



PV module - SS8-72HD-545M-IND

Manufacturer	UNIMACTS	Commercial data	
Model	SS8-72HD-545M-IND	Data source :	DEKRA Testing and Certification
Pnom STC power (manufacturer)	545 Wp	Technology	Si-mono
Module size (W x L)	1.134 x 2.278 m ²	Rough module area (A _{module})	2.58 m ²
Number of cells	2 x 72	Sensitive area (cells) (A _{cells})	2.38 m ²

Specifications for the model (manufacturer or measurement data)

Reference temperature (T _{Ref})	25 °C	Reference irradiance (G _{Ref})	1000 W/m ²
Open circuit voltage (V _{oc})	49.8 V	Short-circuit current (I _{sc})	13.92 A
Max. power point voltage (V _{mpp})	41.8 V	Max. power point current (I _{mpp})	13.04 A
=> maximum power (P _{mpp})	545.2 W	I _{sc} temperature coefficient (μI _{sc})	6.2 mA/°C

One-diode model parameters

Shunt resistance (R _{shunt})	1700 Ω	Diode saturation current (I _{oRef})	0.015 nA
Serie resistance (R _{serie})	0.22 Ω	Voc temp. coefficient (μV _{oc})	-136 mV/°C
Specified P _{max} temper. coeff. (μP _{MaxR})	-0.33 %/°C	Diode quality factor (Gamma)	0.98
		Diode factor temper. coeff. (μGamma)	0.000 1/°C

Reverse Bias Parameters, for use in behaviour of PV arrays under partial shadings or mismatch

Reverse characteristics (dark) (B _{Rev})	3.20 mA/V ²	(quadratic factor (per cell))	
Number of by-pass diodes per module	3	Direct voltage of by-pass diodes	-0.7 V

Model results for standard conditions (STC: T=25 °C, G=1000 W/m², AM=1.5)

Max. power point voltage (V _{mpp})	41.1 V	Max. power point current (I _{mpp})	13.32 A
Maximum power (P _{mpp})	546.6 Wp	Power temper. coefficient (μP _{mpp})	-0.33 %/°C
Efficiency(/ Module area) (Eff _{mod})	21.2 %	Fill factor (FF)	0.789
Efficiency(/ Cells area) (Eff _{cells})	22.9 %		

