



TENKA[®]
solar **GROUP GmbH**

Orion series III - 1 430-455 Watt

KEY FEATURES

Our solar cells offer high conversion efficiency to ensure the highest quality

Our high performing modules have an industry low tolerance of +5% (optional)

The modules can withstand high wind-pressure, snow loads and extreme temperatures

Passed IEC 5400 Pa mechanical loading test

PID Resistance Available

QUALITY & SAFETY

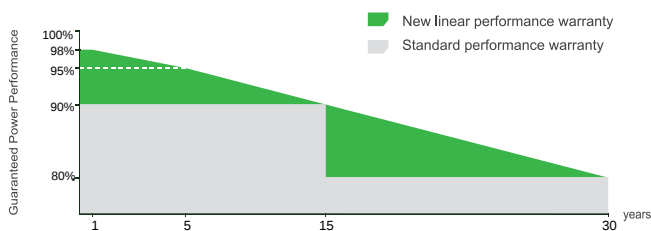
Industry leading power output warranty

(15 years/90%, 30 years/80%)

25-year warranty on materials & workmanship

Fire Rating: Class 1

Premium Performance Warranty



ISO9001:2015; ISO14001:2015; OH SAS18001 certified factory
IEC61215; IEC61730 certified products

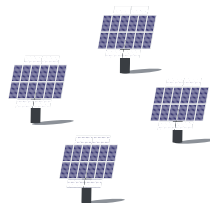
APPLICATIONS



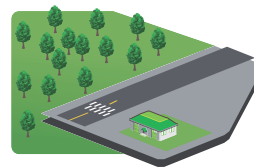
On-grid residential roof-tops



On-grid commercial/
industrial roof-tops

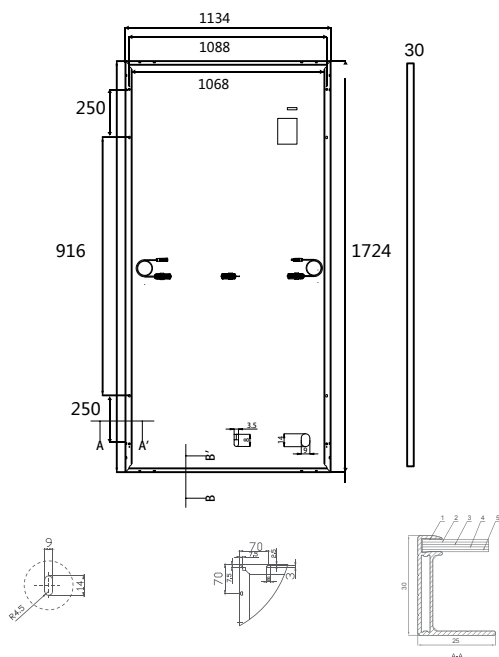


Solar power plants



Off-grid systems

Engineering Drawings

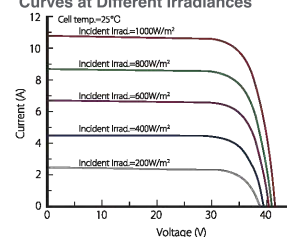


Packaging Configuration

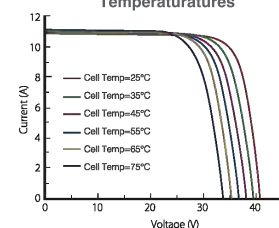
Standard packaging	72PCS/PALLET
Module quantity per 20' container	432PCS
Module quantity per 40' container	936PCS

Electrical Performance & Temperature Dependence

Current-Voltage & Power-Voltage Curves at Different Irradiances



Current-Voltage Curves at Different Temperatures



Mechanical Characteristics

Cell Type	Perc Mono-crystalline 182mm
No. of cells	108
Dimensions	1724×1134×30mm
Weight	20.0kg
Front Glass	Orion Technology, Low Iron, AR Coating Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68 Rated
Output Cables	TÜV 1×4.0mm² / UL 12AWG, Length:1100mm

SPECIFICATIONS

Module Type	TKA430M-108	TKA435M-108	TKA440M-108	TKA445M-108	TKA450M-108	TKA455M-108
Maximum Power at STC(P _{max})	430Wp	435Wp	440Wp	445Wp	450Wp	455Wp
Maximum Power Voltage (V _{mp})	32.72V	32.96V	33.20V	33.44V	33.66V	33.90V
Maximum Power Current (I _{mp})	13.15A	13.21A	13.27A	13.33A	13.39A	13.45A
Open-circuit Voltage (V _{oc})	38.62V	38.86V	39.00V	39.14V	39.28V	39.42V
Short-circuit Current (I _{sc})	13.90A	13.96A	14.02A	14.08A	14.14A	14.20A
Module Efficiency(%)	21.99%	22.25%	22.51%	22.76%	23.02%	23.27%
Operating Temperature(°C)	-40°C~+85°C					
Maximum system voltage	1500V DC					
Maximum series fuse rating	20A					
Power tolerance	±5%					
Temperature coefficients of P _{max}	-0.43%/°C					
Temperature coefficients of V _{oc}	-0.30%/°C					
Temperature coefficients of I _{sc}	0.04%/°C					
Nominal operating cell temperature (NOCT)	45±2°C					

STC: Irradiance 1000W/m²



Module Temperature 25°C



AM=1.5

* Power measurement tolerance: + 5%

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