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sundragon™ Specifications Matrix

Hazardous Grade C1D2

Poly-crystalline Solar Modules

Model Name	Sundragon i125-36P	Sundragon i135-36P	Sundragon i145-36P	Sundragon i170-48P	Sundragon i190-48P	Sundragon i210-54P	Sundragon i220-54P	Sundragon i230-60P
Hazardous Area Protection								
Class 1 Division 2, Groups A,B,C,D	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Temperature Classification T4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Electrical Characteristics								
Maximum Power at STC (Pmax)	125W	135W	145W	170W	190W	210W	220W	230W
Optimum Operating Voltage (Vmp)	17.78V	18.14V	18.50V	23.81V	24.53V	27.43V	27.76V	30.36V
Optimum Operating Current (Imp)	7.03A	7.44A	7.84A	7.14A	7.75A	7.66A	7.93A	7.58A
Open Circuit Voltage (Voc)	21.56V	21.74V	22.18V	28.80V	29.47V	32.94A	33.26V	36.42V
Short Circuit Current (Isc)	7.60A	8.04A	8.39A	7.72A	8.32A	8.17A	8.39	8.10A
Maximum System Voltage	600VDC	600VDC	600VDC	600VDC	600VDC	600VDC	600VDC	600VDC
Maximum Series Fuse Rating	15A	15A	15A	15A	15A	15A	15A	15A
Power Tolerance	±5%	±5%	±5%	±5%	±5%	±5%	±5%	±5%
Mechanical Characteristics								
Solar Cell Type	Polycrystalline Silicon	Polycrystalline Silicon	Polycrystalline Silicon	Polycrystalline Silicon	Polycrystalline Silicon	Polycrystalline Silicon	Polycrystalline Silicon	Polycrystalline Silicon
Solar Cell Size	156 x 156 mm	156 x 156 mm	156 x 156 mm	156 x 156 mm	156 x 156 mm	156 x 156 mm	156 x 156 mm	156 x 156 mm
Number of Solar Cells	36	36	36	48	48	54	54	60
Front Glass	3.2 mm tempered glass	3.2 mm tempered glass	3.2 mm tempered glass	3.2 mm tempered glass	3.2 mm tempered glass	3.2 mm tempered glass	3.2 mm tempered glass	3.2 mm tempered glass
Frame	Anodized Aluminum Alloy	Anodized Aluminum Alloy	Anodized Aluminum Alloy	Anodized Aluminum Alloy	Anodized Aluminum Alloy	Anodized Aluminum Alloy	Anodized Aluminum Alloy	Anodized Aluminum Alloy
Dimensions L x W x D	1474 x 660 x 50 mm	1474 x 660 x 50 mm	1474 x 660 x 50 mm	1316 x 995 x 50 mm	1316 x 995 x 50 mm	1474 x 995 x 50 mm	1474 x 995 x 50 mm	1632 x 995 x 50 mm
Weight	12.0kg	12.0kg	12.0kg	17.0kg	17.0kg	18.0kg	18.0kg	20.0kg
Junction Box								
Dimensions L x W x D	134.8 x 102.8 x 39 mm	134.8 x 102.8 x 39 mm	134.8 x 102.8 x 39 mm	134.8 x 102.8 x 39 mm	134.8 x 102.8 x 39 mm	134.8 x 102.8 x 39 mm	134.8 x 102.8 x 39 mm	134.8 x 102.8 x 39 mm
Termination Block	6-terminal connection block	6-terminal connection block	6-terminal connection block	6-terminal connection block	6-terminal connection block	6-terminal connection block	6-terminal connection block	6-terminal connection block
Knockouts	Four 20 mm knockouts	Four 20 mm Knockouts	Four 20 mm Knockouts	Four 20 mm Knockouts	Four 20 mm Knockouts	Four 20 mm Knockouts	Four 20 mm Knockouts	Four 20 mm Knockouts
Cable Glands	Lankelec HSK-M20X1.5, Qty:2	Lankelec HSK-M20X1.5, Qty:2	Lankelec HSK-M20X1.5, Qty:2	Lankelec HSK-M20X1.5, Qty:2	Lankelec HSK-M20X1.5, Qty:2	Lankelec HSK-M20X1.5, Qty:2	Lankelec HSK-M20X1.5, Qty:2	Lankelec HSK-M20X1.5, Qty:2
Cable Gland Acceptable Cable Sizes	14, 12, 10 AWG	14, 12, 10 AWG	14, 12, 10 AWG	14, 12, 10 AWG	14, 12, 10 AWG	14, 12, 10 AWG	14, 12, 10 AWG	14, 12, 10 AWG
Cables	NA	NA	NA	NA	NA	NA	NA	NA
Connectors	NA	NA	NA	NA	NA	NA	NA	NA
Diode	2 bypass diodes	2 bypass diodes	2 bypass diodes	3 bypass diodes	3 bypass diodes	3 bypass diodes	3 bypass diodes	3 bypass diodes
Protection	IP-65, UL94-5VA	IP-65, UL94-5VA	IP-65, UL94-5VA	IP-65, UL94-5VA	IP-65, UL94-5VA	IP-65, UL94-5VA	IP-65, UL94-5VA	IP-65, UL94-5VA
Standards	UL1703, UL 746C, UL514C	UL1703, UL 746C, UL514C	UL1703, UL 746C, UL514C	UL1703, UL 746C, UL514C	UL1703, UL 746C, UL514C	UL1703, UL 746C, UL514C	UL1703, UL 746C, UL514C	UL1703, UL 746C, UL514C
Environmental Characteristics								
Mechanical Load	2400 Pa	2400 Pa	2400 Pa	5400 Pa	5400 Pa	5400 Pa	5400 Pa	5400 Pa
Fire Rating	Class C	Class C	Class C	Class C	Class C	Class C	Class C	Class C
Operating Temperture	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C
Temperature Coefficients								
Nominal Operating Cell Temperature	46°C, ±2°C	46°C, ±2°C	46°C, ±2°C	46°C, ±2°C	46°C, ±2°C	46°C, ±2°C	46°C, ±2°C	46°C, ±2°C
Maximum Power (Pmax) Coefficient	-0.45%/°C, ±0.05	-0.45%/°C, ±0.05	-0.45%/°C, ±0.05	-0.45%/°C, ±0.05	-0.45%/°C, ±0.05	-0.45%/°C, ±0.05	-0.45%/°C, ±0.05	-0.45%/°C, ±0.05
Short Circuit Current (Isc) Coefficient	-0.06%/°C, ±0.015	-0.06%/°C, ±0.015	-0.06%/°C, ±0.015	-0.06%/°C, ±0.015	-0.06%/°C, ±0.015	-0.06%/°C, ±0.015	-0.06%/°C, ±0.015	-0.06%/°C, ±0.015
Open Circuit Voltage (Voc) Coefficient	-0.35%/°C, ±0.05	-0.35%/°C, ±0.05	-0.35%/°C, ±0.05	-0.35%/°C, ±0.05	-0.35%/°C, ±0.05	-0.35%/°C, ±0.05	-0.35%/°C, ±0.05	-0.35%/°C, ±0.05
Certification								
ETL (Intertek)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Certified to UL 1703	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Certified to CSA C22.2 No. 213	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Certified to ANSI/ISA 12.12.01	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Warranty								
Product Workmanship	5 years	5 years	5 years	5 years	5 years	5 years	5 years	5 years
10 Years	90% output	90% output	90% output	90% output	90% output	90% output	90% output	90% output
25 Years	80% output	80% output	80% output	80% output	80% output	80% output	80% output	80% output
Standard Test Conditions (STC)								
STC = 1000 W/M2 irradiance, 25oC module temperature, AM 1.5 spectrum (Subject to simulator measurement uncertainty of ±3%)								