









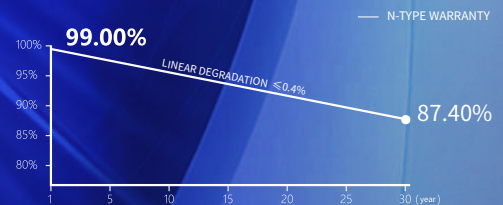




630~650W

HY-NT12/60GDF



-  Module Efficiency up to 23.0%
-  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%/°C), lower operating temperature, increase the power generation
-  Excellent low irradiance performance, higher power output
-  Bifaciality rate up to 80-85%, and up to 30% power gain from back side (depending on albedo)
-  Resistant to harsh environments
-  Anti PID
-  More energy yield, lower BOS and LCOE



-  15-YEAR PRODUCT WORKMANSHIP WARRANTY
-  30-YEAR LINEAR POWER WARRANTY

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

	630	635	640	645	650
Rated output (P _{mpp} / Wp)	630	635	640	645	650
Rated voltage (V _{mpp} / V)	36.20	36.40	36.60	36.80	37.00
Rated current (I _{mpp} / A)	17.45	17.50	17.55	17.60	17.65
Open circuit voltage (V _{oc} / V)	43.78	43.98	44.18	44.38	44.58
Short-circuit current (I _{sc} / A)	18.18	18.22	18.26	18.30	18.34
Module efficiency	22.3%	22.4%	22.6%	22.8%	23.0%
Power tolerance	0~+5W				

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

	479.2	483.4	487.6	491.8	496.1
Rated output (P _{mpp} / Wp)	479.2	483.4	487.6	491.8	496.1
Rated voltage (V _{mpp} / V)	34.11	34.31	34.51	34.71	34.91
Rated current (I _{mpp} / A)	14.05	14.09	14.13	14.17	14.21
Open circuit voltage (V _{oc} / V)	41.65	41.85	42.05	42.25	42.45
Short-circuit current (I _{sc} / A)	14.70	14.74	14.78	14.82	14.86

Different rear power gains (630W as an example)

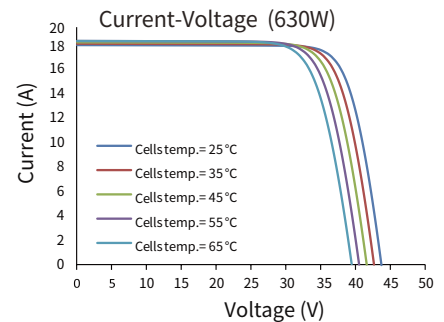
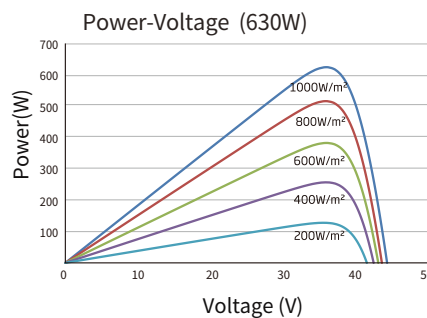
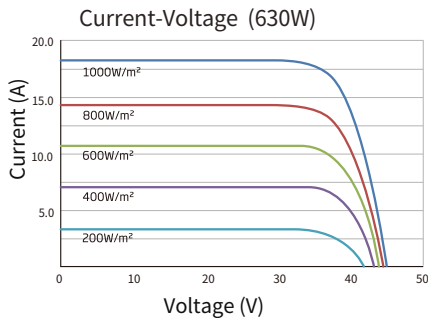
Power gains P _{mpp} /Wp	V _{mpp} /V	I _{mpp} /A	V _{oc} /V	I _{sc} /A	
5%	662	36.20	18.27	43.78	19.09
15%	725	36.20	20.01	43.78	20.91
25%	788	36.20	21.75	43.78	22.73

Temperature coefficient

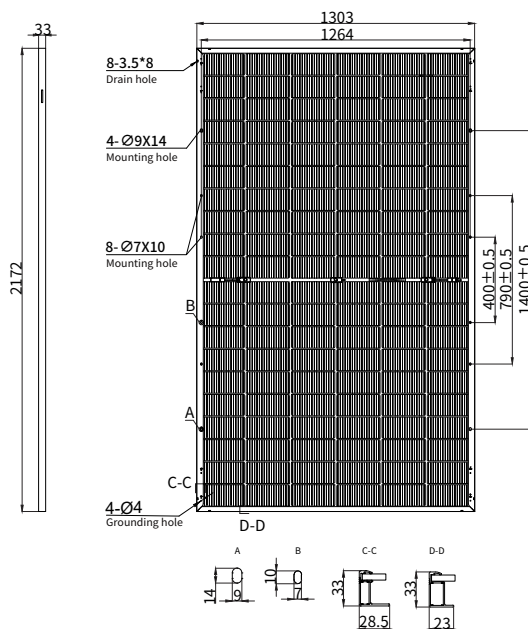
Temperature coefficient (P _{mpp})	-0.29%/°C
Temperature coefficient (I _{sc})	+0.043%/°C
Temperature coefficient (V _{oc})	-0.24%/°C
Nominal module operating temperature (NMOT)	42±2°C

Operating parameters

Max. system voltage (IEC)	1500V _{oc}
Number of diodes	3
Junction box protection rating	IP 68
Max. series fuse rating	30A
Operational temperature	-40~+85°C
Bifaciality rate	80±5%



Mechanical parameters



Outer dimensions (L x W x H)	2172 x 1303 x 33 mm
Cell	N type mono-crystalline
Number of cells	120 (6*20)
Frame type	Aluminum, silver anodized
Glass thickness	2.0+2.0 mm
Cable length (including connector)	Portrait: (+)300 mm, (-)300 mm ; Customized length
Cable cross-sectional area (IEC)	4 mm ² / 12 AWG
①Maximum test mechanical load	5400Pa (front) /2400Pa(rear)
Connector type (IEC)	PV-HYC11xyz(standard)/MC4 EVO2(optional)
Module weight	34.9 kg
Packaging unit	33 pcs / box
Weight of packing unit	1212 kg / box
Modules per 40' HQ container	594 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.