

144 Cells

M10 MBB MONO TOPCON

0 - +3%

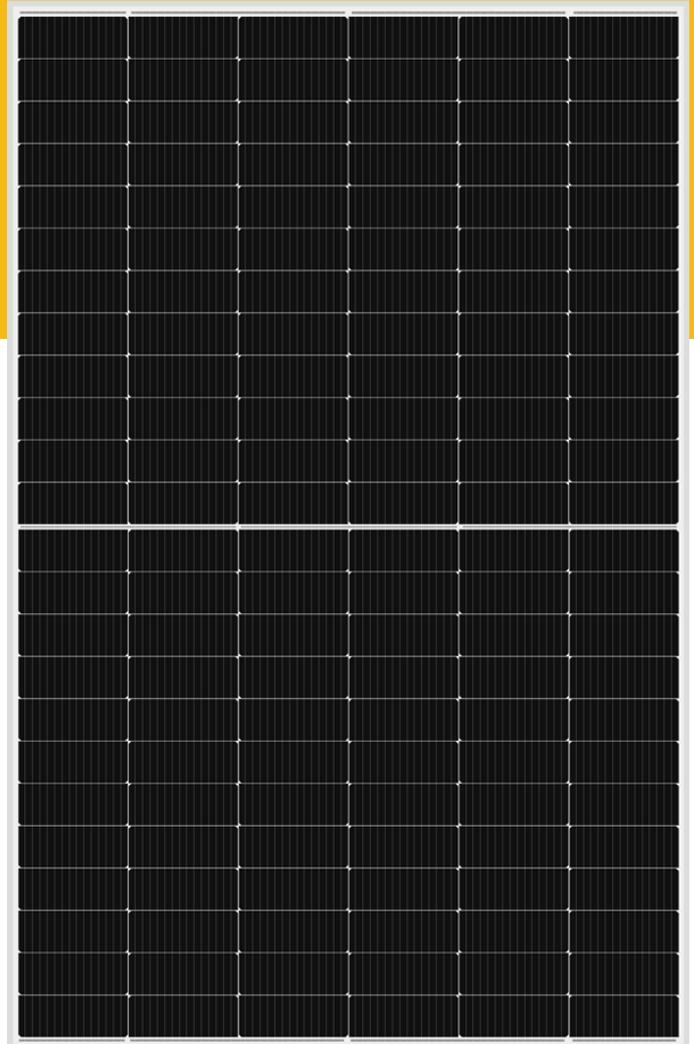
POSITIVE POWER TOLERANCE

23.02%

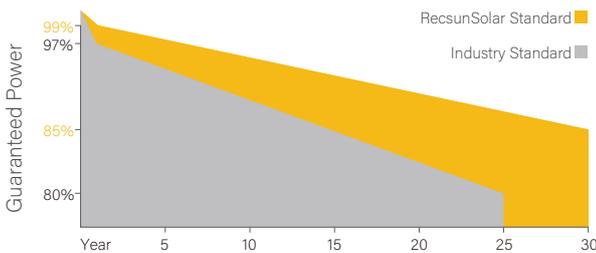
MAXIMUM EFFICIENCY

440W - 460W

- M10 1/3-CUT N-TYPE PV MODULE
- WHITE/TRANSPARENT BACKSHEET



LINEAR PERFORMANCE WARRANTY



15 Years Product Warranty



30 Years Power Warranty

PRODUCT&QUALITY CERTIFICATIONS

IEC 61215, IEC 61730, IEC 61000

ISO 9001, ISO 14001, ISO 45001

POWER DEGRADATION

<1.0% for the First Year

<0.4% for the 2-30 Years

KEY FEATURES



High Efficiency

Leading Module Efficiency in Industry, up to 23.23%.



Excellent Rear Side Power Generation

Bifaciality is up to 80%, up to 30% More Energy Generation than Conventional Modules.



Excellent Appearance and Performance

Grade A Solar Cell, Symmetrical Design, Low Risk of Micro-crack.



Better Low Irradiance Performance

Higher Power Output even Under Low Irradiance Environments Such as on Cloudy or Foggy Days.



High Reliability

Secondard EL Inspection Ensures Zero Hidden Cracks and False Soldering During the Production Process.



Extensive Application Scenes

More Extensive Application Scenes, Such as BIPV, Snow Field, Vertical Installation, High Humidity, Strong Wind.

ELECTRICAL PARAMETERS

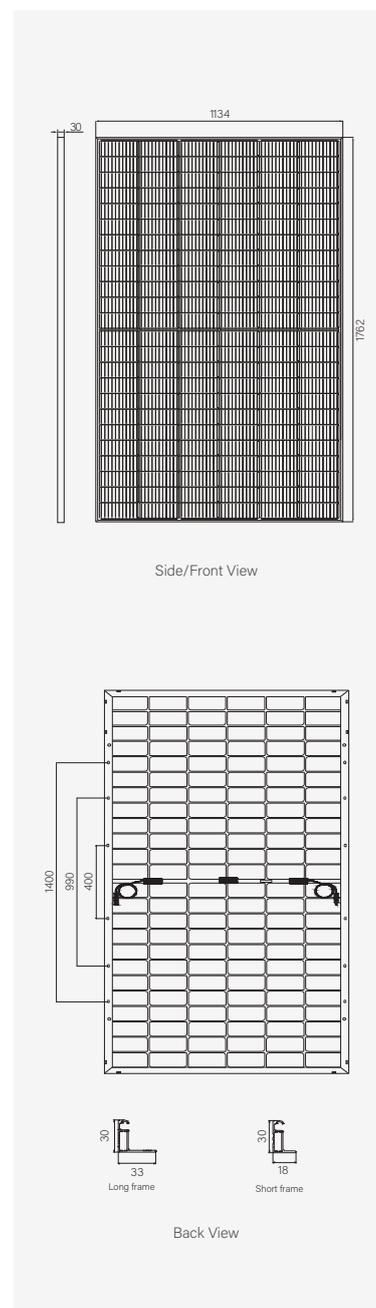
Module Type	RS-N440M10HV		RS-N445M10HV		RS-N450M10HV		RS-N455M10HV		RS-N460M10HV	
	STC	NOCT								
Maximum Power(Pmax)	440	331.89	445	335.66	450	339.44	455	342.21	460	346.98
Maximum Power Voltage(Vmp)	42.07	39.55	42.28	39.74	42.49	39.94	42.70	40.14	42.92	40.34
Maximum Power Current(Imp)	10.46	8.39	10.53	8.45	10.59	8.50	10.66	8.55	10.72	8.60
Open-Circuit Voltage(Voc)	50.48	47.45	50.74	47.69	50.97	47.93	51.24	48.17	52.50	48.41
Short-Circuit Current(Isc)	10.98	8.81	11.05	8.87	11.12	8.92	11.19	8.98	11.25	9.03
Module-Efficiency(%)	22.02%		22.27%		22.52%		22.77%		23.02%	

STC: Irradiance 1000 W/m², Cell Temperature 25°C, Air Mass AM1.5, Average efficiency reduction of 4.5% at 200W/m². NOCT: Irradiance at 800 W/m², Ambient Temperature 20°C, Wind Speed 1m/s.

MECHANICAL PARAMETERS

Solar Cells	MBB MONO TOPCON 182*70mm
No. of Cells	144 [2 x (12 x 6)]
Module Dimensions	1762*1134*30mm
Weight	19.5kg
Glass	3.2mm, High Transmission, AR Coated Heat Strengthened Glass
Encapsulant Material	EVA/POE
Backsheet	White/Transparent(Bifacial), TPT/PET
Frame	Anodized Aluminium Alloy
J-Box	IP68, Three Diodes
Cable	Photovoltaic Technology Cable 4.0mm ² , 300mm(customized)
Connector	MC4 Compatible

DIMENSION PARAMETERS



TEMPERATURE RATINGS

Nominal Operating Cell Temperature	45°C(± 2°C)
Temperature Coefficient of Pmax	-0.300%/°C
Temperature Coefficient of Voc	-0.250%/°C
Temperature Coefficient of Isc	+0.046%/°C

OPERATING PARAMETERS

Operational Temperature	-40°C - +85°C
Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	20A
Mechanical/Wind Load	5400/2400Pa

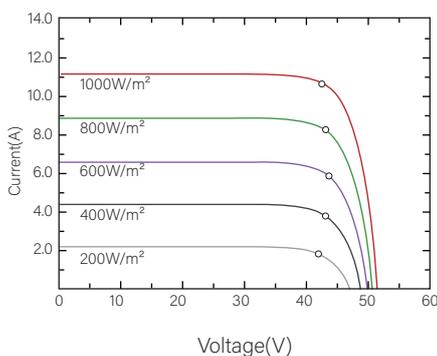
PACKAGING CONFIGURATION

PCS/Pallet: 36
PCS/40' HC: 936 PCS/20' GP: 390

BACK SIDE POWER GAIN(10%/Bifacial)

Front Power(W)	440	445	450	455	460
Max. Power(W)	484	489.5	495	500.5	506

I-V CURVES of PV MODULE(450W)



P-V CURVES of PV MODULE(450W)

