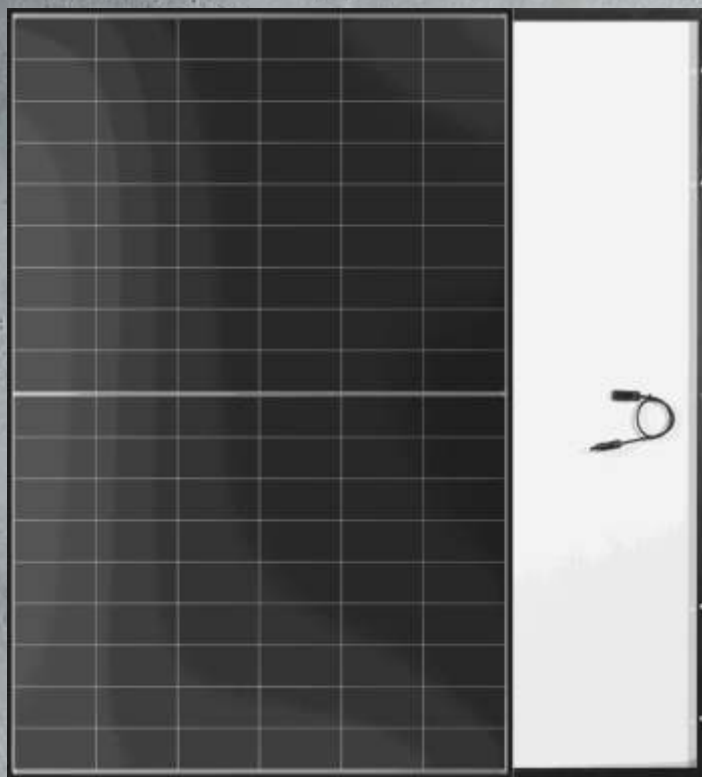


Tenka Orion IV Ultimate **Black Frame**



Tenka Orion IV Ultimate - Product features



Module efficiency

23.8% module efficiency and 465W
Peak power under 2 square metres



Hail protection class 4

Hail protection class 4 for protection
against hailstones up to 45 mm



Nanotech coating

Patented Tenka Nanotech technology
for improved light absorption



Reliable design

Rear-contact technology reduces
micro-cracks in the module



Product guarantee

30-year product guarantee for
maximum investment security



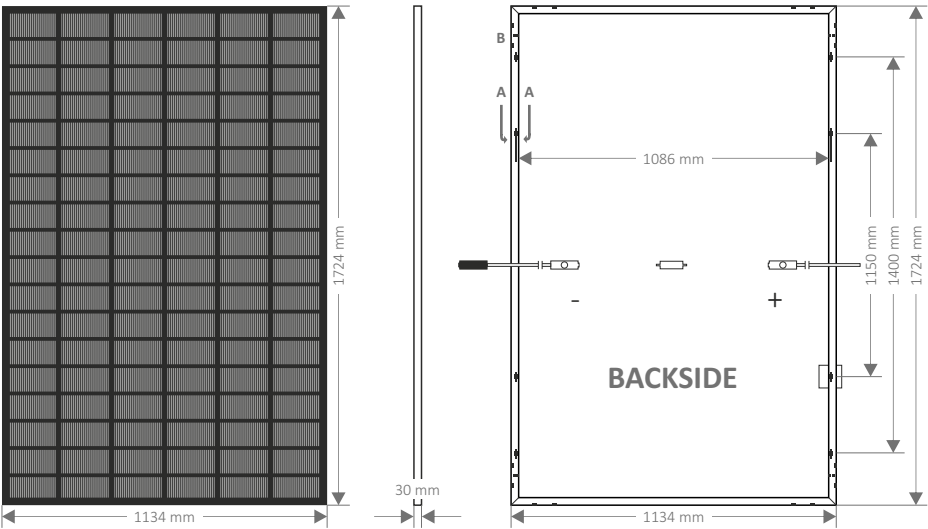
Performance guarantee

30-year performance guarantee on
87.4 % performance guaranteed

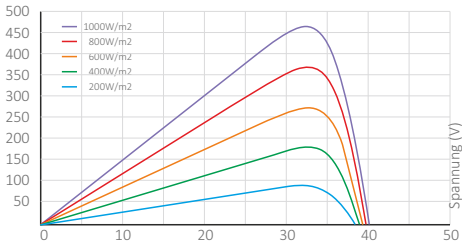
Tenka Orion IV Ultimate

Technical Datasheet	450 W		455 W		460 W		465 W	
	STC ¹	NMOT ²	STC ¹	NMOT ²	STC ¹	NMOT ²	STC ¹	NMOT ²
Maximum power (Pmax)	450Wp	339Wp	455Wp	343Wp	460Wp	347Wp	465Wp	351Wp
Maximum power Voltage (Vmp)	33,81V	31,84V	33,91V	31,94V	34,01V	32,03V	34,11V	32,12V
Maximum power Current (Imp)	13,32A	10,67A	13,42A	10,76A	13,53A	10,84A	13,64A	10,93A
Open circuit voltage (Voc)	39,99V	37,66V	40,09V	37,76V	40,19V	37,85V	40,29V	37,94V
Short-circuit current (Isc)	13,96A	11,32A	14,02A	11,37A	14,08A	11,42A	14,14A	11,46A
Module efficiency (%)	23,00%		23,30%		23,60%		23,80%	
Voc and Isc Tolerances	±3%							
Operating temperature (°C)	-40°C~+85°C							
Maximum system voltage	1500V							
Maximum series protection	25A							
Temperature coefficient Pmax	-0,29%/°C							
Temperature coefficient Voc	-0,25%/°C							
Temperature coefficient Isc	0,045%/°C							
Nominal operating temperature of the cell (NOCT)	45±2 °C							
Cell type	N-Type, TOPCon, mono-crystalline 182 mm, Tenka Nanotech Coating*							
Number of cells	108							
Dimensions	1724 x 1134 x 30 mm (±2mm)							
Weight	20,8 Kg							
Glass front	3,2 mm tempered glass, highly transparent anti-reflective coating							
Backside	White film							
Frame	Anodized aluminium alloy, Black							
Junction box	Protection class IP68							
Output cable	TÜV 1 x 4,0 mm² / UL 12AWG, Length 1100 mm							
Resistance to mechanical loads	5.400 Pa acc. IEC 61215-1-2							
Certificates	IEC61215, IEC61730							

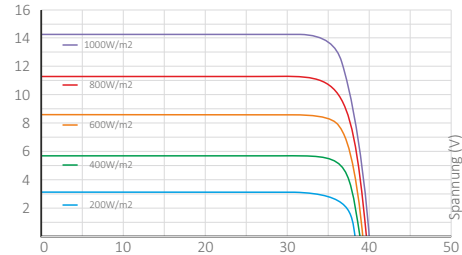
Measurements



P-V Characteristic curve of PV Module



I-V Characteristic curve of PV Module



Packaging information: 36 pieces per pallet, 936 pieces per container (26 pallets)

* By using the Tenka Nanotech layer, 15/20 watts more are generated compared to the standard cell.
¹ STC (standard test conditions): Irradiance 1000W/m2. Cell temperature 25°C. AM 1.5
² NMOT (Nominal Module Operating Temperature): Irradiance 800W/m2. NMOT ambient temperature 20°C. AM 1.5.
Wind speed 1m/s. Data at nominal conditions. Errors and omissions excepted. Illustrations may vary.

