USP110 / USP120 100W /
110W / 120W

USP150 / USP165 / USP180
150W / 165W / 180W

Model	USP75	USP80	USP90	USP100	USP110	USP120	USP150	USP165	USP180
<i>P_{max}</i>	75 Wp	80 Wp	90 Wp	100 Wp	110 Wp	120 Wp	150 Wp	165 Wp	180 Wp
<i>V_{oc}</i>	21.5 V	21.8 V	22.3 V	43.0 V	43.6 V	43.6 V	43.00 V	43.60 V	44.60 V
<i>V_{mpp}</i>	17.1 V	17.3 V	17.6 V	34.2 V	34.6 V	34.6 V	34.20 V	34.60 V	35.20 V
<i>I_{sc}</i>	4.92 A	5.18 A	5.76 A	3.28 A	3.56 A	3.88 A	4.91 A	5.34 A	5.73 A
<i>I_{mpp}</i>	4.39 A	4.63 A	5.12 A	2.93 A	3.18 A	3.47 A	4.39 A	4.77 A	5.12 A
<i>Tolerance</i>	±7.5%	±7.5%	±7.5%	±7.5%	±7.5%	±7.5%	±7.5%	±7.5%	±7.5%
<i>Cell Size (mm)</i>	125x125	125x125	125x125	83.5x125	83.5x125	83.5x125	125x125	125x125	125x125
<i>No. of cells</i>	36	36	36	72	72	72	72	72	72
<i>Dimensions (mm)</i>	1205x535x35	1205x535x35	1205x535x35	1095x795x35	1095x795x35	1095x795x35	1600x800x35	1600x800x35	1600x800x35

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