Characteristics of a PV module

Manufacturer, model : **Longi Solar, LR4-72HBD-435M-glaze-new**

Data source : Longi 202002

STC power (manufacturer)	**Pnom**	**435**	**Wp**	**Technology**		**Si-mono**	
Module size (W x L)		1.038 x 2.094	m²	Rough module area	Amodule	2.17	m²
Number of cells		2 x 72		Sensitive area (cells)	Acells	N/A	m²

Specifications for the model (manufacturer or measurement data)

Reference temperature	TRef	25	° C	Reference irradiance	GRef	1000	W/m²
Open circuit voltage	Voc	49.1	V	Short-circuit current	Isc	11.36	A
Max. power point voltage	Vmpp	40.8	V	Max. power point current	Impp	10.66	A
=> maximum power	Pmpp	434.9	W	Isc temperature coefficient	muIsc	6.7	mA/° C

One-diode model parameters

Shunt resistance	Rshunt	1000	ohm	Diode saturation current	IoRef	0.087	nA
Serie resistance	Rserie	0.27	ohm	Voc temp. coefficient	MuVoc	-144	mV/° C
				Diode quality factor	Gamma	1.04	
Specified Pmax temper. coeff.	muPMaxR	-0.35	%/° C	Diode factor temper. coeff.	muGamma	0.000	1/° C

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

Reverse characteristics (dark)	BRev	3.20	mA/V²	(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	Vmpp	40.3	V	Max. power point current	Impp	10.82	A
Maximum power	Pmpp	436.1	Wc	Power temper. coefficient	muPmpp	-0.34	%/° C
Efficiency(/ Module area)	Eff_mod	20.1	%	Fill factor	FF	0.782	
Efficiency(/ Cells area)	Eff_cells	N/A	%				

PV module: Longi Solar, LR4-72HBD-435M-glaze-new