

Under Shanshan Group, Top 500 Enterprise in China, Ningbo Ulica Solar Co., Ltd. produces our own high quality solar cells and modules starting from August 2005. Our product range covers all from off-grid panels to on-grid panels, both mono-crystalline and poly-crystalline, suitable for all types of installation from residential to commercial projects

MONO HALF-CELL PERC



12% more power than conventional modules



**Lower power degradation
Lower internal current
Lower hot spot temperature**



**Cell crack risk limited in small region,
enhance the module reliability**



Outstanding mechanical load resistance
Snow load 5400Pa (Frontside), and Wind load 3800Pa (Backside)



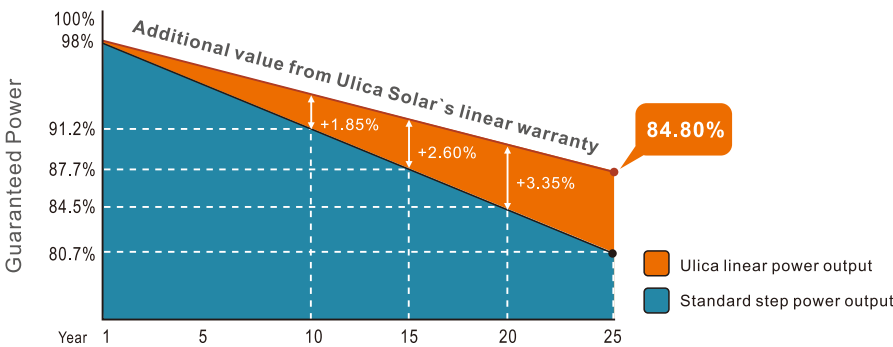
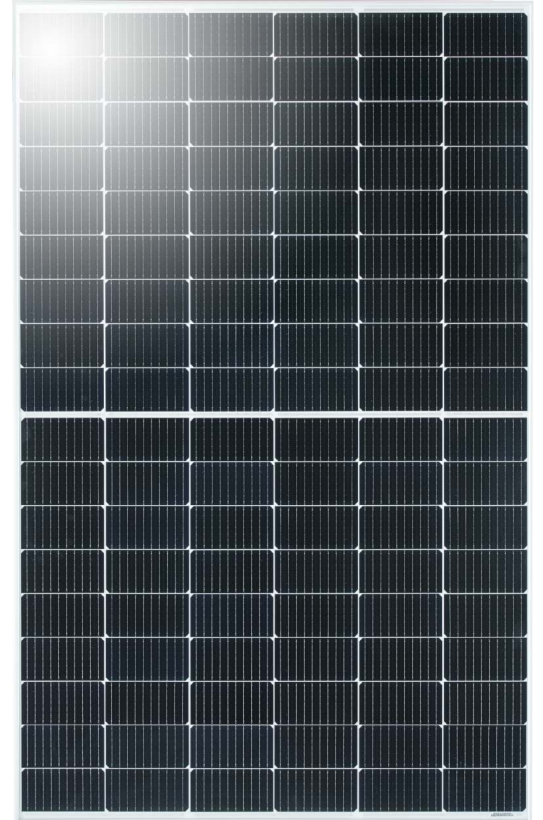
High performance under low light conditions
Cloudy days, Rainy days



Double EL test before and after lamination
Highly control the micro cracks and invisible defects.



World famous insurance
CHUBB(USA), Solar Insurance&Finance(Netherlands)



12-year Limited Product Warranty

25-year Limited Performance Warranty

Certificate Holder Name : Ningbo Ulica Solar Co.,Ltd



ELECTRICAL PERFORMANCE

Electrical Parameters Standard Test Conditions

Module Type	UL-415M-108HV		
Power Output	P _{max}	W	415
Power Tolerance	ΔP _{max}	W	±3%
Module Efficiency	η _m	%	21.25
Voltage at P _{max}	V _m	V	31.50
Current at P _{max}	I _m	A	13.17
Open-Circuit Voltage	V _{oc}	V	37.5 ± 4%
Short-Circuit Current	I _{sc}	A	13.93 ± 4%

STC: 1000w/m² irradiance, 25°C module temperature, AM1.5

Remark : Sorting tolerance as 0~+5W in our factory.

THERMAL CHARACTERISTICS

Nominal Operating Cell Temperature	NOCT	°C	43±2
Temperature Coefficient of P _{max}	γ	%/°C	-0.340
Temperature Coefficient of V _{oc}	β _{voc}	%/°C	-0.265
Temperature Coefficient of I _{sc}	α _{isc}	%/°C	+0.049

OPERATING CONDITIONS

Max. System Voltage	1500V
Max. Series Fuse Rating	25A
Operating Temperature Range	-40°C~85°C
Max static snow load	5400Pa
Max static wind load	3800Pa
Safet Class	II
Fire class rating	Class C

CONSTRUCTION MATERIALS

Front Cover(material/type/thickness)	low-iron tempered glass/3.2mm
Cell(quantity/material/type/dimension)	108/monocrystalline/ 182X91mm
Encapsulant(material)	ethylene vinyl acetate(EVA)
Frame(material/anodization color)	anodized aluminum alloy/silver
Junction Box(protection degree)	IP68
Cable(length/cross-sectional area)	400mm/4mm ²
Plug Connector	DC1500,PV-ZH202B/PV-JM608/PV-CY20L, Made in China

GENERAL CHARACTERISTICS

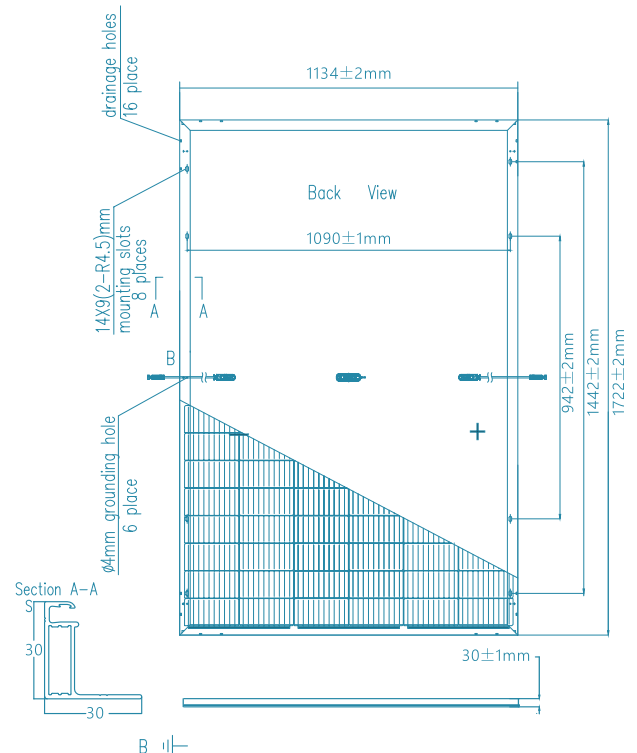
Dimension(L/W/H)	1722x1134x30mm
Weight	21.8kg

PACKING CONFIGURATION

Pallet Size(L/W/H)	1762/1130/2540mm
Pallet Weight	1596kg
Pieces per Pallet	72pcs
Pieces per Container	936pcs

INTERNATIONAL CERTIFICATES

- TÜV SÜD, CE, MCS, CQC, IMERTRO
- ISO9001: 2015
- ISO14001: 2015
- ISO45001: 2018



Please read the installation manual in this entirety before handing, installing, and operating Ulica Solar modules.
Due to continuous Innovation, research and improvement, the specification is subject to change without prior notice.