„TECHNOLOGY FOR A SUSTAINABLE WORLD” - TENKA POWER – A STRONG PART OF THE TENKA SOLAR GROUP.

Tenka Power is a European subsidiary of the globally operating Tenka Solar Group. As part of an internationally successful group of companies, we benefit from the decades of experience, extensive resources and innovative technologies of our parent company. The Tenka Solar Group is one of the leading manufacturers and suppliers in the photovoltaic sector and stands for outstanding quality, high production capacities and comprehensive customer support.

As the European subsidiary of the Tenka Solar family, we bring local expertise, a deep understanding of the requirements of the European market and a strong focus on sustainable, cost-effective solutions. In this way, we ensure that our customers benefit from the latest trends and developments in the field of renewable energies. Thanks to the intensive exchange between the locations and teams of the Tenka Solar Group, we can draw on a wide range of experience and best practices.

This strong international presence enables us to meet individual customer needs, comply with global standards and at the same time develop customised solutions for regional conditions. With Tenka Power as part of the Tenka Solar Group, you have a strong partner that combines European expertise with global innovation- for a sustainable and future-proof energy supply.Translated with DeepL.com (free version)

General distribution DACH, BENELUX & Baltics:
Tenka Power GmbH, Bahnhofstrasse 36, A 4802 Ebensee
Tel.: +43 (0)720 531 135, Mail: sales@tenkapower.com

Tenka Solar PV-Modules

01 Tenka Solar Orion III Plus

02 Tenka Solar Orion III Ultra

03 Tenka Solar Orion IV Ultimate

04 Tenka Solar Orion VIIs

05 Tenka Solar Orion IX

Tenka Orion III Plus **Black Frame**

Tenka Orion III Plus - Product features

Module efficiency
23.27% 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
Tenka Nanotech technology for improved light absorption

Longevity
Low degradation, optimised long-term performance

Product guarantee
30-year product guarantee for maximum investment security

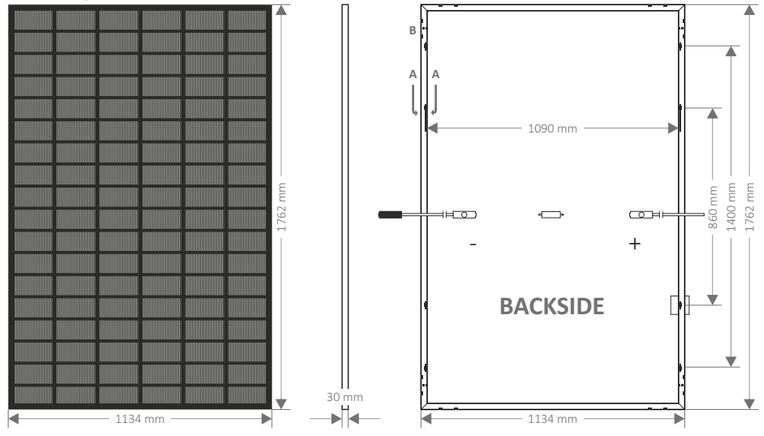
Performance guarantee
30-year performance guarantee on 87.4 % performance guaranteed

www.tenkapower.com

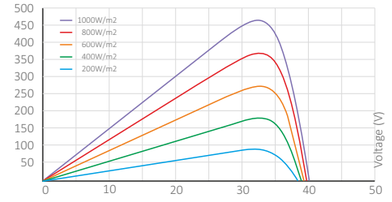
Tenka Orion III Plus

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	341Wp	455Wp	345Wp	460Wp	349Wp	465Wp	352Wp
Maximum power Voltage (Vmp)	33,22V	30,56V	33,42V	30,75V	33,63V	30,94V	33,83V	31,12V
Maximum power Current (Imp)	13,55A	11,16A	13,61A	11,21A	13,68A	11,27A	13,75A	11,32A
Open circuit voltage (Voc)	39,78V	36,20V	39,98V	36,38V	40,18V	36,56V	40,38V	36,75V
Short-circuit current (Isc)	14,00A	11,29A	14,06A	11,34A	14,13A	11,40A	14,20A	11,45A
Module efficiency (%)	22,52%		22,77%		23,02%		23,27%	
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-cristalline 183 mm, Tenka Nanotech Coating							
Number of cells	108							
Dimensions	1762 x 1134 x 30 mm (±2mm)							
Weight	21,5 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 mm^2 / UL 12AWG, Length 1100 mm							
Resistance to mechanical loads	5.400 Pa acc. IEC 61215-1-2							
Certificates	IEC61215, IEC61730							

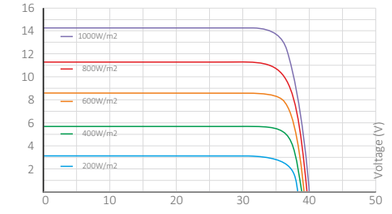
Abmessungen



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.

Tenka Orion III Plus **Bifacial Black Mesh**

Tenka Orion III Plus - Product features

Module efficiency
23.27% module efficiency and 465W
Peak power under 2 square metres

Bifacial design
Additional yield through rear power increase

Nanotech coating
Tenka Nanotech technology for improved light absorption

Longevity
Low degradation, optimised long-term performance

Product guarantee
30-year product guarantee for maximum investment security

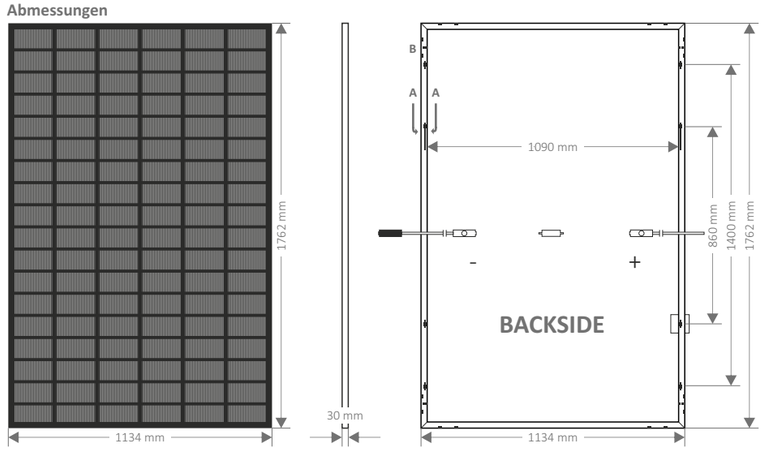
Performance guarantee
30-year performance guarantee on 87.4 % performance guaranteed

www.tenkapower.com

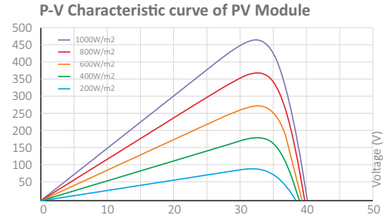
Tenka Orion III Plus

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	341Wp	455Wp	345Wp	460Wp	349Wp	465Wp	352Wp
Maximum power Voltage (Vmp)	33,22V	30,56V	33,42V	30,75V	33,63V	30,94V	33,83V	31,12V
Maximum power Current (Imp)	13,55A	11,16A	13,61A	11,21A	13,68A	11,27A	13,75A	11,32A
Open circuit voltage (Voc)	39,78V	36,20V	39,98V	36,38V	40,18V	36,56V	40,38V	36,75V
Short-circuit current (Isc)	14,00A	11,29A	14,06A	11,34A	14,13A	11,40A	14,20A	11,45A
Module efficiency (%)	22,52%		22,77%		23,02%		23,27%	
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-cristalline 183 mm, Tenka Nanotech Coating							
Number of cells	108							
Dimensions	1762 x 1134 x 30 mm (±2mm)							
Weight	24 Kg							
Glass front	2 mm tempered glass, highly transparent anti-reflective coating							
Glass back	2 mm tempered glass, highly transparent anti-reflective coating							
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							
Bi-facial backside power increase	**450 W**		**455 W**		**460 W**		**465 W**	
5%	472 Wp		477 Wp		483 Wp		488 Wp	
15%	517 Wp		523 Wp		529 Wp		534 Wp	
25%	562 Wp		568 Wp		575 Wp		581 Wp	

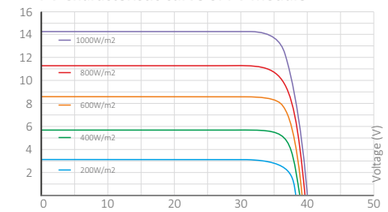
Abmessungen



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.

Tenka Orion III Ultra **Black Frame**

Tenka Orion III Ultra - Product features

Module efficiency
23.76% module efficiency and 485W 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

Longevity
Low degradation, optimised long-term performance

Product guarantee
30-year product guarantee for maximum investment security

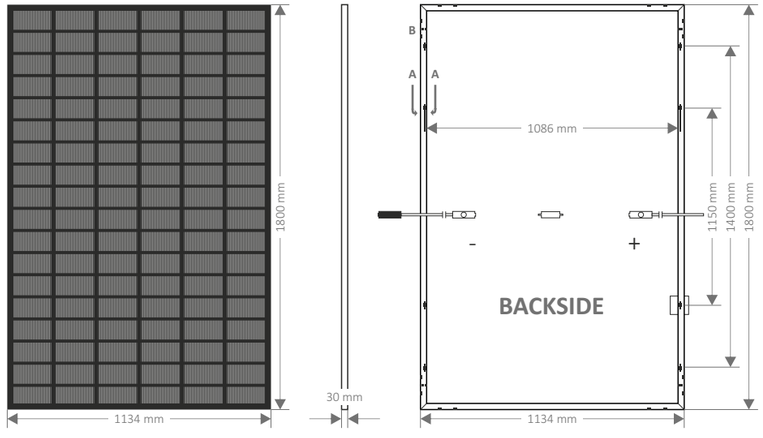
Performance guarantee
30-year performance guarantee on 87.4 % performance guaranteed

www.tenkapower.com

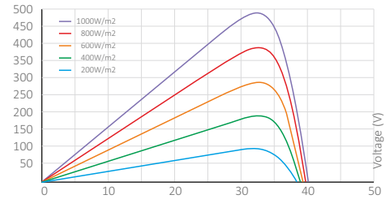
Tenka Orion III Ultra

Technical Datasheet	470 W		475 W		480 W		485 W	
	STC [1]	NMOT [2]	STC [1]	NMOT [2]	STC [1]	NMOT [2]	STC [1]	NMOT [2]
Maximum power (Pmax)	470Wp	356Wp	475Wp	360Wp	480Wp	364Wp	485Wp	368Wp
Maximum power Voltage (Vmp)	33,62V	30,93V	33,82V	31,11V	34,02V	31,29V	34,22V	31,47V
Maximum power Current (Imp)	13,98A	11,52A	14,04A	11,57A	14,11A	11,64A	14,18A	11,70A
Open circuit voltage (Voc)	40,18V	36,56V	40,38V	36,75V	40,58V	36,93V	40,78V	37,11V
Short-circuit current (Isc)	14,71A	11,87A	14,89A	11,97A	14,98A	12,13A	15,08A	12,29A
Module efficiency (%)	23,02%		23,27%		23,52%		23,76%	
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-cristalline 183 mm, Tenka Nanotech Coating							
Number of cells	108							
Dimensions	1800 x 1134 x 30 mm (±2mm)							
Weight	21,5 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 1100mm with original Stäubli MC4 connectors							
Resistance to mechanical loads	5.400 Pa acc. IEC 61215-1-2							
Certificates	IEC61215, IEC61730							

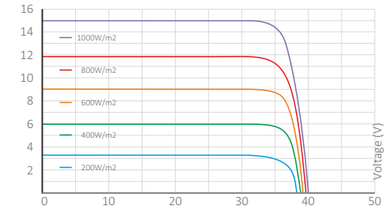
Measurements



P-V Characteristic curve of PV Module



I-V Characteristic curve of PV Module



Packaging information: 36 pieces per pallet, 864 pieces per container (24 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.

Tenka Orion III Ultra Bifacial Black Mesh

Tenka Orion III Ultra Bi-facial - Product features

Module efficiency
23.76% module efficiency and 485W Peak power

Bifacial design
Additional yield through rear power increase

Nanotech coating
Patented Tenka Nanotech technology for improved light absorption

Longevity
Low degradation, optimised long-term performance

Product guarantee
30-year product guarantee for maximum investment security

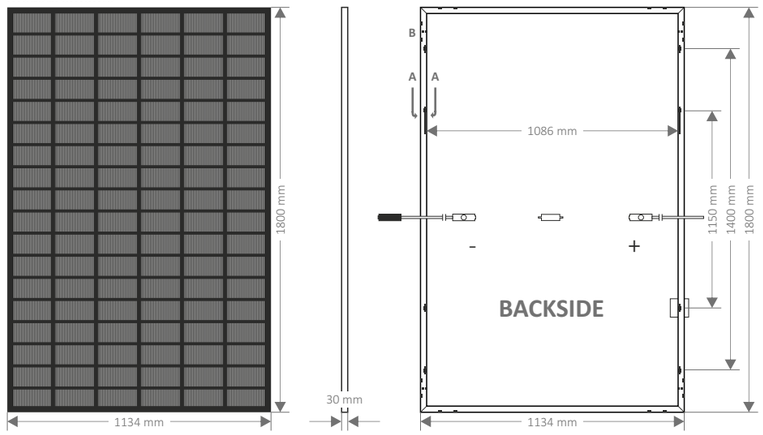
Performance guarantee
30-year performance guarantee on 87.4 % performance guaranteed

www.tenkapower.com

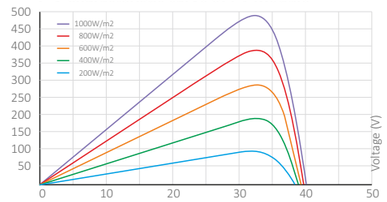
Tenka Orion III Ultra Bi-facial

Technical Datasheet	470 W		475 W		480 W		485 W	
	STC [1]	NMOT [2]	STC [1]	NMOT [2]	STC [1]	NMOT [2]	STC [1]	NMOT [2]
Maximum power (Pmax)	470Wp	356Wp	475Wp	360Wp	480Wp	364Wp	485Wp	368Wp
Maximum power Voltage (Vmp)	33,62V	30,93V	33,82V	31,11V	34,02V	31,29V	34,22V	31,47V
Maximum power Current (Imp)	13,98A	11,52A	14,04A	11,57A	14,11A	11,64A	14,18A	11,70A
Open circuit voltage (Voc)	40,18V	36,56V	40,38V	36,75V	40,58V	36,93V	40,78V	37,11V
Short-circuit current (Isc)	14,71A	11,87A	14,89A	11,97A	14,98A	12,13A	15,08A	12,29A
Module efficiency (%)	23,02%		23,27%		23,52%		23,76%	
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-cristalline 183 mm, Tenka Nanotech Coating							
Number of cells	108							
Dimensions	1800 x 1134 x 30 mm (±2mm)							
Weight	24,5 Kg							
Glass front	1,6 mm glass, anti-reflective coating							
Glass back	1,6 mm tempered glass							
Frame	Anodized aluminium alloy, Black							
Junction box	Protection class IP68							
Output cable	TÜV 1 x 4.0 mm2 / UL 12AWG, length 1100 mm with original Stäubli MC4 connectors							
Resistance to mechanical loads	5.400 Pa acc. IEC 61215-1-2							
Certificates	IEC61215, IEC61730							
Bi-facial backside power increase	**470 W**		**475 W**		**480 W**		**485 W**	
5%	494 Wp		499 Wp		504 Wp		509 Wp	
15%	540 Wp		546 Wp		552 Wp		557 Wp	
25%	587 Wp		593 Wp		600 Wp		606 Wp	

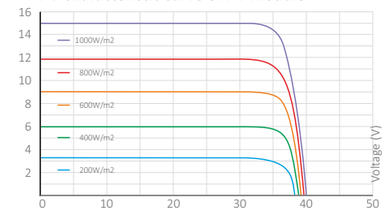
Measurements



P-V Characteristic curve of PV Module



I-V Characteristic curve of PV Module



Packaging information: 36 pieces per pallet, 864 pieces per container (24 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.

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

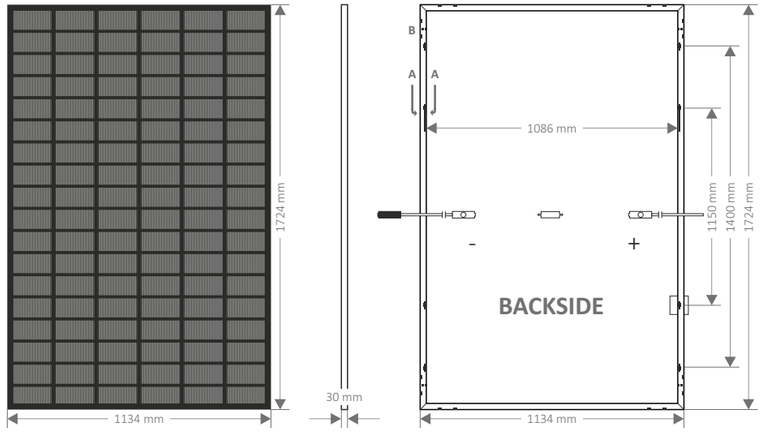
Performance guarantee
30-year performance guarantee on
87.4 % performance guaranteed

www.tenkapower.com

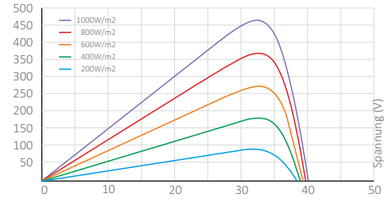
Tenka Orion IV Ultimate

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-cristalline 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 mm^2 / UL 12AWG, Length 1100 mm							
Resistance to mechanical loads	5.400 Pa acc. IEC 61215-1-2							
Certificates	IEC61215, IEC61730							

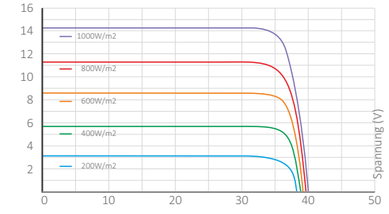
Measurements



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.

Tenka Orion IV Ultimate Full Black

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

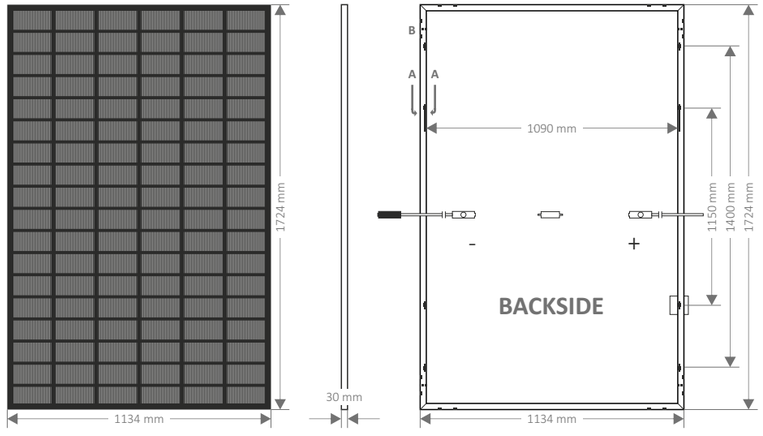
Performance guarantee
30-year performance guarantee on
87.4 % performance guaranteed

www.tenkapower.com

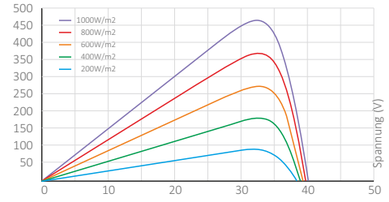
Tenka Orion IV Ultimate

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-cristalline 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							

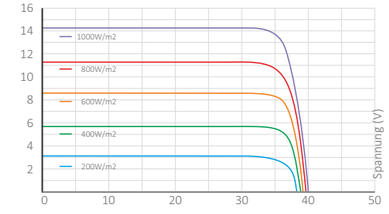
Measurements



P-V Characteristic curve of PV Module



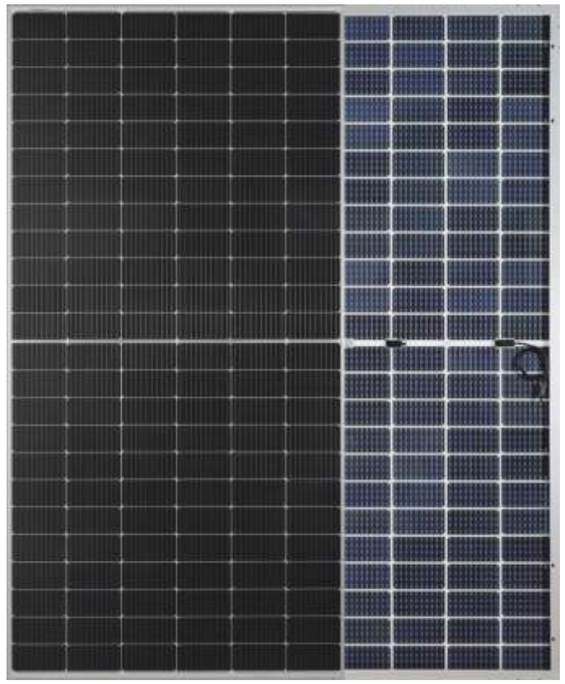
I-V Characteristic curve of PV Module



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.

Tenka Orion VIIs Bi-facial Silver Frame



Tenka Orion VIIs - Product features

Module efficiency
23.51% module efficiency and 635W Peak power

Maximum power output
Maximum output of 635 watts

Nanotech coating
Patented Tenka Nanotech technology for improved light absorption

Longevity
Low degradation, optimised long-term performance

Product guarantee
30-year product guarantee for maximum investment security

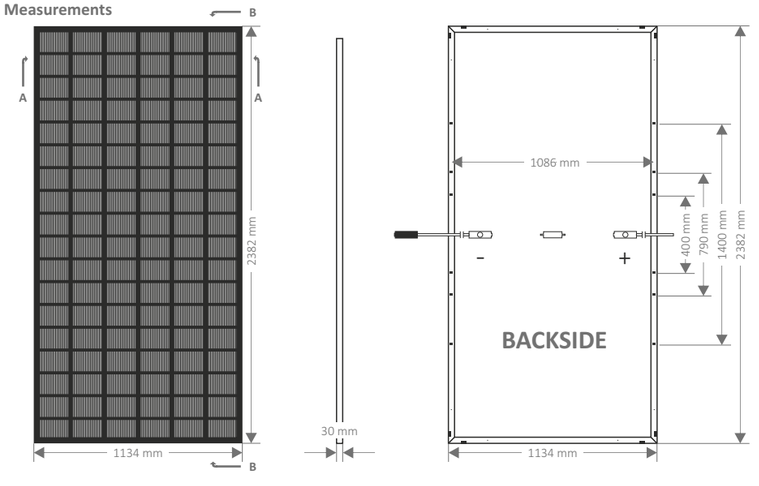
Performance guarantee
30-year performance guarantee on 87.4 % performance guaranteed

www.tenkapower.com

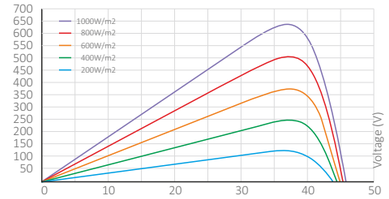
Tenka Orion VIIs

Technical Datasheet	620 W		625 W		630 W		635 W	
	STC [1]	NMOT [2]	STC [1]	NMOT [2]	STC [1]	NMOT [2]	STC [1]	NMOT [2]
Maximum power (Pmax)	620Wp	474Wp	625Wp	478Wp	630Wp	482Wp	635Wp	486Wp
Maximum power Voltage (Vmp)	41,2V	38,7V	41,4V	38,9V	41,6V	39,1V	41,8V	39,3V
Maximum power Current (Imp)	15,05A	12,25A	15,10A	12,29A	15,15A	12,33A	15,20A	12,37A
Open circuit voltage (Voc)	49,6V	47,1V	49,9V	47,4V	50,2V	47,7V	50,5V	48,0V
Short-circuit current (Isc)	15,90A	12,82A	15,92A	12,84A	15,94A	12,86A	15,96A	12,88A
Module efficiency (%)	22,95%		23,14%		23,32%		23,51%	
Voc and Isc Tolerances	±3%							
Operating temperature (°C)	-40°C~+85°C							
Maximum system voltage	1500V							
Maximum series protection	35A							
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-cristalline 182 x 210 mm, Tenka Nanotech Coating*							
Number of cells	132							
Dimensions	2382 x 1134 x 30 mm (±2mm)							
Weight	33 Kg							
Glass front	2 mm tempered glass, highly transparent anti-reflective coating							
Glass back	2 mm tempered glass, highly transparent anti-reflective coating							
Frame	Anodized aluminium alloy, Silver							
Junction box	Protection class IP68							
Output cable	TÜV 1 x 4,0 mm^2 / UL 12AWG, Length 1400 mm							
Resistance to mechanical loads	5.400 Pa acc. IEC 61215-1-2							
Certificates	IEC61215, IEC61730							
Bi-facial backside power increase	**620 W**		**625 W**		**630 W**		**635 W**	
5%	651 Wp		656 Wp		661 Wp		666 Wp	
15%	713 Wp		718 Wp		724 Wp		730 Wp	
25%	775 Wp		781 Wp		788 Wp		794 Wp	

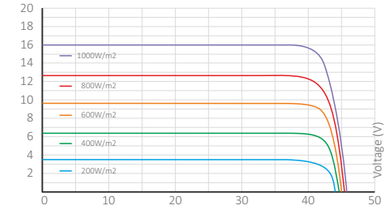
Measurements



P-V Characteristic curve of PV Module



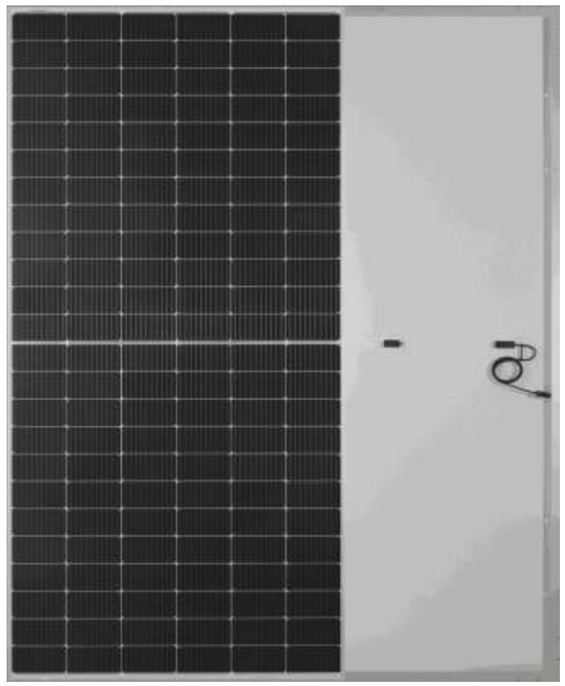
I-V Characteristic curve of PV Module



Packaging information: 36 pieces per pallet, 720 pieces per container (20 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.

Tenka Orion IX Silver Frame



Tenka Orion IX - Product features

Module efficiency
22.21% module efficiency and 690W Peak power

Maximum power output
Maximum output of 690 watts

Nanotech coating
Patented Tenka Nanotech technology for improved light absorption

Longevity
Low degradation, optimised long-term performance

Product guarantee
30-year product guarantee for maximum investment security

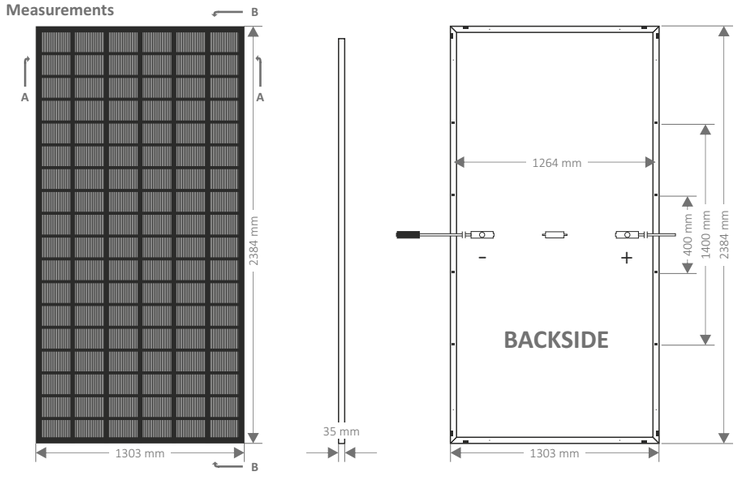
Performance guarantee
30-year performance guarantee on 87.4 % performance guaranteed

www.tenkapower.com

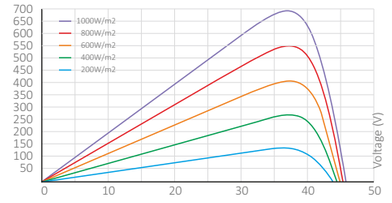
Tenka Orion IX

Technical Datasheet	670 W		675 W		680 W		685 W		690 W	
	STC [1]	NMOT [2]	STC [1]	NMOT [2]	STC [1]	NMOT [2]	STC [1]	NMOT [2]	STC [1]	NMOT [2]
Maximum power (Pmax)	670Wp	510Wp	675Wp	514Wp	680Wp	518Wp	685Wp	522Wp	690Wp	526Wp
Maximum power Voltage (Vmp)	38,20V	34,79V	38,40V	34,97V	38,60V	35,15V	38,80V	35,32V	39,00V	35,50V
Maximum power Current (Imp)	17,55A	14,66A	17,59A	14,70A	17,63A	14,74A	17,67A	14,78A	17,71A	14,82A
Open circuit voltage (Voc)	46,10V	41,92V	46,30V	42,10V	46,50V	42,28V	46,70V	42,46V	46,90V	42,64V
Short-circuit current (Isc)	18,62A	15,66A	18,66A	15,70A	18,71A	15,74A	18,75A	15,78A	18,80A	15,82A
Module efficiency (%)	21,57%		21,73%		21,89%		22,05%		22,21%	
Voc and Isc Tolerances	±3%									
Operating temperature (°C)	-40°C~+85°C									
Maximum system voltage	1500V									
Maximum series protection	35A									
Temperature coefficient Pmax	-0,29%/°C									
Temperature coefficient Voc	-0,25%/°C									
Temperature coefficient Isc	0,048%/°C									
Nominal operating temperature of the cell (NOCT)	45±2 °C									
Cell type	N-Type, TOPCon, mono-cristalline 210 mm, Tenka Nanotech Coating									
Number of cells	132									
Dimensions	2384 x 1303 x 35 mm (±2mm)									
Weight	33,5 Kg									
Glass front	3,2 mm tempered glass, highly transparent anti-reflective coating									
Backside	Grey Film									
Frame	Anodized aluminium alloy, Silver									
Junction box	Protection class IP68									
Output cable	TÜV 1 x 4,0 mm^2 / UL 12AWG, Length 1200 mm									
Resistance to mechanical loads	5.400 Pa acc. IEC 61215-1-2									
Certificates	IEC61215, IEC61730									

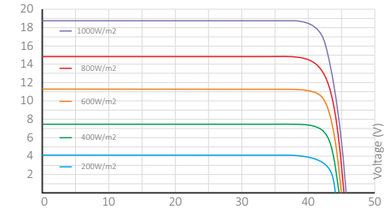
Measurements



P-V Characteristic curve of PV Module



I-V Characteristic curve of PV Module



Packaging information: 31 pieces per pallet, 558 pieces per container (18 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.


TENKA