

**PV module - SS8-72HD-590N**

Manufacturer	UNIMACTS	<b>Commercial data</b>	
Model	SS8-72HD-590N	Availability :	Prod. Since 2023
		Data source :	TÜV SÜD
Pnom STC power (manufacturer)	590 Wp	Technology	Si-mono
Module size (W x L)	1.134 x 2.278 m <sup>2</sup>	Rough module area (Amodule)	2.58 m <sup>2</sup>
Number of cells	2 x 72	Sensitive area (cells) (Acells)	2.38 m <sup>2</sup>
<b>Specifications for the model (manufacturer or measurement data)</b>			
Reference temperature (TRef)	25 °C	Reference irradiance (GRef)	1000 W/m <sup>2</sup>
Open circuit voltage (Voc)	51.9 V	Short-circuit current (Isc)	14.48 A
Max. power point voltage (Vmpp)	42.9 V	Max. power point current (Impp)	13.75 A
=> maximum power (Pmpp)	590.2 W	Isc temperature coefficient (mulsc)	6.5 mA/°C
<b>One-diode model parameters</b>			
Shunt resistance (Rshunt)	350 Ω	Diode saturation current (IoRef)	0.015 nA
Serie resistance (Rserie)	0.22 Ω	Voc temp. coefficient (MuVoc)	-124 mV/°C
Specified Pmax temper. coeff. (muPMaxR)	-0.29 %/°C	Diode quality factor (Gamma)	1.02
		Diode factor temper. coeff. (muGamma)	0.000 1/°C
<b>Reverse Bias Parameters, for use in behaviour of PV arrays under partial shadings or mismatch</b>			
Reverse characteristics (dark) (BRev)	3.20 mA/V <sup>2</sup>	(quadratic factor (per cell))	
Number of by-pass diodes per module	3	Direct voltage of by-pass diodes	-0.7 V
<b>Model results for standard conditions (STC: T=25 °C, G=1000 W/m<sup>2</sup>, AM=1.5)</b>			
Max. power point voltage (Vmpp)	42.9 V	Max. power point current (Impp)	13.79 A
Maximum power (Pmpp)	590.1 Wp	Power temper. coefficient (muPmpp)	-0.29 %/°C
Efficiency(/ Module area) (Eff_mod)	22.8 %	Fill factor (FF)	0.786
Efficiency(/ Cells area) (Eff_cells)	24.7 %		

