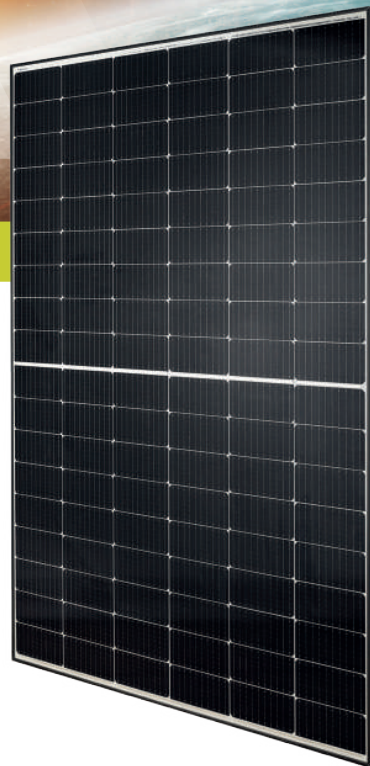


HC MONO

ORION nano-tech layer

430 - 455 Watt



KEY FEATURES

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

Our high performing modules enable cost savings in mounting, cabling and labour of up to 15%.

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

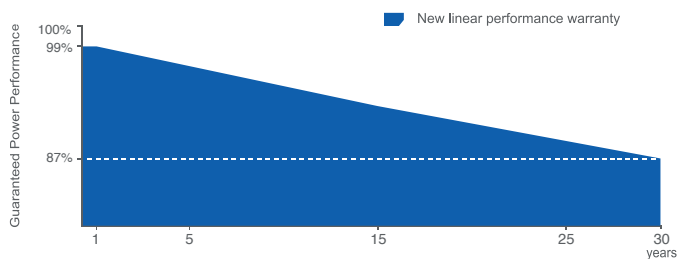
Passed IEC 5400 Pa mechanical loading test.
PID Resistance Available.

QUALITY AND SAFETY

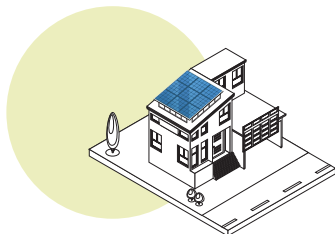


- ✓ Industry leading power output warranty
30 years/87,4%
- ✓ 30-year warranty on materials & workmanship
- 🔥 Fire Rating: Class 1

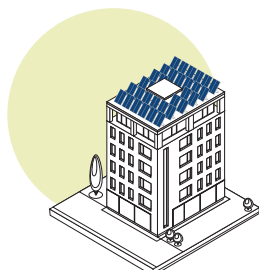
PREMIUM PERFORMANCE WARRANTY



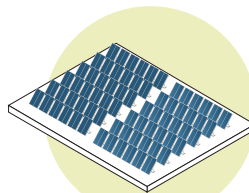
APPLICATIONS



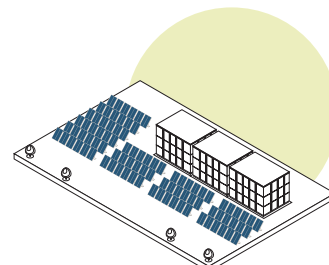
On-grid residential roof-tops



On-grid commercial - industrial roof-tops

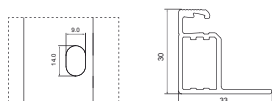
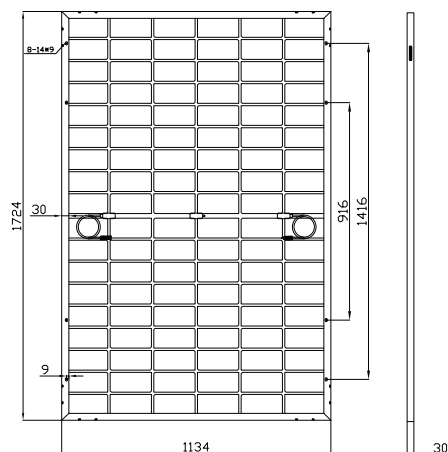


Solar power plants



Off-grid systems

ENGINEERING DRAWINGS

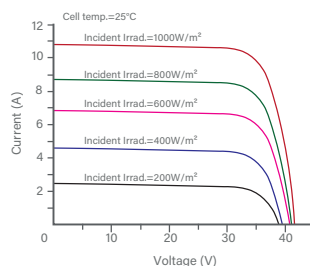


PACKAGING CONFIGURATION

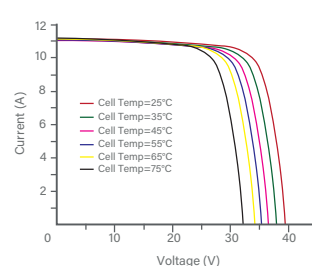
Standard packaging	36 pcs / pallet
Module quantity per 40' container	936 pcs
Pallets per container	26

ELECTRICAL PERFORMANCE & TEMPERATURE DEPENDENCE

Current-Voltage & Power-Voltage Curves at Different Irradiances



Current-Voltage Curves at Different Temperatures



MECHANICAL CHARACTERISTICS

Cell Type	Orion N-Type TOPCon Mono-crystalline (182X91mm) Orion Technology Layer Applied*
No. of cells	108(6x18)
Dimensions	1724x1134x30mm (±2mm)
Weight	20.5 kg
Front Glass	3.2mm, AR Coating, High Transmission, Low Iron, Tempered Glass
Frame	Anodized Aluminium Alloy (Silver/Black optional)
Junction Box	IP68 Rated
Output Cables	TÜV 1x4.0mm² / UL 12AWG, Length:1100mm

SPECIFICATIONS

STC



Irradiance 1000W/m²



Module Temperature 25°C



AM=1.5

Module Type ⁽¹⁾	ORION III-430M		ORION III-435M		ORION III-440M		ORION III-445M		ORION III-450M		ORION III-455M	
	STC ⁽²⁾	NMOT ⁽³⁾	STC ⁽²⁾	NMOT ⁽³⁾	STC ⁽²⁾	NMOT ⁽³⁾	STC ⁽²⁾	NMOT ⁽³⁾	STC ⁽²⁾	NMOT ⁽³⁾	STC ⁽²⁾	NMOT ⁽³⁾
Maximum Power (Pmax)	430Wp	323Wp	435Wp	327Wp	440Wp	331Wp	445Wp	335Wp	450Wp	339Wp	455Wp	343Wp
Maximum Power Voltage (Vmp)	32.72V	30.10V	32.96V	30.34V	33.20V	30.57V	33.44V	30.79V	33.66V	31.02V	33.90V	32.24V
Maximum Power Current (Imp)	13.15A	10.73A	13.21A	10.78A	13.27A	10.83A	13.33A	10.88A	13.39A	10.93A	13.45A	10.98A
Open-circuit Voltage (Voc)	38.62V	37.00V	38.86V	37.20V	39.00V	37.40V	39.14V	37.60V	39.28V	37.80V	39.42V	38.00V
Short-circuit Current (Isc)	13.90A	11.09A	13.96A	11.14A	14.02A	11.19A	14.08A	11.24A	14.14A	11.29A	14.20A	11.34A
Module Efficiency (%)	21.99%		22.27%		22.53%		22.78%		23.04%		23.29%	
Voc and isc tolerance	±3%											
Operating Temperature(°C)	-40°C~+85°C											
Maximum system voltage	1500V											
Maximum series fuse rating	25A											
Temperature coefficients of Pmax	-0.29%/°C											
Temperature coefficients of Voc	-0.25%/°C											
Temperature coefficients of Isc	0.045%/°C											
Nominal operating cell temperature (NOCT)	45±2 °C											



(1) Measurement Tolerances: P_{max} (± 3%), I_{sc} & V_{oc} (± 3%) - Module Type 0/+5W

(2) STC (Standard Testing Condition): Irradiance 1000W/m², Cell Temperature 25°C, AM 1.5

(3) NMOT (Nominal Operating Module Temperature): Irradiance 800W/m², NMOT, Ambient Temperature 20°C, AM 1.5, Wind Speed 1m/s

*The application of our layer adds 15/20 more watts compared to the standard cell.

Specifications included in this datasheet are subject to change without notice. Tenka Solar reserves the right of final interpretation.

