

Smart Module

60-Cell Monocrystalline PERC Module with Integrated Power Optimizer

SPV300-60MMJ / SPV305-60MMJ / SPV310-60MMJ

SMART MODULE



PV to grid solution including full service from SolarEdge

- Easy installation with module integrated power optimizer
- Optimized energy output by constantly tracking the maximum power point (MPPT) of each module individually
- Module-level voltage shutdown for installer and firefighter safety
- Full visibility of system performance from module to grid
- Superior quality control with full automatic production line and 100% EL triple inspection
- Excellent mechanical loading and shock resistance performance
- Elegant design with black frame
- 12-year module warranty and 25-year performance warranty
- Specifically designed to work with SolarEdge inverters

Smart Module 60-Cell Monocrystalline PERC Module with Integrated Power Optimizer

SPV300-60MMJ / SPV305-60MMJ / SPV310-60MMJ

MODULE ELECTRICAL PROPERTIES

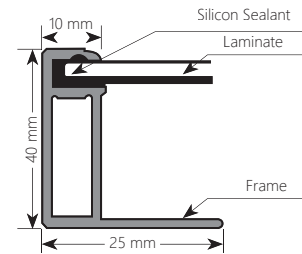
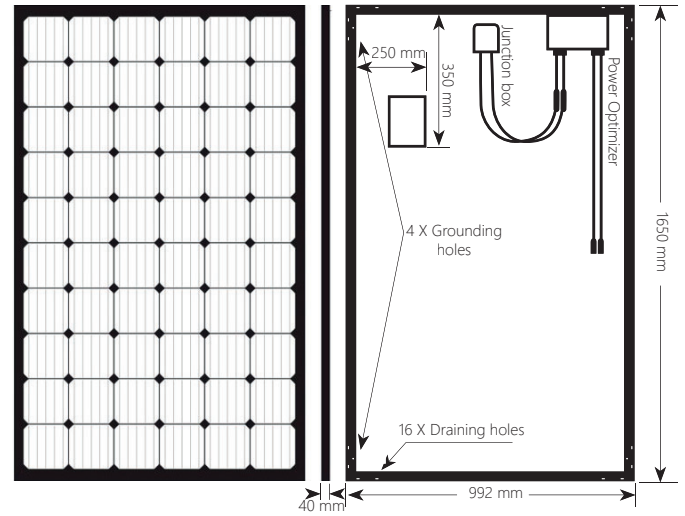
STC ⁽¹⁾	SPV300-60MMJ	SPV305-60MMJ	SPV310-60MMJ	
Module Power	300	305	310	W
Max. Power Voltage (Vmp)	32.62	32.92	33.16	V
Max. Power Current (Imp)	9.2	9.27	9.35	A
Open Circuit Voltage (Voc)	39.75	39.92	40.09	V
Short Circuit Current (Isc)	9.64	9.71	9.76	A
Maximum System Voltage	1000			Vdc
Maximum Series Fuse Rating	15			A
Module Efficiency	18.3	18.6	18.9	%
Power Tolerance	0 ~ +5			W

NOCT⁽²⁾

Module Power	223.3	227	230.7	W
Max. Power Voltage (Vmp)	30.34	30.61	30.84	V
Max. Power Current (Imp)	7.36	7.42	7.48	A
Open Circuit Voltage (Voc)	37.28	37.44	37.60	V
Short Circuit Current (Isc)	7.78	7.83	7.87	A

MODULE MECHANICAL PROPERTIES

Cells	60 (6 x 10)	
Cell Type	Monocrystalline PERC	
Cell Dimensions	156 x 156	mm
Dimensions (L x W x H)	1650 x 992 x 40	mm
Front Design Load (snow)	3600	Pa
Front Test Load ⁽³⁾	5400	Pa
Rear Design Load (wind)	2400	Pa
Rear Test Load ⁽³⁾	3600	Pa
Weight	18.8	kg
Front Glass	3.2mm, AR coated toughened glass	
Frame	Black anodized aluminium	
Junction Box	IP67	
Connector Type	MC4 (PVKST4II-UR, PV-KBT4II-UR)	
Operating Temperature	-40 to +85	°C
Packaging Information (units per pallet)	26	



CERTIFICATIONS & WARRANTY

Module Certifications	IEC 61215:2016, IEC61730:2016, PID: IEC62804, SIL, AS4040.2:1992 (wind pressure)
Product Warranty	Power Optimizer — 25-year warranty, Module — 12-year warranty
Output Warranty of Pmax	25-year linear module warranty ⁽⁴⁾

TEMPERATURE CHARACTERISTICS

Temperature Coefficient Power (Pm)	-0.40	% / °C
Temperature Coefficient Voltage (Voc)	-0.29	% / °C
Temperature Coefficient Current (Isc)	0.04	% / °C
Operating Cell Temperature (NOCT)	45 ± 2	°C

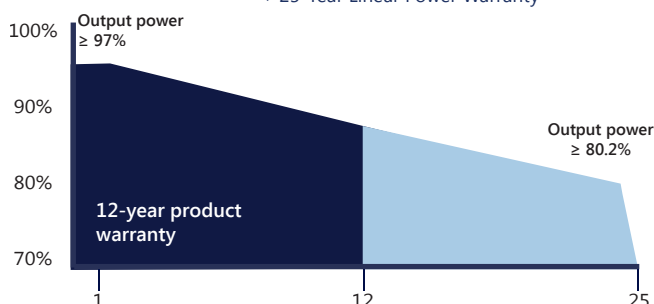
⁽¹⁾ STC: Irradiance 1000 W/m², Cell Temperature 25°C, Air Mass AM1.5

⁽²⁾ NOCT: Irradiance at 800 W/m², Ambient Temperature 20°C, Wind Speed 1 m/s

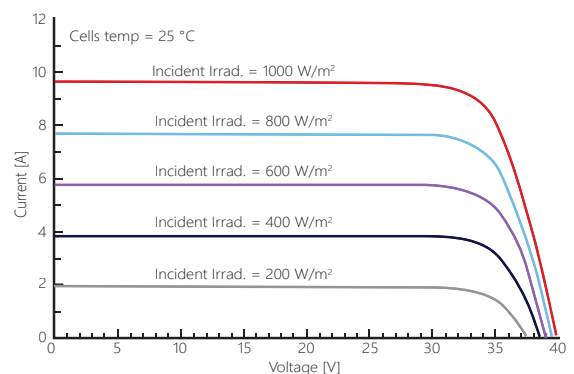
⁽³⁾ Safety factor of 1.5

⁽⁴⁾ 1st year: 97%, 80.2% power output over 25 years

Linear Warranty 12-Year Product Warranty + 25-Year Linear Power Warranty



Module I-V Curve (SPV305-60MMJ)



/ Smart Module 60-Cell Monocrystalline PERC

Module with Integrated Power Optimizer

SPV300-60MMJ / SPV305-60MMJ / SPV310-60MMJ

POWER OPTIMIZER PROPERTIES

INPUT

Rated Input DC Power	370	W
Absolute Maximum Input Voltage (Voc at lowest temperature)	60	
MPPT Operating Range	8 - 60	Vdc
Maximum Short Circuit Current (Isc)	11	Adc
Maximum Efficiency	99.5	%
Weighted Efficiency	98.8	%
Overvoltage Category	II	

OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREEDGE INVERTER)

Maximum Output Current	15	Adc
Maximum Output Voltage	60	Vdc

OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREEDGE INVERTER OR SOLAREEDGE INVERTER OFF)

Safety Output Voltage per Power Optimizer	1 ± 0.1	Vdc
---	---------	-----

STANDARD COMPLIANCE

EMC	FCC Part15 Class B, IEC61000-6-2, IEC61000-6-3	
Safety	IEC62109-1 (class II safety), UL1741	
RoHS	Yes	
Fire Safety	VDE-AR-E 2100-712:2013-05	

INSTALLATION SPECIFICATIONS

Output Connector	MC4	
Output Wire Length	1.2 / 3.9	m / ft
Operating Temperature Range	-40 - +85 / -40 - +185	°C / °F
Protection Rating	IP68 / NEMA6P	
Relative Humidity	0 - 100	%

PV System Design Using a SolarEdge Inverter		Single Phase HD-Wave	Single Phase	Three Phase	Three Phase for 277/480V Grid	
Minimum String Length (Power Optimizers)	P370	8		16	18	
Maximum String Length (Power Optimizers)		25			50	
Maximum Power per String		5700	5250	11250	12750	W
Parallel Strings of Different Lengths or Orientations		Yes				