



Monocrystalline

440W ~ 460W



MONO PERC

High Efficiency Modules

21.25%

Max Efficiency

12 Years

Product Warranty



Higher power output

The use of high-efficiency multi-gate and cell half-chip design significantly increases the output power of the product.



Excellent temp coefficient

The product's excellent temperature coefficient characteristics result in superior outdoor power generation performance and longer service life.



Reduce hot spots

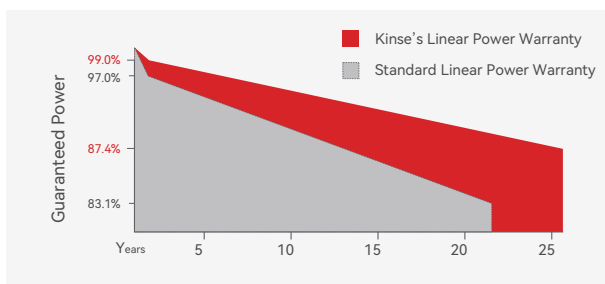
Reduced operating current through better product design, thus reducing the risk of hot spots.



Long-term reliability

Reduce the attenuation caused by PID with production technology optimization and material control.

Linear Performance Warranty



12-Year product warranty



25-Year linear power output warranty

Product and system certifications



IEC61215 (2016), IEC61730 (2016)

ISO9001:2015 Quality Management System

ISO14001:2015 Environmental Management System

ISO45001:2018 Occupational Health and Safety Management System

* Specifications subject to technical changes and tests. Kinse Solar reserves the right of interpretation.

Electrical Characteristics

Module Type	KS440-120-M182		KS445-120-M182		KS450-120-M182		KS455-120-M182		KS460-120-M182	
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Test Conditions	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power(Pmax)[W]	440	333	445	336	450	340	455	344	460	349
Maximum Power Voltage(Vmp)[V]	33.90	32.46	34.10	32.56	34.30	32.76	34.50	32.95	34.70	33.15
Maximum Power Current (Imp)[A]	12.98	10.26	13.06	10.32	13.14	10.38	13.20	10.44	13.27	10.53
Open-circuit Voltage (Voc)[V]	41.00	38.45	41.20	38.57	41.40	38.68	41.60	38.81	41.80	39.01
Short-circuit Current (Isc)[A]	13.41	10.97	13.49	11.03	13.60	11.10	13.69	11.15	13.78	11.23
Module Efficiency STC(%)	20.33%		20.56%		20.79%		21.02%		21.25%	

* STC : Irradiance at 1000 W/m², Cell Temperature 25°C, Air Mass AM1.5

* NMOT: Irradiance at 800W/m². Ambient Temperature 20°C , Wind Speed 1 m/s

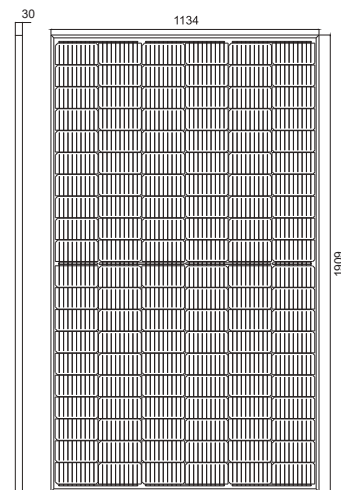
Note: The electrical performance parameters in the catalog are used to compare different components and do not represent specific performance commitments for individual components.

Mechanical Parameters

Cell Type	Monocrystalline (182mm)	No. of Cells	120 [2 x (10 x 6)]
Dimensions	1909*1134*30 mm	Weight	24.2kg
Glass	3.2mm Strengthened Glass	Encapsulant Material	EVA/POE
Frame	Anodized Aluminium Alloy	Junction Box	IP68
Output Cable	4.0mm ² , 1200/1200mm(can be customized)	Connector	MC4 Compatible

Dimensions

Unit: mm



Front View

Temperature Ratings

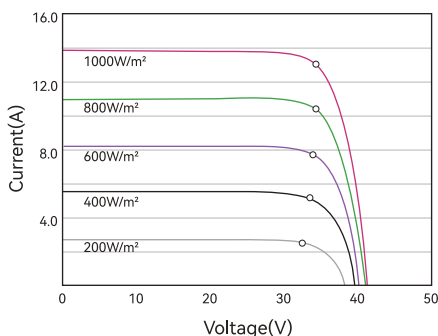
Nominal operating cell temperature (NOCT)	45°C ± 2°C
Temperature Coefficient of Pmax	-0.35%/°C
Temperature Coefficient of Voc	-0.29%/°C
Temperature Coefficient of Isc	+0.045%/°C

Operating Parameters

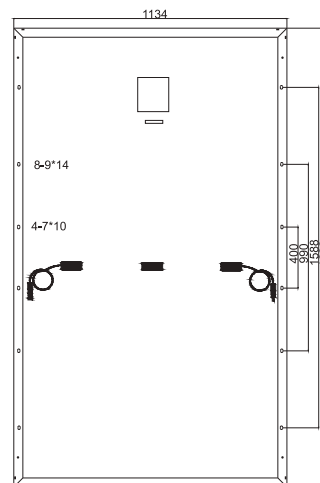
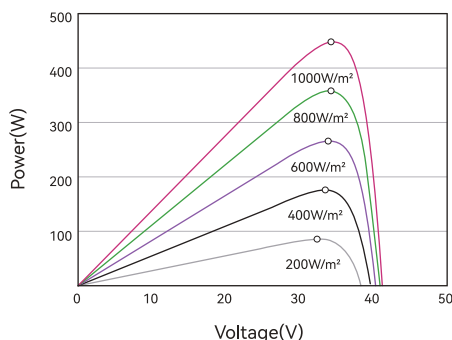
Operational Temperature	-40°C~+85°C
Maximum System Voltage	1500V DC (IEC)
Maximum Series Fuse Rating	25A
Fire Class Rating	Class C

Electrical Performance

I-V Curves of PV Module (450W)



P-V Curves of PV Module (450W)



Back View

Packaging

Pcs per Pallet: 36
Pcs per 40' HC: 864

