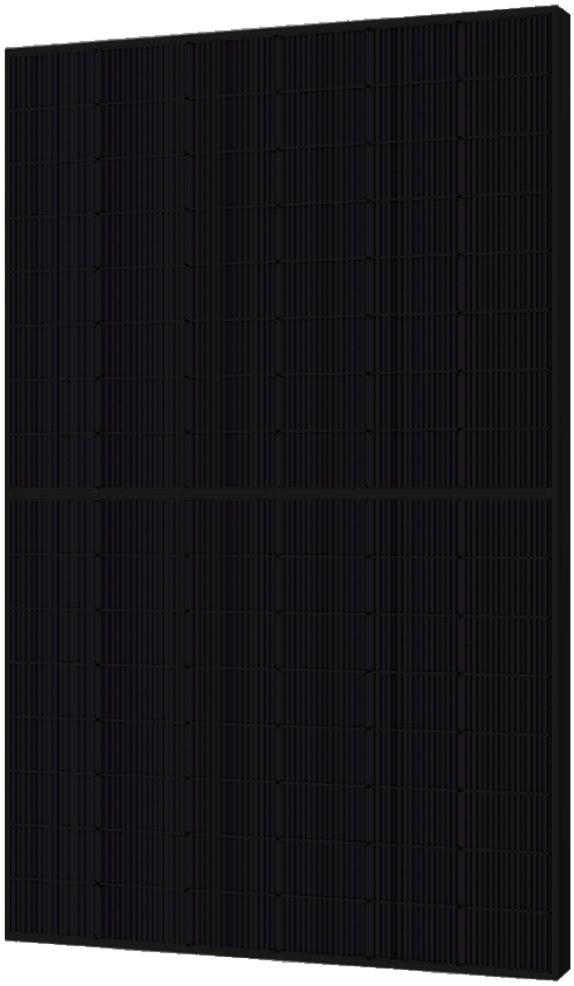
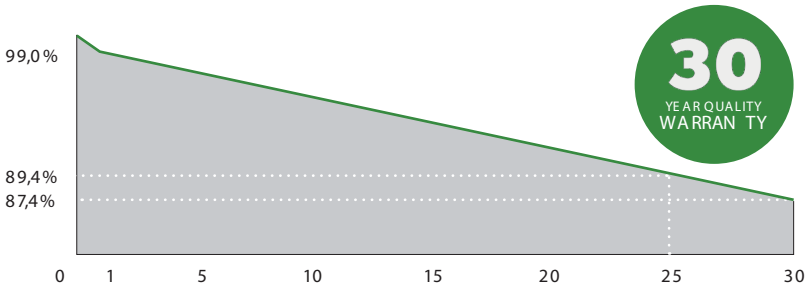
NORDIKA SERIES
450W / 470W

N T7 N -Type Rectangle TOPCon
Bifacial Ultra Black



- Bifacial technolog y enables additional ene rgy har vesting from rea r side (up to 30%)
- 30 yea rs lifespan brin gs 10-30% additional pow er gene ratio n com pa ring with conventio nal P-type modul e
- N-type sola r cell has no LID natu rall y which can inc rease powe r gene ration
- Stronger surface resistance to mechanical loads with 8000PA front side and 5400PA back side
- Better light trapping and current collection to improve module powe r output and reliability
- Industry leading lowest thermal co-efficient of power
- O ptimi zed electrical desi gn and low er operati ng current for reduced hot spot loss and better temperature coefficient
- Passed kiwa hail test with a diameter of 45mm a speed of 30.7m per second

LINEA R PER FORMANCE WARRANTY



ABOU T OMNIS P OWER

Omnis Powe r was founded in 2010 by a g roup of entrep reneu rs with experience in the ene rgy se ctor and a common idea: to innovate the renewable energy sector.Arising from several spin-offs of leading companies in the indu stry, Omnis Powe r is at the forefront of ne w technolog y resea rch and comp etitive produ ct d evelopme nt.

Toda y, Omnis Powe r is a European compa ny with i nternational experience that beli eves and i nvests in Europe. The increasingly strong group already has offices in Italy, Lithuania, Estonia, Germany and Norwa y in addition to nume rous partne rs a round the world.
Norway in addition to numerous partners around the world.

ELECTRIC CHARACTERISTICS

NT7 N-TYPE 450/470 W BF

Model of modules	OP4 50M48-NT7-BF		OP4 55M48-NT7-BF		OP4 60M48-NT7-BF		OP4 65M48-NT7-BF		OP4 70M48-NT7-BF	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum power — P_{mp} (W)	450	341	455	346	460	350	465	354	470	358
Open-circuit voltage — V_{oc} (V)	35.95	34.02	36.21	34.26	36.46	34.50	36.72	34.75	36.98	34.99
Short-circuit current — I_{sc} (A)	15.69	12.63	15.75	12.68	15.79	12.71	15.84	12.75	15.89	12.79
Maximum power voltage — V_{mp} (V)	30.05	28.32	30.28	28.59	30.51	28.85	30.75	29.11	30.99	29.37
Maximum power current — I_{mp} (A)	14.98	12.04	15.03	12.08	15.08	12.12	15.13	12.16	15.18	12.20
Cell efficiency	22.52		22.77		23.02		23.27		23.52	

STC (Standard Testing Conditions): Irradiance 1000W/m^2, Cell Temperature 25 °C , Spectra at AM1.5, Flash test tolerance +-4 %
NOCT (Nominal Operating Cell Temperature): Irradiance 800W/m^2, Ambient Temperature 20°C , Spectra at AM1.5, Wind at 1m/s

ELECTRICAL CHARACTERISTICS WITH 10% REAR SIDE POWER GAIN

Total power Pmax/W	491	496	501	507	512
Vmp / V (Total)	30.05	30.28	30.51	30.75	30.99
Imp / A (Total)	16.33	16.38	16.44	16.49	16.55
Voc / V (Total)	35.95	36.21	36.46	36.72	36.98
Isc / A (Total)	17.10	17.16	17.21	17.27	17.32

STRUCTURAL CHARACTERISTICS

Module size (L*W*H)	1762x1134x30mm
Weight	24kg
Cell	96 cells,N type Monocrystalline 182x105mm
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	4mm^2
Wire length	300mm/1100mm/customized
Connector	MC4 Compatible
Packing Specification	36 pcs/Pallet ; 936 pcs/40’ HQ

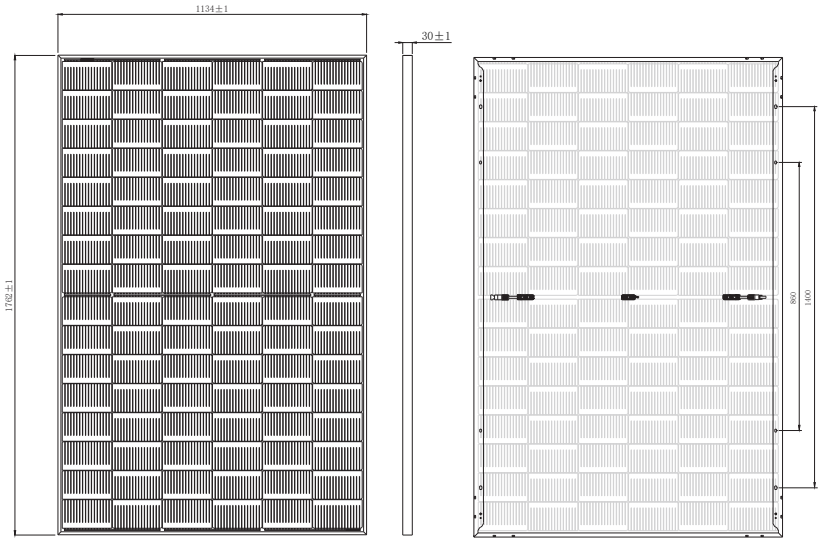
OPERATING PARAMETERS

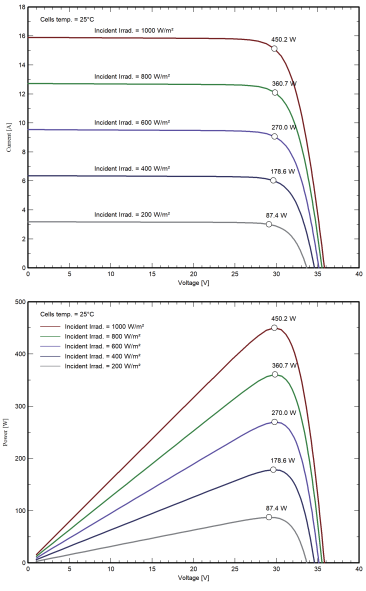
Power tolerance (W)	(0~+4)
Maximum system voltage (V)	1500
Maximum rated fuse current (A)	30
Current operating temperature (°C)	-40~+85°C
Mechanical load	8000 Pa / 5400 Pa

TEMPERATURE RATINGS

Temperature coefficient (P_{max})	-0.30% / °C
Temperature coefficient (V_{oc})	-0.25% / °C
Temperature coefficient (I_{sc})	0.045% / °C
Nominal operating cell temperature	42±2 °C

MODULE DIMENSIONS (MM)





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