



PV module - JAM72D40-590/LB

Manufacturer	JA Solar	Commercial data	
Model	JAM72D40-590/LB	Availability :	Prod. Since 2021
		Data source :	JA internal
Pnom STC power (manufacturer)	590 W _p	Technology	Si-mono
Module size (W x L)	1.134 x 2.333 m ²	Rough module area (A _{module})	2.65 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})	52.0 V	Short-circuit current (I _{sc})	14.35 A
Max. power point voltage (V _{mpp})	43.4 V	Max. power point current (I _{mpp})	13.59 A
=> maximum power (P _{mpp})	589.9 W	Isc temperature coefficient (μI _{sc})	6.4 mA/°C

One-diode model parameters

Shunt resistance (R _{shunt})	500 Ω	Diode saturation current (I _{oRef})	0.016 nA
Serie resistance (R _{serie})	0.21 Ω	Voc temp. coefficient (μV _{oc})	-124 mV/°C
Specified Pmax temper. coeff. (μP _{maxR})	-0.29 %/°C	Diode quality factor (Gamma)	1.02
		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	-0.7V

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

Max. power point voltage (V _{mpp})	43.2 V	Max. power point current (I _{mpp})	13.70 A
Maximum power (P _{mpp})	590.0 W _p	Power temper. coefficient (μP _{mpp})	-0.29 %/°C
Efficiency(/ Module area) (Eff _{mod})	22.3 %	Fill factor (FF)	0.791
Efficiency(/ Cells area) (Eff _{cells})	24.7 %		

