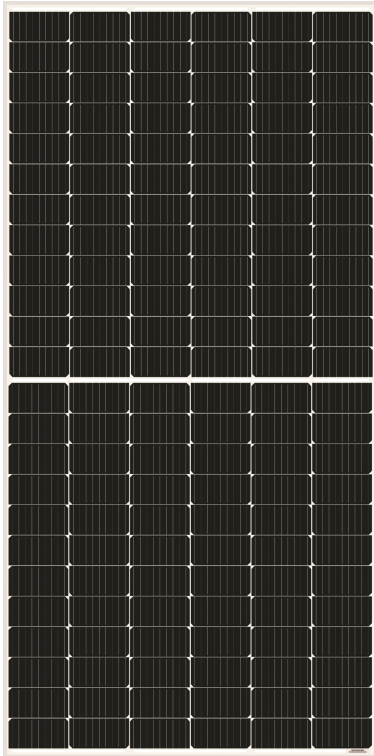




UKSOL 450w Half Cell Mono Black Bifacial with Transparent Backsheet



ADVANCED PERFORMANCE & PROVEN ADVANTAGES

- More power gain up to 30% by utilizing the ambient light reflected from surrounding surfaces.
- Lower annual power degradation and higher energy yield during the module's lifetime.
- Superior performance under high temperature and low light conditions.
- High load-bearing capacity which can withstand wind loads up to 2400Pa and snow loads up to 5400Pa.
- Excellent reliability and durability against extreme environmental conditions (high resistance to salt mist, ammonia, sand, acid and alkali, etc.).
- Potential induced degradation (PID) free.

CERTIFICATIONS

- IEC 61215, IEC 61730, CE
- ISO9001:2015: Quality management system
- ISO14001:2015: Environmental management system
- ISO 45001:2018: Occupational health and safety management system

SPECIAL WARRANTY

- 12 years product warranty
- 30 years linear power output warranty



LOW RISK BRITISH
PROCUREMENT



BRITISH TECHNICAL
SUPPORT



ALWAYS GRADE
"A" CELLS



BRITISH QUALITY
STANDARDS



ELECTRICAL CHARACTERISTICS AT STC*

Module Type					
Maximum Power (P_{max})	435W	440W	445W	450W	455W
Open Circuit Voltage (V_{oc})	49.6V	49.8V	50.0V	50.2V	50.4V
Short Circuit Current (I_{sc})	11.10A	11.16A	11.22A	11.28A	11.34A
Voltage at Maximum Power (V_{mp})	41.2V	41.4V	41.6V	41.8V	42.0V
Current at Maximum Power (I_{mp})	10.56A	10.63A	10.70A	10.77A	10.84A
Module Efficiency (%)	19.90	20.13	20.36	20.58	20.81
Operating Temperature	-40°C to +85°C				
Maximum System Voltage	1000V DC/1500V DC				
Fire Resistance Rating	Class C				
Maximum Series Fuse Rating	25A				

*STC: Irradiance 1000W/m², Cell temperature 25°C, AM1.5; Tolerance of P_{max} : ±3%; Measurement Tolerance: ±3%

ELECTRICAL CHARACTERISTICS AT NOCT**

Maximum Power (P_{max})	319W	323W	327W	331W	335W
Open Circuit Voltage (V_{oc})	45.4V	45.6V	45.8V	46.0V	46.2V
Short Circuit Current (I_{sc})	8.94A	8.99A	9.04A	9.09A	9.14A
Voltage at Maximum Power (V_{mp})	37.2V	37.4V	37.6V	37.8V	38.0V
Current at Maximum Power (I_{mp})	8.58A	8.64A	8.70A	8.76A	8.82A

**NOCT: Irradiance 800W/m², Ambient temperature 20°C, Wind Speed 1 m/s

ELECTRICAL CHARACTERISTICS WITH DIFFERENT REAR SIDE POWER GAIN

Power Gain	P_{max}	V_{oc}	I_{sc}	V_{mp}	I_{mp}
10%	495W	50.2V	12.42A	41.8V	11.85A
15%	518W	50.2V	13.00A	41.8V	12.40A
20%	540W	50.2V	13.55A	41.8V	12.92A
25%	563W	50.2V	14.12A	41.8V	13.47A
30%	585W	50.2V	14.68A	41.8V	14.00A

MECHANICAL CHARACTERISTICS

Cell type	Monocrystalline bifacial
Number of cells	144 (6x24)
Module dimensions	2102x1040x35mm
Weight	24kg
Front cover	3.2mm tempered glass with AR coating
Back cover	Transparent backsheet
Frame	Anodized aluminum alloy
Junction box	IP68, 3 diodes
Cable	4mm ² , Length: Portrait: 300mm; Landscape: 1400mm
Connector	MC4 compatible

TEMPERATURE CHARACTERISTICS

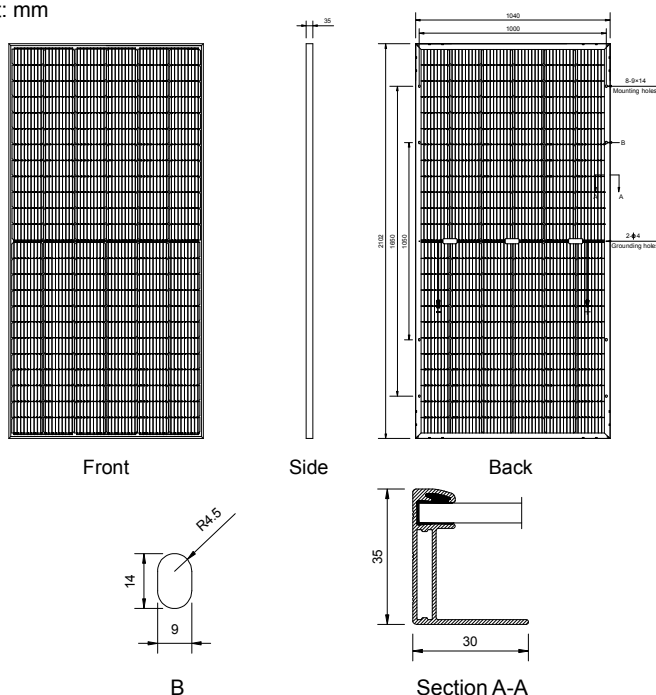
Nominal Operating Cell Temperature (NOCT)	42°C±2°C
Temperature Coefficients of P_{max}	-0.36%/°C
Temperature Coefficients of V_{oc}	-0.30%/°C
Temperature Coefficients of I_{sc}	0.05%/°C

PACKAGING

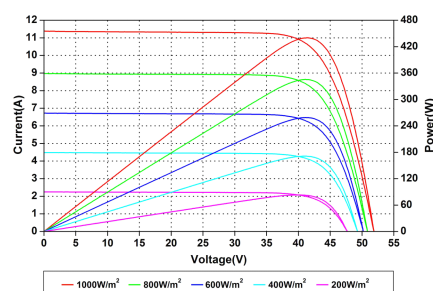
Standard packaging	31pcs/pallet
Module quantity per 20' container	155pcs
Module quantity per 40' container	715pcs(HQ)

ENGINEERING DRAWINGS

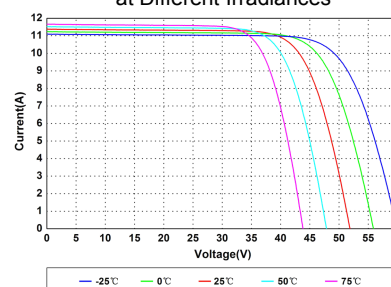
Unit: mm



IV CURVES



Current-Voltage and Power-Voltage Curves at Different Irradiances



Current-Voltage Curves at Different Temperatures

Specifications in this datasheet are subject to change without prior notice.