



Classic Sizing Tool

PV Module Data

Power	285	Watts
VOC	38.6	Volts
VMP	31.9	Volts
ISC	9.66	Amps
IMP	8.95	Amps
VOC Temp Coef %	0.3	C
VMP Temp Coef %	0.36	Amps

Environmental Data

Coldest Ambient Temperature	20	F
Hottest Ambient Temperature	104	F
Nominal Battery Volts	24	Volts

PV Array

Number Of Modules In Series	4
Number Of Parallel Strings	3
Total Modules	12
Rated PV Array Power	3420 Watts
Anticipated Array Power @ 104 F	3235 Watts
Rated PV Array Current	26.85 Amps
Battery Charging Current @ 28.8V	118.8 Amps
VMP (Maximum Power Point Voltage)	127.6 Volts
VOC (Open Circuit Voltage)	154.4 Volts
VMP @ 20 F	142 Volts
VOC @ 20 F	169.2 Volts

Charge Controllers

	CLASSIC 150/LITE	CLASSIC 200/LITE	CLASSIC 250/LITE
Max Operating Voltage	150	200	250
Max None Operating VOC (HyperVOC) @ 48V Nominal Bat Voltage	174	224	274
Maximum Number Of Modules In Series Configuration	3	4	5
Max Number Of Modules In Series Using HyperVOC	4	5	6
Max Allowable Output Current Per Classic Based On This Current	82	72	62
Max Allowable Wattage Per Classic Based On This Configuration	2353	2066	1779
Present PV Array Wattage Of This Configuration	3420	3420	3420

Design Check

Max VOC	MARGINAL (HyperVOC)	OK	OK
Temp The Classic Enters HyperVOC	ALWAYS	-99.4 F°	-293.8 F°
Array Power (Wattage)	EXCESSIVE	EXCESSIVE	EXCESSIVE
Classics Required	1.5	1.7	2

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.