



Classic Sizing Tool

PV Module Data

Power	190	Watts
VOC	43.8	Volts
VMP	36.5	Volts
ISC	5.83	Amps
IMP	5.2	Amps
VOC Temp Coef %	0.32	C
VMP Temp Coef %	0.44	Amps

Environmental Data

Coldest Ambient Temperature	-5	C
Hottest Ambient Temperature	40	C
Nominal Battery Volts	48	Volts

PV Array

Number Of Modules In Series	3	
Number Of Parallel Strings	8	
Total Modules	24	
Rated PV Array Power	4560	Watts
Anticipated Array Power @ 40 C	4259	Watts
Rated PV Array Current	41.6	Amps
Battery Charging Current @ 57.6V	79.2	Amps
VMP (Maximum Power Point Voltage)	109.5	Volts
VOC (Open Circuit Voltage)	131.4	Volts
VMP @ -5 C	123.9	Volts
VOC @ -5 C	144	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	198	248	298
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	80	70	55
Max Allowable Wattage Per Classic Based On This Configuration	4672	4080	3212
Present PV Array Wattage Of This Configuration	4560	4560	4560

Design Check

Max VOC	OK	OK	OK
Temp The Classic Enters HyperVOC	-19 C°	-138 C°	-257 C°
Array Power (Wattage)	OK	EXCESSIVE	EXCESSIVE
Classics Required	1	1.2	1.5

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.