



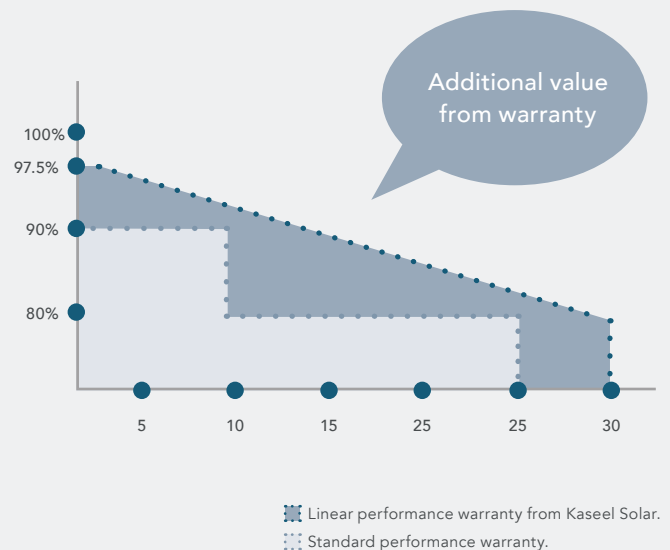
SOLAR ORBITER

KSHC-144 PERC

144 cell monocrystalline perc
High performance solar module



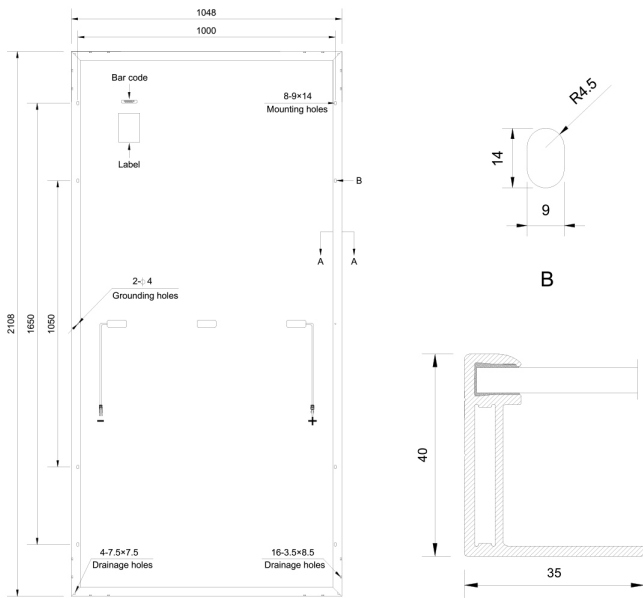
SPECIAL WARRANTY



KEY FEATURES

- **HIGH PERFORMANCE LINEAR WARRANTY:**
20 years product warranty
30 years linear power output warranty
- **High module conversion efficiency up to 21.05%**
by using Half Cell (144 cells HC), Perc technology and advanced manufacturing technology.
- **Low-light Performance:** Advance glass and surface texturing allow for excellent performance in low-light environments.
- **9 Busbar Solar Cell:** 9 busbar solar cell adopts new technology to improve the efficiency of modules, offers a better aesthetic appearance, making it perfect for rooftop installation.

- **Temperature Coefficient:** excellent performance under high temperature and low light conditions.
- **Strong Mechanical load capacity:** Robust aluminum frame ensures the modules to withstand wind loads up to 2400Pa and snow loads up to 5400Pa.
- **Durability against extreme environmental conditions:** High reliability against extreme environmental conditions (passing salt mist, ammonia and hail tests).
- **Potential induced degradation (PID) resistance.**
- **Guaranteed positive power tolerance of 0~+3%** by individual measurement.



Rear View

Section A-A

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

MECHANICAL CHARACTERISTICS

Cell type	Monocrystalline PERC 166*83mm
Number of cells	144 (6x24)
Module dimensions	2108x1048x40 mm
Weight	24 kg
Front cover	3.2mm tempered glass with AR coating.
Frame	Clear anodized aluminum alloy
Junction box	IP68, 3 diodes
Cable	4mm ² , 1400mm
Connector	MC4 or MC4 compatible

TEMP. CHARACTERISTICS

Nominal Operating Cell Temperature (NOCT)	43° C±2°C
Temperature Coefficients of Pmax	-0.36%/°C
Temperature Coefficients of VOC	-0.28%/°C
Temperature Coefficients of ISC	0.05%/ °C

ELECTRICAL CHARACTERISTICS AT STC

STC: Irradiance 1000W/m², Cell temperatura 25°C, A/11.5

Nominal Power (Pmax)	435W	440W	445W	450W	455W	460W	465W
Open Circuit Voltage (VOC)	49.6V	49.8V	50.0V	50.2V	50.4V	50.6V	50.8V
Short Circuit Current (ISC)	11.10A	11.16A	11.22A	11.28A	11.34A	11.40A	11.46A
Voltage at Nominal Power (Vmp)	41.2V	41.4V	41.6V	41.8V	42.0V	42.2V	42.4V
Current at Nominal Power (Imp)	10.56V	10.63A	10.70A	10.77A	10.84A	10.91A	10.97A
Module Efficiency (%)	19.69	19.92	20.14	20.37	20.60	20.82	21.05
Operating Temperature	-40 C to +85 C						
Maximum System Voltage	1000V DC/1500V DC						
Fire Resistance Rating	Type I (in accordance with UL 1703)/Class C (IEC61730)						
Maximum Series Fuse Rating	20A						

ELECTRICAL CHARACTERISTICS AT NOCT

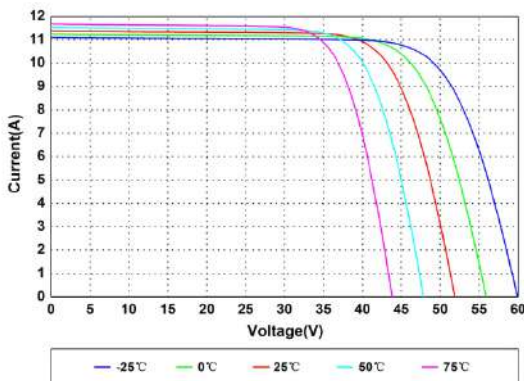
NOCT: Irradiance 800W/m², Ambient temperature 20°C, Wind Speed 1 m/s

Nominal Power (Pmax)	323W	327W	331W	335W	339W	343W	347W
Open Circuit Voltage (VOC)	45.6V	45.8V	46.0V	46.2V	46.4V	46.6V	46.8V
Short Circuit Current (ISC)	8.99A	9.04A	9.09A	9.14A	9.19A	9.24A	9.29A
Voltage at Nominal Power (Vmp)	37.4V	37.6V	37.8V	38.0V	38.2V	38.4V	38.6V
Current at Nominal Power (Imp)	8.64A	8.70A	8.76A	8.82A	8.88A	8.94A	8.99A

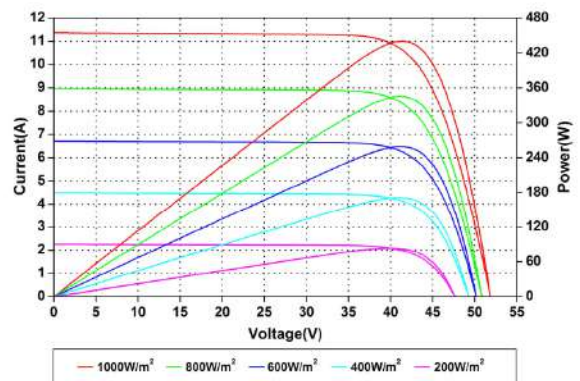
PACKAGING

Standard packaging	27pcs pallet
Module quantity per 20' container	135pcs
Module quantity per 40' container	594pcs

IV CURVES



Current-Voltage Curves at Different Temperatures



Current-Voltage and Power-Voltage Curves at Different Irradiances