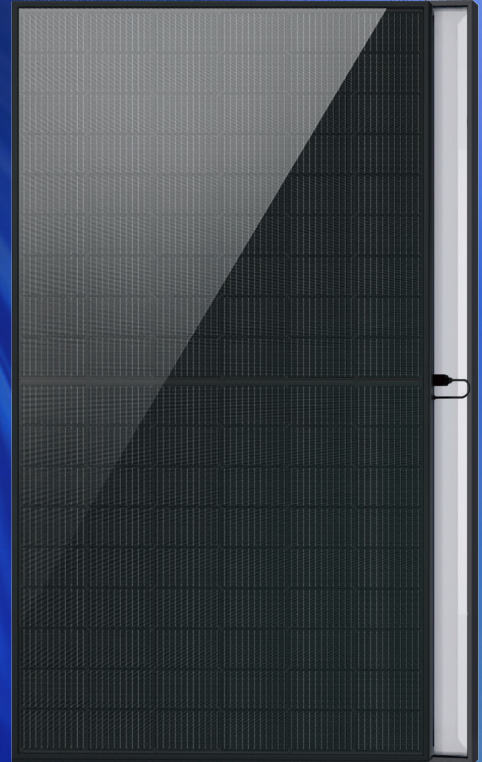
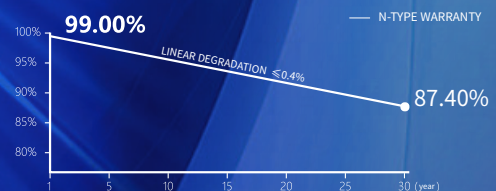


Monofacial Series

445-460W



-  Module Efficiency up to 22.3%
-  Zero LID
-  SMBB + Half-cell tech, reduce internal current loss, improve module efficiency, minimize micro-crack impacts, and improve module reliability
-  Non-destructive Slicing Tech, reduce micro-crack risk
-  Lower temperature coefficient ($-0.29\%/^{\circ}\text{C}$), lower operating temperature, increase the power generation
-  Excellent low irradiance performance, higher power output
-  Resistant to harsh environments
-  Anti PID
-  More energy yield, lower BOS and LCOE
-  All black Aesthetics Module



 30-YEAR PRODUCT WORKMANSHIP WARRANTY

 30-YEAR LINEAR POWER WARRANTY

Subject to the terms and conditions contained in the applicable HY Solar Limited Warranty Statement. Also this 30-year limited product warranty is available only for products installed and operating on residential rooftops in certain regions.

| Comprehensive Products and System Certificates

IEC 61215, IEC 61730
ISO 9001:2015 Quality management systems
ISO 14001:2015 Environmental management systems
ISO 45001:2018 Occupational health and safety management systems



Electrical performance parameters

STC: Irradiance 1000W/m², Cell Temperature 25° C, AM=1.5

Rated output (P _{mp} / Wp)	440	445	450	455	460
Rated voltage (V _{mp} / V)	31.83	32.04	32.25	32.46	32.66
Rated current (I _{mp} / A)	13.04	13.11	13.18	13.25	13.32
Open circuit voltage (V _{oc} / V)	38.25	38.40	38.54	38.70	38.85
Short-circuit current (I _{sc} / A)	13.75	13.83	13.90	13.97	14.04
Module efficiency	21.3%	21.5%	21.8%	22.0%	22.3%
Power tolerance	0~+5W				

NMOT: Irradiance 800W/m², Ambient Temperature 20° C, AM=1.5, Wind Speed 1m/s

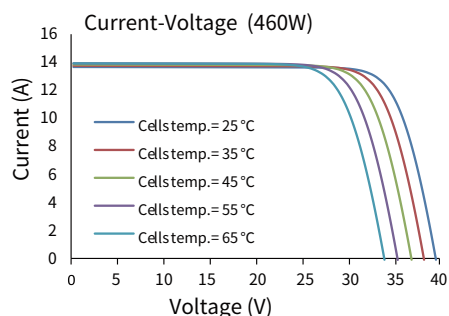
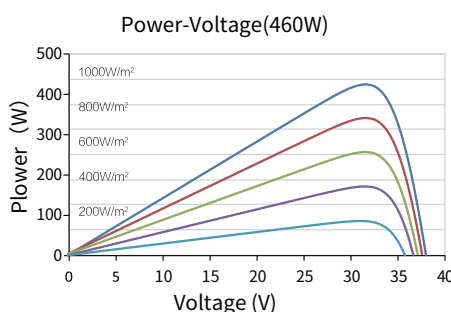
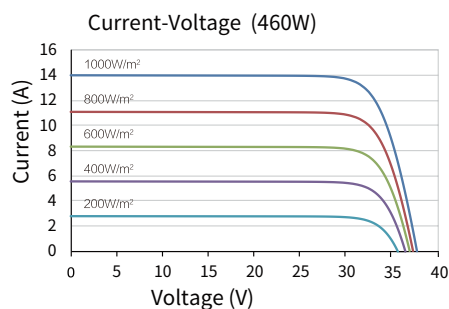
Rated output (P _{mp} / Wp)	311.9	315.7	319.5	323.6	327.9
Rated voltage (V _{mp} / V)	29.93	30.12	30.31	30.53	30.73
Rated current (I _{mp} / A)	10.42	10.48	10.54	10.60	10.67
Open circuit voltage (V _{oc} / V)	36.29	36.43	36.56	36.71	36.85
Short-circuit current (I _{sc} / A)	11.09	11.15	11.21	11.27	11.34

Temperature Ratings (STC)

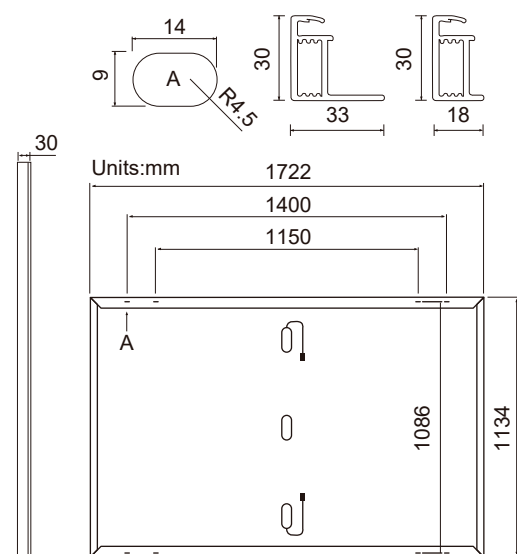
Temperature coefficient (P _{mp})	-0.29%/°C
Temperature coefficient (I _{sc})	+0.043%/°C
Temperature coefficient (V _{oc})	-0.24%/°C
Nominal module operating temperature (NMOT)	42±2°C

Operating Parameters

Max. system voltage (IEC)	1500V _{DC}
Number of diodes	3
Junction box IP rating	IP 68
Max. series fuse rating	25 A
Operational temperature	-40~+85°C



Mechanical parameters



Outer dimensions (L x W x H)	1722x 1134 x 30 mm
Cell	N type mono-crystalline
Number of cells	108 (6*18)
Frame Type	Aluminum, black anodized
Glass thickness	3.2 mm
Cable length (including connector)	(±)1200 mm; Customized length
Cable diameter (IEC)	4 mm ² / 12 AWG
^① Maximum test mechanical load	5400 Pa (front) / 2400 Pa (rear)
Connector type (IEC)	QC4.10-cds compatible
Module weight	21.3 kg
Packaging unit	36 pcs / box
Modules per 40' HQ container	936 pcs

^① Please refer to the installation manual or contact us to confirm.
The maximum test mechanical load = 1.5 × maximum design mechanical load.

*The data above is for reference only and the actual data is in accordance with the practical testing. Power Measurement Tolerance ±3% under STC standard.