

# i20 String Optimizer

## 1500V Systems

maximum output **20A**

Vxxxx-i20-20 Models		V1350	V1375	V1400	V1425	V1450	V1475	V1500
<b>Electrical</b>								
<b>Input</b>								
Maximum voltage per input <sup>1</sup>	V	1500	1500	1500	1500	1500	1500	1500
Maximum current (Imp) per input <sup>2</sup>	A	12.8	12.8	12.8	12.8	12.8	12.8	12.8
Maximum short-circuit current (Isc) per input	A	13.3	13.3	13.3	13.3	13.3	13.3	13.3
MPP tracking voltage range	V	400 - 1270	400 - 1295	400 - 1300	400 - 1300	400 - 1300	400 - 1300	400 - 1300
Startup voltage per input	V	510	510	510	510	510	510	510
Number of inputs		2	2	2	2	2	2	2
<b>Output</b>								
Output voltage range	V	0 - 1350	0 - 1375	0 - 1400	0 - 1425	0 - 1450	0 - 1475	0 - 1500
Output voltage at full power	V	1270	1295	1320	1345	1370	1395	1420
Output voltage at zero power	V	1350	1375	1400	1425	1450	1475	1500
Maximum output current	A	20	20	20	20	20	20	20
Maximum continuous output power	kWdc	24.8	25.3	25.8	26.3	26.7	27.2	27.7
Efficiency (max / CEC / Euro)	%	99.6 / 99.5 / 99.4						
<b>Mechanical</b>								
Input & output connector	Amphenol H4							
Dimensions	13.31" x 8.66" x 3.94" (338 mm x 220 mm x 100 mm)							
Weight	11.6 lbs. (5.3 kg)							
Ambient temperature operating range	-40 °F to +122 °F (-40 °C to +50 °C)							
Cooling	Convection							
<b>Environmental</b>								
Environmental category	Outdoor							
Pollution degree	2							
Maximum operating altitude <sup>3</sup>	9843 ft (3000 m)							
Overvoltage category	OVII							
Ingress protection	IP66 / 4X							
<b>General</b>								
Compliance	ETL to UL 1741; IEC 61000-6-1, 61000-6-3, 62109; CE; Giteki 2-1-19; FCC Part 15, class A							

1. Voc at coldest design temp. Follow Ampt's design guidelines to determine the number of modules per input and max. system voltage.
2. Maximum Imp of modules on the input at standard test condition (STC) - irradiation level of 1000 W/m<sup>2</sup> at 25°C.
3. Optimizer derates above this altitude.

# i20 String Optimizer

## 1500V Systems

maximum  
output **20A**

Vxxxx-i20-20 Models		V1200	V1225	V1250	V1275	V1300	V1325
<b>Electrical</b>							
<b>Input</b>							
Maximum voltage per input <sup>1</sup>	V	1500	1500	1500	1500	1500	1500
Maximum current (Imp) per input <sup>2</sup>	A	12.8	12.8	12.8	12.8	12.8	12.8
Maximum short-circuit current (Isc) per input	A	13.3	13.3	13.3	13.3	13.3	13.3
MPP tracking voltage range	V	400 - 1120	400 - 1145	400 - 1170	400 - 1195	400 - 1220	400 - 1245
Startup voltage per input	V	510	510	510	510	510	510
Number of inputs		2	2	2	2	2	2
<b>Output</b>							
Output voltage range	V	0 - 1200	0 - 1225	0 - 1250	0 - 1275	0 - 1300	0 - 1325
Output voltage at full power	V	1120	1145	1170	1195	1220	1245
Output voltage at zero power	V	1200	1225	1250	1275	1300	1325
Maximum output current	A	20	20	20	20	20	20
Maximum continuous output power	kWdc	21.8	22.3	22.8	23.3	23.8	24.3
Efficiency (max / CEC / Euro)	%	99.6 / 99.5 / 99.4					
<b>Mechanical</b>							
Input & output connector	Amphenol H4						
Dimensions	13.31" x 8.66" x 3.94" (338 mm x 220 mm x 100 mm)						
Weight	11.6 lbs. (5.3 kg)						
Ambient temperature operating range	-40 °F to +122 °F (-40 °C to +50 °C)						
Cooling	Convection						
<b>Environmental</b>							
Environmental category	Outdoor						
Pollution degree	2						
Maximum operating altitude <sup>3</sup>	9843 ft (3000 m)						
Overvoltage category	OVII						
Ingress protection	IP66 / 4X						
<b>General</b>							
Compliance	ETL to UL 1741; IEC 61000-6-1, 61000-6-3, 62109; CE; Giteki 2-1-19; FCC Part 15, class A						

1. Voc at coldest design temp. Follow Ampt's design guidelines to determine the number of modules per input and max. system voltage.
2. Maximum Imp of modules on the input at standard test condition (STC) - irradiation level of 1000 W/m<sup>2</sup> at 25°C.
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# i20 String Optimizer

## 1500V Systems

maximum output **16A**

Vxxxx-i20-16 Models		V1350	V1375	V1400	V1425	V1450	V1475	V1500
<b>Electrical</b>								
<b>Input</b>								
Maximum voltage per input <sup>1</sup>	V	1500	1500	1500	1500	1500	1500	1500
Maximum current (Imp) per input <sup>2</sup>	A	12.3	12.3	12.3	12.3	12.3	12.3	12.3
Maximum short-circuit current (Isc) per input	A	13.3	13.3	13.3	13.3	13.3	13.3	13.3
MPP tracking voltage range	V	400 - 1285	400 - 1300	400 - 1300	400 - 1300	400 - 1300	400 - 1300	400 - 1300
Startup voltage per input	V	510	510	510	510	510	510	510
Number of inputs		2	2	2	2	2	2	2
<b>Output</b>								
Output voltage range	V	0 - 1350	0 - 1375	0 - 1400	0 - 1425	0 - 1450	0 - 1475	0 - 1500
Output voltage at full power	V	1285	1310	1335	1360	1385	1410	1435
Output voltage at zero power	V	1350	1375	1400	1425	1450	1475	1500
Maximum output current	A	16	16	16	16	16	16	15.9
Maximum continuous output power	kWdc	20.1	20.5	20.9	21.3	21.6	22.0	22.4
Efficiency (max / CEC / Euro)	%	99.6 / 99.5 / 99.4						
<b>Mechanical</b>								
Input & output connector	Amphenol H4							
Dimensions	13.31" x 8.66" x 3.94" (338 mm x 220 mm x 100 mm)							
Weight	11.6 lbs. (5.3 kg)							
Ambient temperature operating range	-40 °F to +122 °F (-40 °C to +50 °C)							
Cooling	Convection							
<b>Environmental</b>								
Environmental category	Outdoor							
Pollution degree	2							
Maximum operating altitude <sup>3</sup>	9843 ft (3000 m)							
Overvoltage category	OVII							
Ingress protection	IP66 / 4X							
<b>General</b>								
Compliance	ETL to UL 1741; IEC 61000-6-1, 61000-6-3, 62109; CE; Giteki 2-1-19; FCC Part 15, class A							

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<b>Electrical</b>							
<b>Input</b>							
Maximum voltage per input <sup>1</sup>	V	1500	1500	1500	1500	1500	1500
Maximum current (Imp) per input <sup>2</sup>	A	12.3	12.3	12.3	12.3	12.3	12.3
Maximum short-circuit current (Isc) per input	A	13.3	13.3	13.3	13.3	13.3	13.3
MPP tracking voltage range	V	400 - 1135	400 - 1160	400 - 1185	400 - 1210	400 - 1235	400 - 1260
Startup voltage per input	V	510	510	510	510	510	510
Number of inputs		2	2	2	2	2	2
<b>Output</b>							
Output voltage range	V	0 - 1200	0 - 1225	0 - 1250	0 - 1275	0 - 1300	0 - 1325
Output voltage at full power	V	1135	1160	1185	1210	1235	1260
Output voltage at zero power	V	1200	1225	1250	1275	1300	1325
Maximum output current	A	16	16	16	16	16	16
Maximum continuous output power	kWdc	17.7	18.1	18.5	18.9	19.3	19.7
Efficiency (max / CEC / Euro)	%	99.6 / 99.5 / 99.4					
<b>Mechanical</b>							
Input & output connector	Amphenol H4						
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