

CLASSIC SIZING TOOL

PV Module Data

Power:	90	Watts
VOC (Open Circuit Voltage):	22.25	Volts
VMP (Maximum Power Point Voltage):	17.8	Volts
ISC: (Short Circuit Amperage)	5.39	Amps
IMP (Maximum Power Point Amperage):	5.06	Amps
VOC Temp Coef %:	0.33	C°
VMP Temp Coef %:	0.45	C°

Environmental Data

Coldest Ambient Temperature:	-30	F°
Hottest Ambient Temperature:	104	F°
Nominal Battery Volts:	12	Volts

PV Array

Number Of Modules In Series:	3	
Number Of Parallel Strings:	2	
Total Modules	6	
Rated PV Array Power:	540	Watts
Anticipated Array Power @ 120F:	482	Watts
Rated PV Array Current:	10.12	Amps
Battery Charging Current @ 14.4 V:	37.5	Amps
VMP (Maximum Power Point Voltage) :	53.4	Volts
VOC (Open Circuit Voltage):	66.75	Volts
VMP @ -30 F°:	67.8	Volts
VOC @ -30 F°:	79.8	Volts

Charge Controller Selection

	Classic150/Lite	Classic200/Lite	Classic250/Lite	Classic250KS
Max Operating Voltage	150	200	250	250
Max Non operating VOC (HyperVOC) @ 12V Nominal Battery Voltage	162	212	262	262
Maximum Number Of Modules In Series	5	7	9	9
Max Number Of Modules In Series (Using HyperVOC)	6	7	9	9
Max Allowable Output Current Per Classic Based On This Current Configuration	96	79	61	56
Max Allowable Wattage Per Classic Based On This Current Configuration	1380	1137	878	800
Present PV Array Wattage Of This Configuration	540	540	540	540

Design Check

Max VOC	OK	OK	OK	OK
Temperature The Classic Will Enter HyperVOC	-603.4 F°	-1012 F°	-1420.6 F°	-1420.6 F°
Array Power (Wattage)	OK	OK	OK	OK
Classics Required	0.4	0.5	0.7	0.7

NOTE: MidNite Solar recommends a second controller be added after 1.2

WARNING: MidNite Solar makes no representation, warranty or assumption of liability regarding the use of the String Calculator. This tool uses data provided by other parties (such as PV module specs) and makes calculations based on assumptions which may or may not prove to be valid.

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