



## Performance

Model Number	SP-380B-PV-MHL SP-380S-PV-MHL		SP-405B-PV-MHO SP-405S-PV-MHO		SP-450B-PV-MHO SP-450S-PV-MHO		SP-540B-PV-MHO SP-540S-PV-MHO		SP-660S-PV-MHG	
Test Conditions	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power (W)	380	288	405	306	450	340	540	408	660	499
Short-circuit Current (A)	11.55	9.24	13.65	10.92	13.68	10.94	13.87	11.1	18.26	14.97
Open-circuit Voltage (V)	41.7	39.13	37.14	35.15	41.4	39.2	49.4	46.68	45.98	42.67
Maximum Power Current (A)	11.04	8.83	13.06	10.45	13.01	10.41	13.11	10.49	17.36	14.16
Maximum Power Voltage (V)	34.5	32.61	31.02	29.29	34.6	32.67	41.2	38.9	38.01	35.24
Module Efficiency (%)	20.86		20.74		20.79		20.90		21.25	
Max. Overcurrent Protection Rating (A)	20		25		25		25		30	
Power Tolerance (W)						0~ +5				
Measuring Uncertainty of Pm (%)						0~ ±3				
Maximum System Voltage (V)						1500				

## General

Junction Box	IP68				
Frame	Aluminium Alloy				
Cable	4 mm <sup>2</sup> +300,-300 mm/±1000 mm Length can be customized				
Fire Class Rating	Class C according to UL 790				
Connector	Ningbo Win Solar: Win02				
Operating Temperature (°C)	-40 to +85				
Snow Load (Pa)	5400				
Standards	IEC 61215 & IEC 61730 & ISO9001				
Dimensions (mm)	1755 x 1038 x 35	1722 x 1134 x 30	1909 x 1134 x 35	2279 x 1134 x 35	2384 x 1303 x 35
Weight (kg)	20.0	20.5	24	29	34

## Temperature Characteristics

NMOT (°C)	45 ± 2
Temp Coefficient of VOC (%/ °C)	-0.28
Temp Coefficient of ISC (%/ °C)	+0.05
Temp Coefficient of Pmax (%/ °C)	-0.34

- STC (Standard Test Conditions): 1000 W/m<sup>2</sup> Irradiance, 25 °C Cell Temperature, AM 1.5.
- NMOT (Normal Module Operation Temperature): 800 W/m<sup>2</sup> Irradiance, 20 °C Ambient Temperature, Wind Speed 1 m/s.
- NOTE: Clamps are not used for these PV Modules.