

ORION

KSHC-120 M N-Type



120 cells

N-TOPCon
Monocrystalline

22,4%

Maximum
efficiency

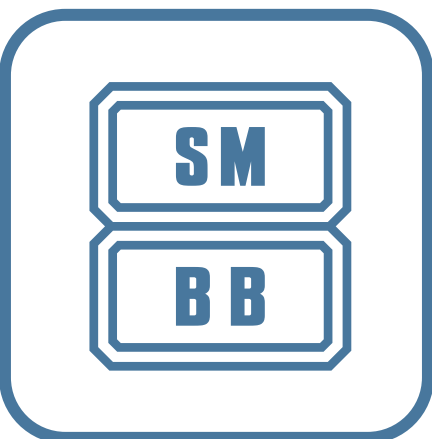
0~+3%

Positive Power
Tolerance

460-485

Peak Power
Range

SMBB Technology



Better light trapping and current collection to improve module power output and reliability.

Excellent weak light performance

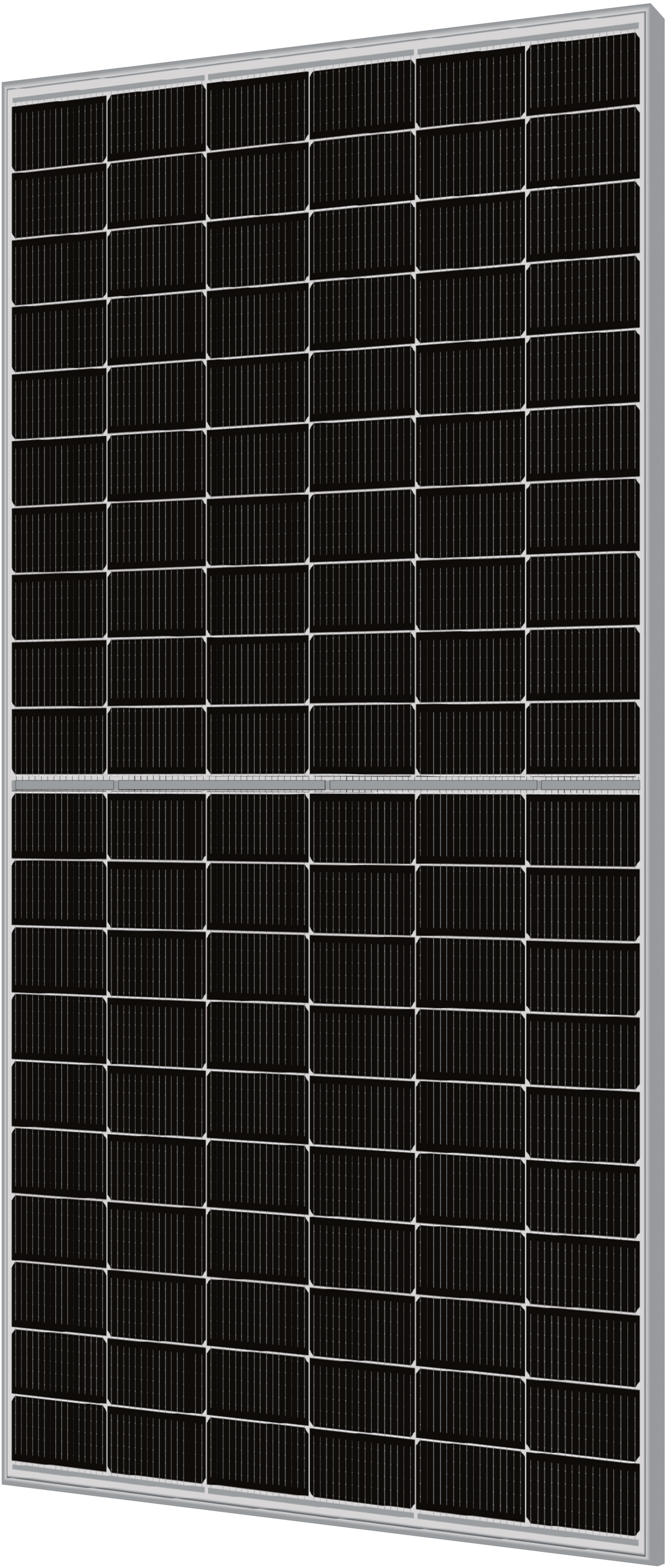


More power output in weak light condition, such as cloudy, morning and sunset.

Higher Reliability



No polysilicon wrap around, full electrical isolation, zero leakage current; much safer for roof.



ZERO LID (Light Induced Degradation)

N-type solar cell has no LID naturally which can increase power generation.



Outstanding visual appearance

Designed with aesthetics in mind, thinner wires that appear all black at a distance.



Better Temperature Coefficient

Higher power generation under working conditions, thanks to passivating contact cell technology.

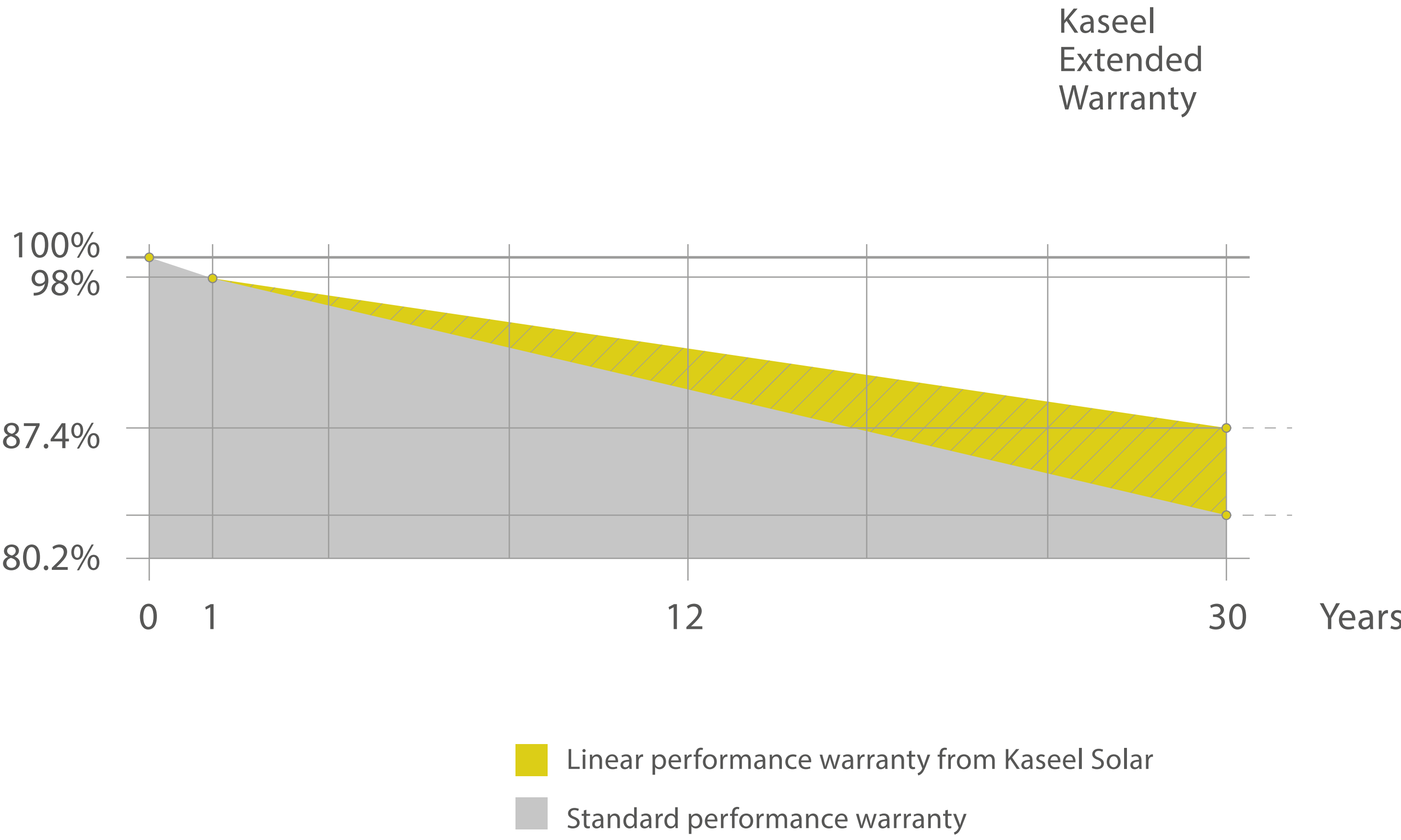
SPECIAL WARRANTY

30
YEARS

Linear
warranty

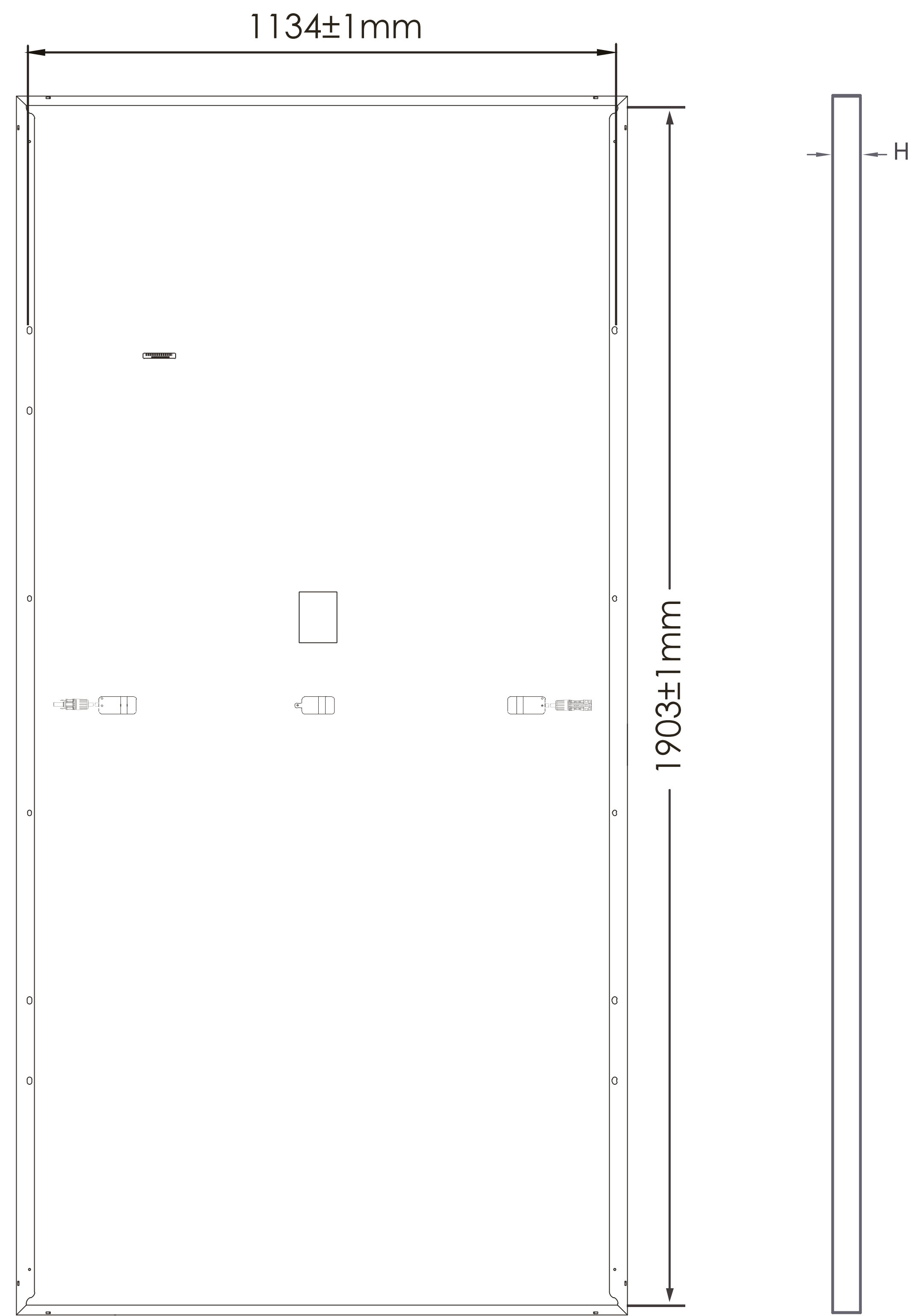
20
YEARS

Product
warranty



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ENGINEERING DRAWINGS



MECHANICAL CHARACTERISTICS

Cell type	N TOPCon Monocrystalline (182x182mm)	
Number of cells	120 (6x20)	
Module dimensions	1903x1134x30mm (67.79x44.65x1.18inches)	
Weight	24.5kg (47.40lbs.)	
Front cover	3.2mm (0.13inches) AR Coating Tempered Glass	
Frame	Anodized Aluminium	
Junction box	Split Junction Box (IP68, three diode)	
Cable	TUV: 4mm² (0.006inches2)/UL: 12AWG	
Connector	T01/LJQ-3-CSY/MC4/MC4-EVO2	
Operating Temperature		-40°C ~ +85°C
Maximum System Voltage		1500V DC (IEC)
Snow / Wind		II
Maximum Series Fuse Rating		25A

TEMP. CHARACTERISTICS

Nominal Operating Cell Temperature	43°C ±2°C
Temperature Coefficients of Pmax	-0.30% °C
Temperature Coefficients of VOC	-0.25%/°C
Temperature Coefficients of ISC	0.046%/°C

PACKAGING

Standard packaging	36 pcs/carton
Module quantity per 40' container	864 pcs/40hq

ELECTRIC CHARACTERISCS AT STC

Nominal Power (Pmax)	460W	465W	470W	475W	480W	485W
Voltage Circuit Voltage (VOC)	42.3V	42.5V	42.6V	42.8V	42.9V	43.1V
Short Circuit Current (ISC)	13.89A	13.98A	14.09A	14.16A	14.26A	14.34A
Voltage at Nominal Power (Vmp)	35.0V	35.2V	35.3V	35.5V	35.6V	35.8V
Current at Nominal Power (Imp)	13.14A	13.22A	13.31A	13.39A	13.48A	13.56
Module Efficiency (%)	21.2	21.5	21.7	21.9	22.2	22.4

STC: Irradiance 1000W/m2, Cell Temperature 25°C, Air Mass AM1.5

ELECTRICAL CHARACTERISTICS NOCT

Nominal Power (Pmax)	347W	351W	355W	359W	362W	366W
Voltage Circuit Voltage (VOC)	40.1V	40.2V	40.4V	V40.5V	40.7V	40.8V
Short Circuit Current (ISC)	11.28A	11.36A	11.44A	11.50A	11.58A	11.65A
Voltage at Nominal Power (Vmp)	32.6V	32.7V	32.8V	33.0V	33.1V	33.3V
Current at Nominal Power (Imp)	10.66A	10.73A	10.82A	10.87A	10.95A	11.01A

NOCT: Irradiance at 800W/m2, Ambient Temperatue 20°C, Air Mass AM1.5, Wind Speed 1m/s

CURVES

