LEDIT SUN

PANNELLI SOLARI
serie PFO antigrandine

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PFO 420-440 M54NT5-BF

Modulo fotovoltaico monocristallino **BIFACCIALE** - 108 celle **N-Type Topcon**

SERIE NORDIC 420W/440W

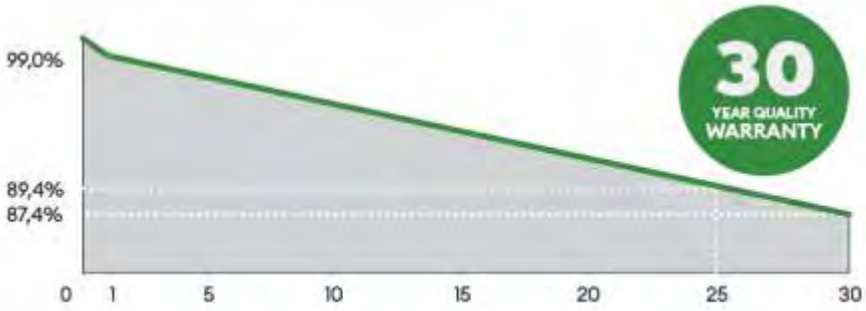
European Recycling Platform

NT5 N-Type
Bifacciale Ultra Black

- La tecnologia bifacciale consente un ulteriore recupero di energia dal lato posteriore (fino al 30%)
- La durata di 30 anni garantisce una generazione di energia aggiuntiva del 10-30% rispetto al modulo di tipo P convenzionale
- La cella solare di tipo N non ha degrado LID e quindi aumenta la produzione di energia
- Eccellenti prestazioni a basso irraggiamento
- Migliore cattura della luce e della corrente per migliorare la potenza erogata e l'affidabilità del modulo
- Coefficiente termico di potenza più basso del settore
- Circuito elettrico ottimizzato e corrente operativa inferiore per un ridotto Hot Spot Loss e un migliore coefficiente di temperatura
- Triplo test EL al 100% che abbatte sensibilmente il tasso di incrinatura nascosta dei moduli

Test Anti-Grandine per Grandine da 45 mm a 30,7 m/s

GARANZIA SULLE PRESTAZIONI



<0.8%
FIRST YEAR POWER DEGRADATION

0.32%
YEAR 2-30 POWER DEGRADATION

PERFORMANCE INSURANCE
al costo del 2% a richiesta del cliente

LLOYD'S underwriters

ELECTRIC CHARACTERISTICS

PFO 420-440 M54NT5-BF

Model of modules	PFO 420M54NT5BF		PFO 425M54NT5BF		PFO 430M54NT5BF		PFO 435M54NT5BF		PFO 440M54NT5BF	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum power — P_{mp} (W)	420	313	425	317	430	320	435	324	440	328
Open-circuit voltage — V_{oc} (V)	37.58	35.48	37.75	35.63	38.07	35.94	38.26	36.12	38.32	36.17
Short-circuit current — I_{sc} (A)	13.93	11.25	13.99	11.30	14.00	11.31	14.08	11.38	14.22	11.49
Maximum power voltage — V_{mp} (V)	31.91	29.87	32.22	30.16	32.49	30.38	32.52	30.44	32.57	30.49
Maximum power current — I_{mp} (A)	13.16	10.48	13.19	10.50	13.24	10.53	13.38	10.64	13.51	10.75
Module efficiency — η_m (%)	21.5		21.8		22.0		22.3		22.5	

STC (Standard Testing Conditions): Irradiance 1000W/m², Cell Temperature 25 °C , Spectra at AM1.5, Flash test tolerance +- 3%
NOCT (Nominal Operating Cell Temperature): Irradiance 800W/m², Ambient Temperature 20°C , Spectra at AM1.5, Wind at 1m/s

ELECTRICAL CHARACTERISTICS WITH DIFFERENT POWER BIN (REFERENCE TO 13.5% IRRADIANCE RATIO)

Peak Power (P_{max}) (W)	465	471	476	482	488
Open Circuit Voltage (V_{oc}) (V)	37.58	37.75	38.07	38.26	38.32
Short Circuit Current (I_{sc}) (A)	15.43	15.50	15.52	15.60	15.76
MPP Voltage (V_{mp}) (V)	31.91	32.22	32.49	32.52	32.57
MPP Current (I_{mp}) (A)	14.59	14.61	14.67	14.82	14.97

STRUCTURAL CHARACTERISTICS

Module dimensions (L*W*H)	1722 x 1134 x 30 mm
Weight	24.2 kg
Cell	108 cells, N-type Monocrystalline 182 x 91 mm
Front glass	2.0mm, Anti-Reflection Coating
Back glass	2.0mm, Heat Strengthened Glass
Frame	Black Anodized aluminum alloy
Junction box	IP68, 3 diodes
Output wire	4.0 mm²
Wire length	300mm/1200mm/customized
Connector	MC4 Compatible
Packing Specification	36pcs/Pallet; 936 pcs/40'HQ

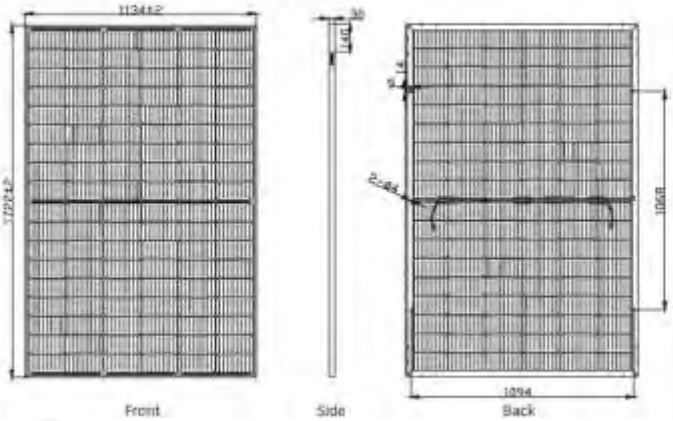
OPERATING PARAMETERS

Power tolerance (W)	(0,+5)
Maximum system voltage (V)	1500
Maximum rated fuse current (A)	30
Current operating temperature (°C)	-40~+85 °C
Mechanical load	5400 Pa / 2400 Pa
HailStone Test at 30,7m/s speed	**45mm at 31m/s**

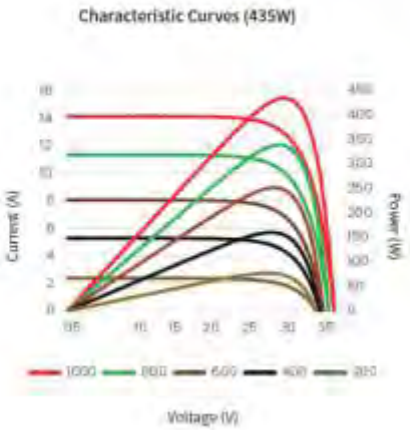
TEMPERATURE RATINGS

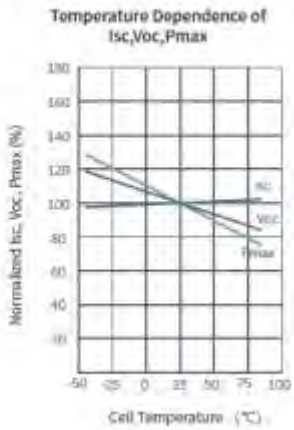
Temperature coefficient (P_{max})	-0.30 %/°C
Temperature coefficient (V_{oc})	-0.26 %/°C
Temperature coefficient (I_{sc})	+0.046 %/°C
Nominal operating cell temperature	43±2 °C

MODULE DIMENSIONS (MM)



* The unma rance is ±1 mm
Length shown in mm





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PFO 465-485 M60NT5-BF

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SERIE NORDIC
465W/485W

European Recycling Platform

NT5 N-Type
Bifacciale Ultra Black

- La tecnologia bifacciale consente un ulteriore recupero di energia dal lato posteriore (fino al 30%)
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- La cella solare di tipo N non ha degrado LID e quindi aumenta la produzione di energia
- Eccellenti prestazioni a basso irraggiamento
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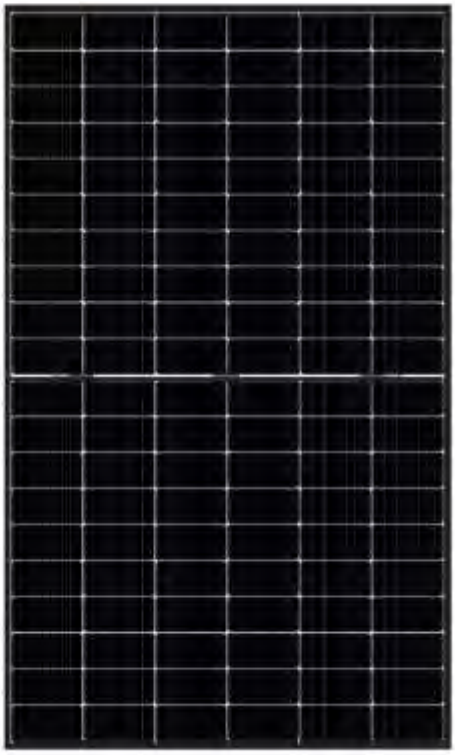

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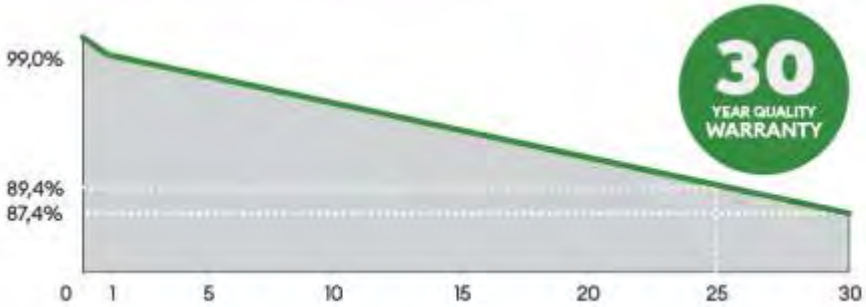

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ELECTRIC CHARACTERISTICS

PFO 465-485 M60NT5-BF

Model of modules	PFO 465M60NT5BF		PFO 470M60NT5BF		PFO 475M60NT5BF		PFO 480M60NT5BF		PFO 485M60NT5BF	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum power — P_{mp} (W)	465	346	470	350	475	354	480	358	485	361
Open-circuit voltage — V_{oc} (V)	42.75	34.30	42.88	34.40	43.01	34.51	43.14	34.61	43.27	34.72
Short-circuit current — I_{sc} (A)	13.36	10.10	13.43	10.18	13.51	10.25	13.58	10.33	13.65	20.41
Maximum power voltage — V_{mp} (V)	36.64	40.36	36.75	40.48	36.86	40.60	36.97	40.73	37.09	40.85
Maximum power current — I_{mp} (A)	12.69	10.79	12.79	10.85	12.89	10.91	12.98	10.97	13.08	11.03
Module efficiency — η_{m} (%)	21.6		21.8		22.0		22.2		22.5	

STC (Standard Testing Conditions): Irradiance 1000W/m², Cell Temperature 25 °C , Spectra at AM1.5, Flash test tolerance +- 3%
NOCT (Nominal Operating Cell Temperature): Irradiance 800W/m², Ambient Temperature 20°C , Spectra at AM1.5, Wind at 1m/s

ELECTRICAL CHARACTERISTICS WITH DIFFERENT POWER BIN (REFERENCE TO 13.5% IRRADIANCE RATIO)

Peak Power (Pmax) (W)	515	521	526	532	537
Open Circuit Voltage (V_{oc}) (V)	42.75	42.88	43.01	43.14	43.27
Short Circuit Current (I_{sc}) (A)	14.80	14.88	14.97	15.05	15.13
Maximum power voltage — V_{mp} (V)	36.64	36.75	36.86	36.97	37.09
Maximum power current — I_{mp} (A)	14.06	14.17	14.28	14.38	14.49

STRUCTURAL CHARACTERISTICS

Module size (L*W*H)	1903 x 1134 x 30 mm
Weight	26.3kg
Cell	120 cells, N-type Monocrystalline 182x91 mm
Front glass	2.0mm, Anti-Reflection Coating
Back glass	2.0mm, Heat Strengthened Glass
Frame	Anodized aluminum alloy
Junction box	IP68, 3 bypass diodes
Output wire	4.0 mm²
Wire length	300mm/1200mm/customized
Connector	MC4 original (EVO2)
Packing Specification	36 pcs/Pallet; 864 pcs/40'HQ

OPERATING PARAMETERS

Power tolerance (W)	(0,+5)
Maximum system voltage (V)	1500
Maximum rated fuse current (A)	30
Current operating temperature (°C)	-40~+85 °C
Mechanical load	5400 Pa / 2400 Pa

TEMPERATURE RATINGS

Temperature coefficient (P_{max})	-0.30 %/°C
Temperature coefficient (V_{oc})	-0.26 %/°C
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Nominal operating cell temperature	43±2 °C

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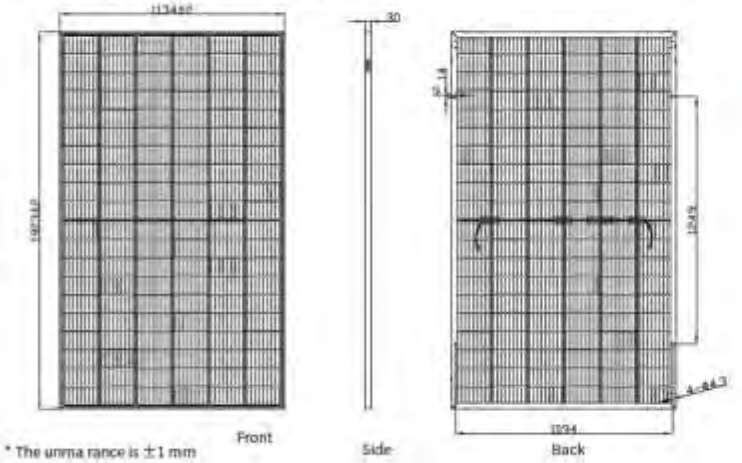

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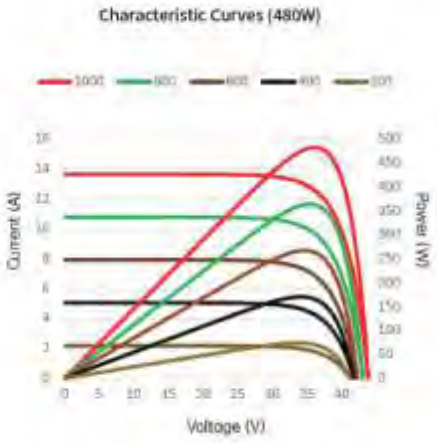

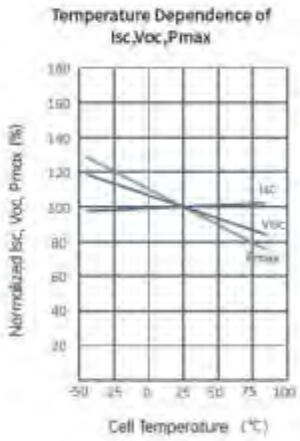

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