

Ulica Solar is a subsidiary of Shanshan Co.,Ltd(SH.600884), Top 500 Enterprise in China. Ulica designs and manufactures high-quality solar cells and panels starting from August 2005. Its product line covers both mono and poly crystalline models, suitable for full range of projects from off-grid to on-grid, from residential to commercial.

**POLY 60CELL 5BB**



**5 Bus bar cell design**  
More evenly distributed mechanical stress  
Less micro cracks and resistance losses  
Higher fill factor and higher performance



**Positive power tolerance (0~+5W)**



**Outstanding mechanical load resistance**  
3800 Pa wind load, 5400 Pa snow load



**High performance under low light**  
Works at cloudy, rainy days



**Anti-PID(potential induced degradation)**  
Passed anti-PID test under 85% damp heat,  
85% relative humidity for 96 hours



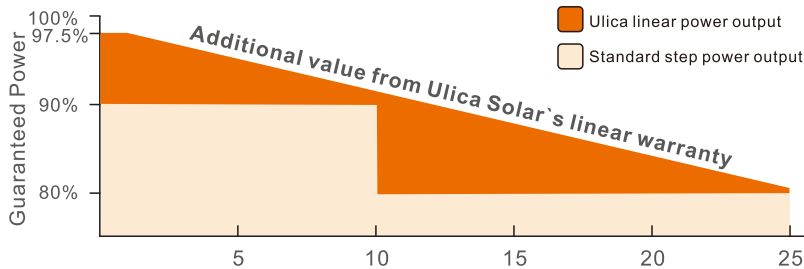
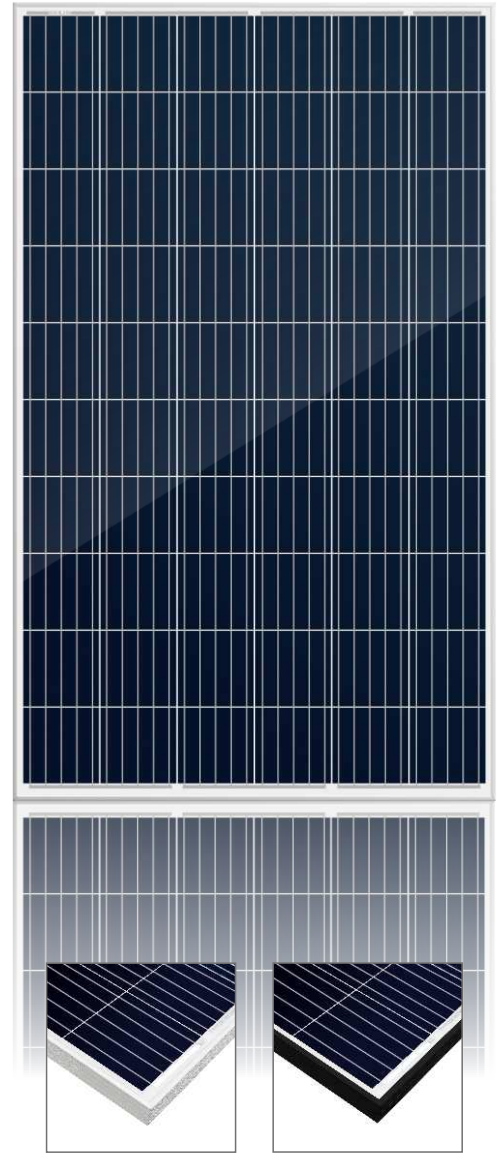
**Great Durability against extreme conditions**  
Passed salt mist corrosion test, ammonia corrosion test,  
dust & sand test, fire test, all certified by TÜV



**Double electroluminescence (EL) tests**  
Carefully inspected before and after lamination  
to guarantee fault-free modules



**World famous insurance**  
Solar Insurance&Finance(Netherlands), AON(Japan)



**12-year product warranty**  
**25-year linear power warranty**



## ELECTRICAL PERFORMANCE

Electrical Parameters Standard Test Conditions

Module Type			UL-265P-60	UL-270P-60	UL-275P-60	UL-280P-60
Power Output	P <sub>max</sub>	W	265	270	275	280
Power Tolerance	ΔP <sub>max</sub>	W	0/+5W			
Module Efficiency	η <sub>m</sub>	%	16.19	16.50	16.80	17.11
Voltage at P <sub>max</sub>	V <sub>m</sub>	V	30.9	31.0	31.1	31.3
Current at P <sub>max</sub>	I <sub>m</sub>	A	8.58	8.71	8.85	8.95
Open-Circuit Voltage	V <sub>oc</sub>	V	38.0	38.2	38.3	38.5
Short-Circuit Current	I <sub>sc</sub>	A	9.02	9.13	9.25	9.35

STC: 1000w/m<sup>2</sup> irradiance, 25°C module temperature, AM1.5 spectrum.

## THERMAL CHARACTERISTICS

Nominal Operating Cell Temperature	NOCT	°C	45±2
Temperature Coefficient of P <sub>max</sub>	γ	%/°C	-0.403
Temperature Coefficient of V <sub>oc</sub>	β <sub>voc</sub>	%/°C	-0.330
Temperature Coefficient of I <sub>sc</sub>	α <sub>isc</sub>	%/°C	+0.049

## OPERATING CONDITIONS

Max. System Voltage	1000V
Max. Series Fuse Rating	15A
Operating Temperature Range	-40°C~85°C
Max static snow load	5400Pa
Max static wind load	3800Pa
Application Class	A

## CONSTRUCTION MATERIALS

Front Cover(material/type/thickness)	low-iron tempered glass/3.2mm
Cell(quantity/material/type/dimension)	60/polycrystalline/156.75x156.75mm
Encapsulant(material)	ethylene vinyl acetate(EVA)
Frame(material/anodization color)	anodized aluminum alloy/silver or black
Junction Box(Protection degree)	IP67
Cable(length/cross-sectional area)	900mm/4mm <sup>2</sup>
Plug Connector	MC4 compatible

## GENERAL CHARACTERISTICS

Dimension(L/W/H)	1650/992/35mm
Weight	18.5kg

## PACKING CONFIGURATION

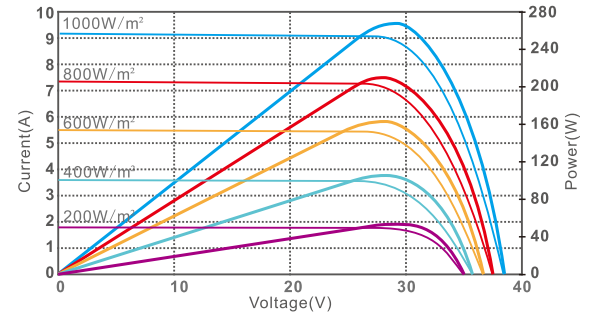
Pallet Size(L/W/H)	1690/1100/2440mm
Pallet Weight	1260kg
Pieces per Pallet	64pcs
Pieces per Container	896pcs

## INTERNATIONAL CERTIFICATES

- TÜV SÜD, TÜV NORD, UL, CE, JET, CEC, MCS, CQC, IMERTRO, NRE, KS
- ISO9001:2008
- ISO14001:2004
- BS OHSAS 18001:2007

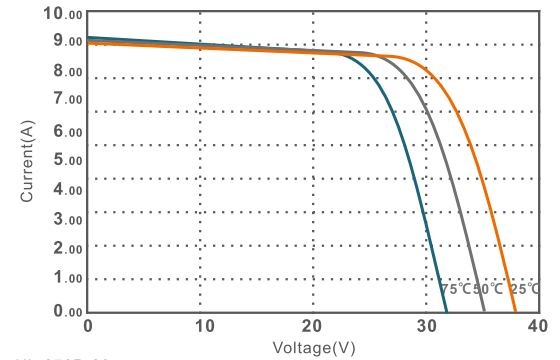
## I-V CURVE

I-V characteristics at different irradiances

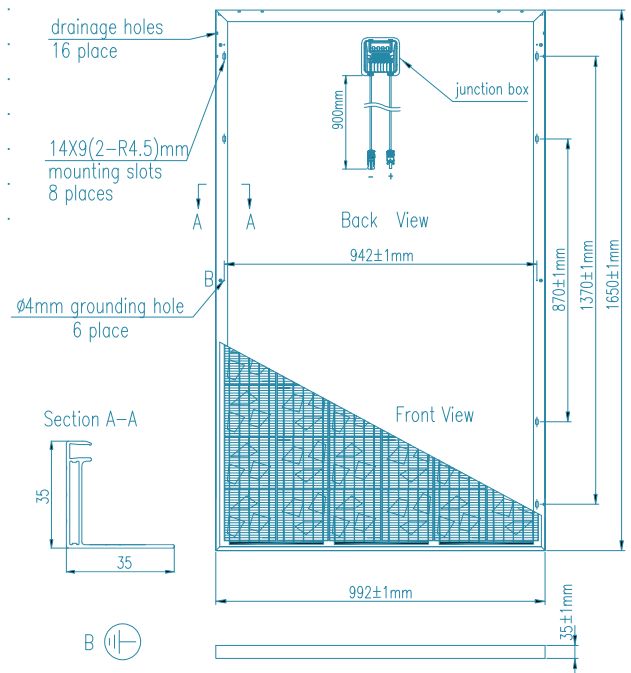


UL-270P-60

I-V characteristics at different temperature



UL-270P-60



Please read the instruction entirely before handling, installing and operating Ulica Solar modules.

Due to continuous research and development, the specification is subject to change without prior notice.