

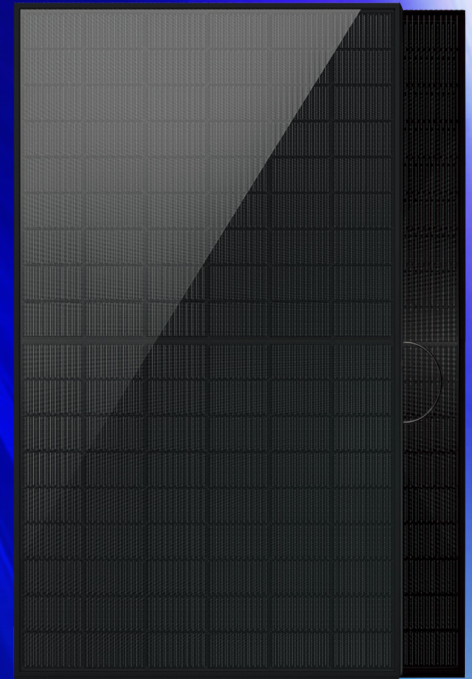


Bifacial Series  
Full Black

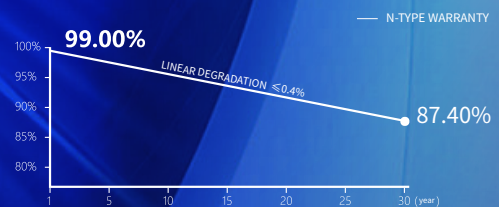


# 445~465W

## HY-NT10/54BGDF



- Module Efficiency up to 23.3%
- 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%/°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
- 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



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Group Headquarter: No. 158 Nanhu Middle Road, Binhu District,  
Wuxi City, Jiangsu Province, China

Tel: 0510-85958787

E-mail: [info@hysolar.com](mailto:info@hysolar.com)

Web: <https://module.hysolar.com>

## Electrical performance parameters

\*STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25° C, AM=1.5

Rated output (Pmpp / Wp)	445	450	455	460	465
Rated voltage (Vmpp / V)	32.65	32.83	33.00	33.17	33.34
Rated current (Impp / A)	13.63	13.71	13.79	13.87	13.95
Open circuit voltage (Voc / V)	39.10	39.30	39.50	39.70	39.90
Short-circuit current (Isc / A)	14.40	14.48	14.56	14.64	14.72
Module efficiency	22.3%	22.5%	22.8%	23.0%	23.3%
Power tolerance	0~+5W				

NMOT: Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20° C, AM=1.5, Wind Speed 1m/s

Rated output (Pmpp / Wp)	334.8	338.4	342.0	345.7	349.3
Rated voltage (Vmpp / V)	30.66	30.82	30.98	31.14	31.30
Rated current (Impp / A)	10.92	10.98	11.04	11.10	11.16
Open circuit voltage (Voc / V)	36.82	37.00	37.18	37.36	37.54
Short-circuit current (Isc / A)	11.54	11.61	11.68	11.75	11.82

## Different rear power gains (450W as an example)

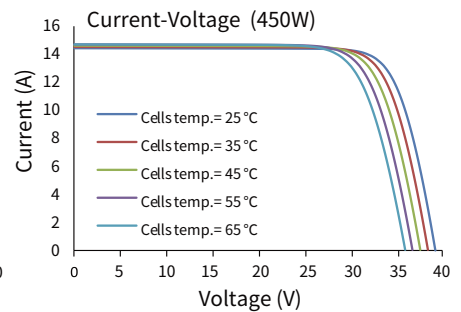
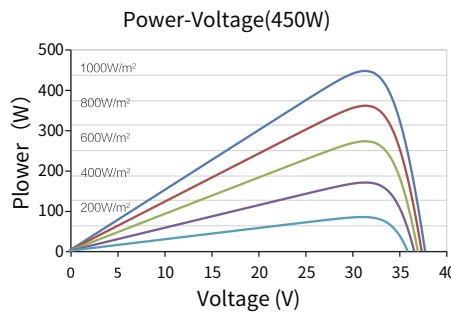
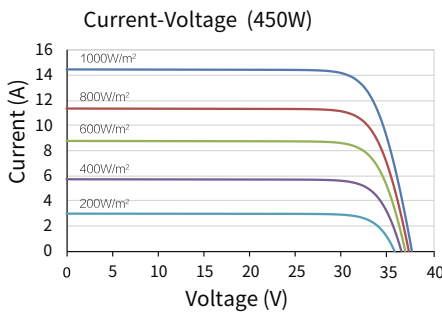
Power gains Pmpp/ Wp	Vmpp/V	Impp/A	Voc / V	Isc/A	
5%	473	32.83	14.39	39.30	15.20
15%	518	32.83	15.76	39.30	16.65
25%	563	32.83	17.13	39.30	18.10

## Temperature coefficient

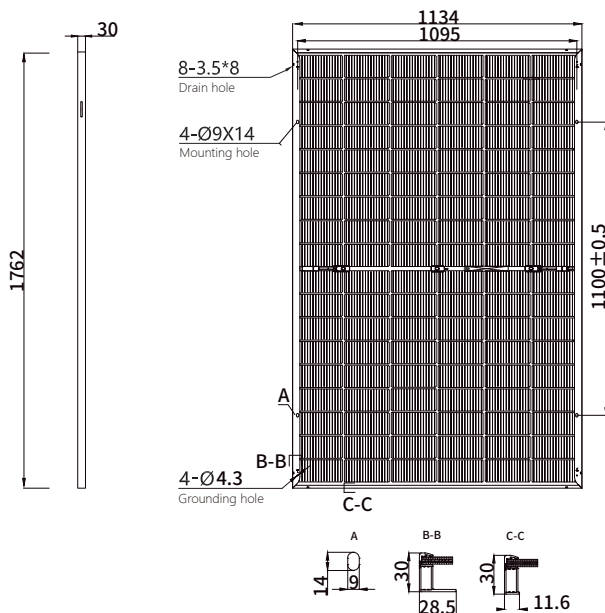
Temperature coefficient (Pmpp)	-0.29%/°C
Temperature coefficient (Isc)	+0.043%/°C
Temperature coefficient (Voc)	-0.24%/°C
Nominal module operating temperature (NMOT)	42±2°C

## Operating parameters

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



## Mechanical parameters



Outer dimensions (L x W x H)	1762 x 1134 x 30 mm
Cell	N type mono-crystalline
Number of cells	108 (6*18)
Frame Type	Aluminum, black anodized
Glass thickness	2.0+2.0mm (rear glass in glazed black/transparent)
Cable length (including connector)	Portrait: (+)300 mm, (-)300 mm; Customized length
Cable cross-sectional area (IEC)	4 mm <sup>2</sup> / 12 AWG
<sup>①</sup> Maximum test mechanical load	5400Pa (front) /2400Pa(rear)
Connector type (IEC)	PV-HYC11xyz(standard)/MC4 EVO2(optional)
Module weight	24.5 kg
Packaging unit	36 pcs / box
Weight of packing unit	928 kg / box
Modules per 40' HQ container	936 pcs

<sup>①</sup> 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.