

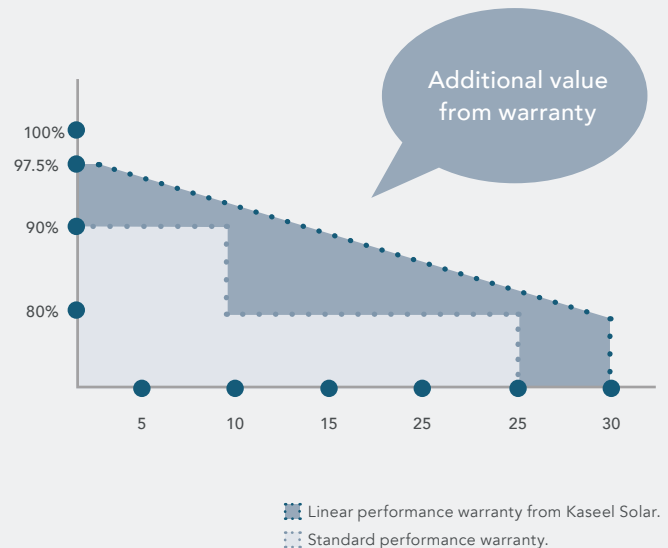


## SOLAR ORBITER KSHC-144 PERC

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.

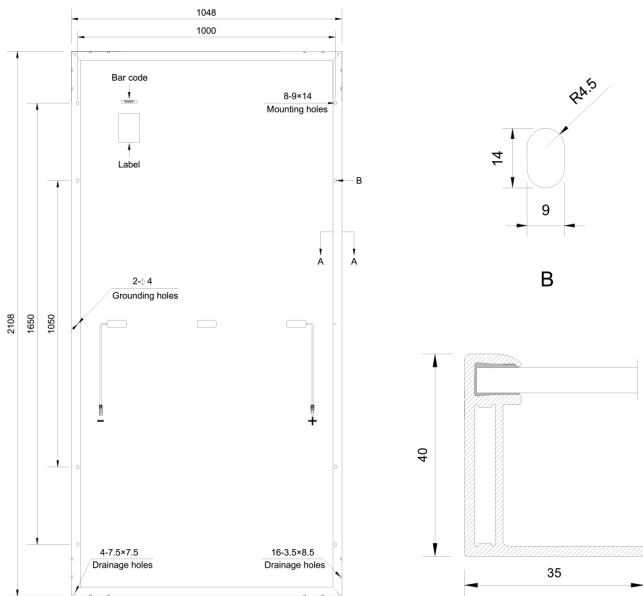
• **Temperature Coefficient:** excellent performance under high temperature and low light conditions.

• **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

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

### TEMP. CHARACTERISTICS

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

### ELECTRICAL CHARACTERISTICS AT STC

STC: Irradiance 1000W/m<sup>2</sup>, Cell temperatura 25°C, A/11.5

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

### ELECTRICAL CHARACTERISTICS AT NOCT

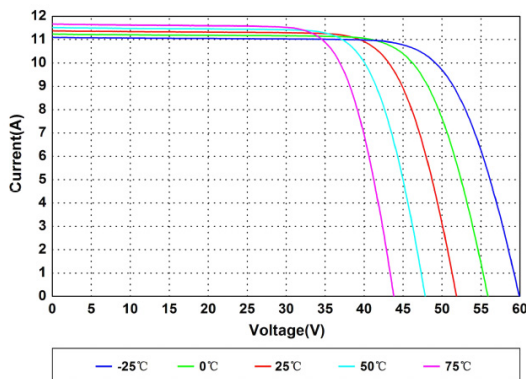
NOCT: Irradiance 800W/m<sup>2</sup>, Ambient temperature 20°C, Wind Speed 1 m/s

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

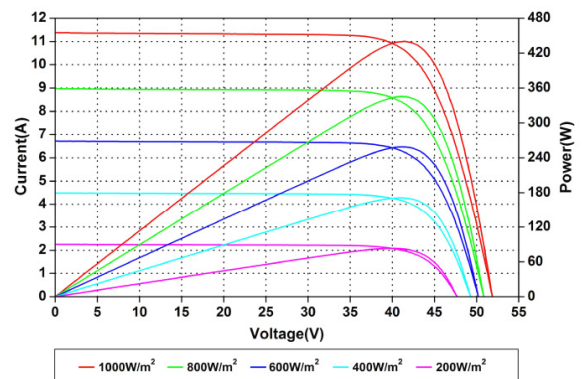
### PACKAGING

<b>Standard packaging</b>	27pcs pallet
<b>Module quantity per 20' container</b>	135pcs
<b>Module quantity per 40' container</b>	594pcs

### IV CURVES



Current-Voltage Curves at Different Temperatures



Current-Voltage and Power-Voltage Curves at Different Irradiances