

470-500 W

Topcon N-Type

 182 mm bifacial half cell

 1.909 x 1.134 mm

 26 kg



SMBB Technology

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



PID Resistance

Excellent Anti-PID performance guarantee via optimized mass-production process and materials control.



Durability Against Extreme Environmental Conditions

High salt mist and ammonia resistance.



Hot 2.0 Technology

The N-Type module with hot 2.0 technology has better reliability and lower LID/LETID.



Enhanced Mechanical Load

Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal).

Warranty | Garantía

25 **Years | Años**
Product
Producto

30 **Years | Años**
Linear power
Rendimiento lineal



Bloomberg

NEW ENERGY FINANCE

CERTIFIED
IEC
61730 Ed.1

CERTIFIED
IEC
61215 Ed.2

 **Anti-PID**
System voltage durability
PPP 56042



TIPO TYPE	EX470TC-120HC	EX475TC-120HC	EX480TC-120HC	EX485TC-120HC	EX490TC-120HC	EX495TC-120HC	EX500TC-120HC
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PERFORMANCE AT STC (POWER TOLERANCE 0-+5W)

Potencia de salida Maximum Power	470	475	480	485	490	495	500
Voltaje máximo Max. voltage, VMP (V)	35,7	35,88	36,06	36,25	36,43	36,62	36,79
Intensidad máxima actual Current, IMP (A)	13,17	13,24	13,31	13,38	13,45	13,52	13,59
Voltaje circ. abierto Voltage open circuit, VOC (V)	43,3	43,45	43,6	43,76	43,91	44,07	44,21
Intensidad cortocircuito Short circuit current, ISC (A)	13,69	13,77	13,85	13,93	14,01	14,09	14,17
Modulo eficiencia Module Efficiency (%)	21.74	21.98	22.21	22.44	22.67	22.90	23.17

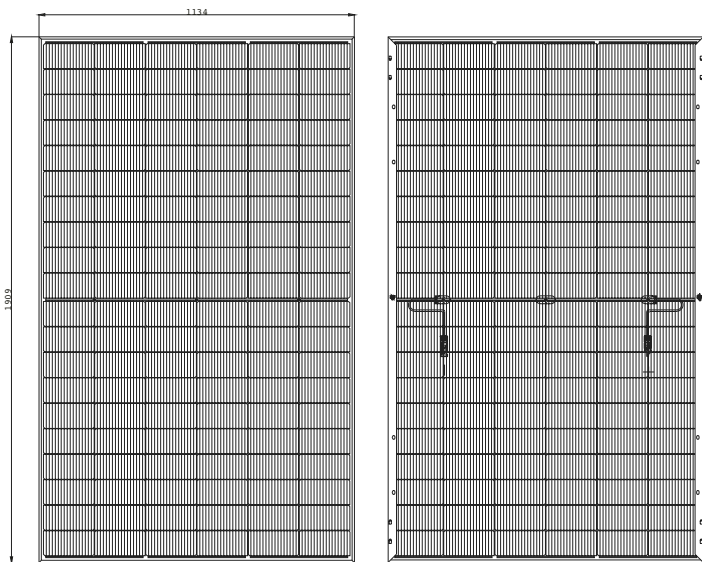
PERFORMANCE AT NOCT

Potencia de salida Maximum Power	353,40	357,16	360,92	364,68	368,44	372,20	375,96
Voltaje máximo Max. voltage, VMP (V)	33,60	33,77	33,94	34,12	34,29	34,47	34,63
Intensidad máxima actual Current, IMP (A)	10,526	10,57	10,63	10,68	10,74	10,80	10,85
Voltaje circ. abierto Voltage open circuit, VOC (V)	41,13	41,27	41,41	41,57	41,71	41,86	41,99
Intensidad cortocircuito Short circuit current, ISC (A)	11,05	11,12	11,18	11,25	11,31	11,38	11,44
Max. potencia tolerada Max. power tolerance (W)	0~+3%						
Max. system Voltage (V)	1000/1500VDC (IEC/UL)						
Maximum Series Fuse Rating (A)	25A						

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5 NOCT: Irradiance 800W/m², Ambient Temperature 25°C, Wind Speed 1m/s

ELECTRICAL CHARACTERISTICS WITH DIFFERENT REAR SIDE POWER AGAIN (REFERENCE TO 455W FRONT)

Pmax gain (%)	5%	10%	15%	20%	25%
Voltaje máximo Max. voltage, VMP (V)	525	550	575	600	625



DATOS MECÁNICOS MECHANICAL SPECIFICATIONS

Dimensions: 1909*1134mm
Nº of cells: 120 (60x2)
Cells: N type Mono-crystalline
Front glass: 3.2mm, anti-reflection coating, high transmission, low iron, tempered glass
Connector: MC4 Compatible
Weight: 26 kg
Junction Box: IP68 Rated
Frame: Anodized aluminum alloy
Cable: 4mm2 (+): 400 mm, (-) 200 mm or customized length
Front load: 5400Pa
Real Load: 2400Pa
Protection class: Class II
IEC Fire Type: Class C

COEFICIENTES DE TEMPERATURA TEMPERATURE COEFFICIENTS

Coeficiente de temp. Temp. Coefficient (P _{MAX})	-0.29%/°C
Coeficiente de temp. Temp. Coefficient (ISC)	0.045%/°C
Coeficiente de temp. Temp. Coefficient (VOC)	-0.25%/°C
Nominal Operating Cell Temp. (NOCT)	45°C (±2°C)
Operating Temperature	-40~+70°C

I-V CURVAS CURVES

Temperatura celdas | Cells temperature: 25°C. Current-Voltage & Power Voltage Curve (490)

