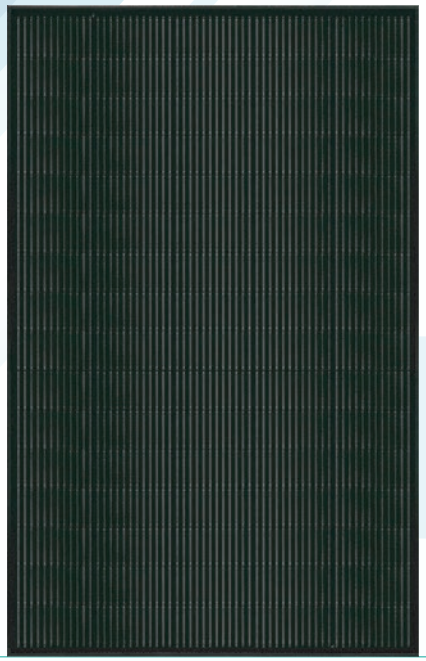
NBS
New Best Solution
NBS ENERGY GROUP CO., LTD.



G12

12 YEARS Guarantee on product material and workmanship

25 YEARS Linear power output warranty

Bifacial / Full Black Module

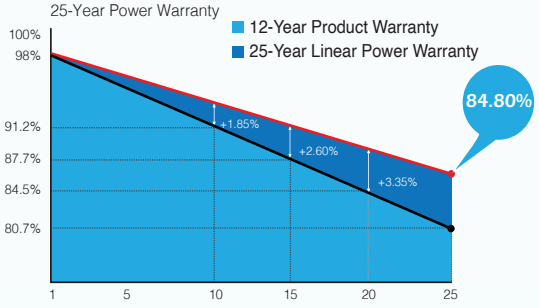
NB80M-G12PB-FB(390~410)

Solar Cells With PERC Technology
High Efficiency MONO Solar Module

The Module strengthens the module density, greatly improves the power and efficiency. At the same time, it has the advantages of flexible installation, cost saving, good system adaptation. High reliability, easy transportation, environmental protection and so on.

- Mono MBB half cut technology Double-sided electricity generation
- Production process reliability test
- 3 times EL test to ensure best quality
- Competitive low light performance
- Less mismatch to get more power
- Less power loss by minimizing the shading impact
- Ideal choice for utility and commercial scale projects by reduced BOS and improved ROI
- PVEL — Outstanding reliability proven by PVEL for stringent environment condition: Sand, Acid, Salt, Hailstones Anti-PID

QUALITY ASSURANCE



CERTIFICATION

TUV: IEC/EN 61215, IEC/EN 61730
GB/T 19001-2016 / ISO 9001:2015
GB/T 24001-2016 / ISO 14001:2015
CHSAS: 18001:2007
CNAS-CL01: ISO/IEC 17025:2017

NBS ENERGY GROUP CO., LTD.
www.nbsenergy.com | sales@nbsenergy.com

On-grid commerical industrial roof-tops

On-grid residential roof-tops

NB80M-G12PB-FB

G12-80 Half-Cut Cell | MBB Mono PERC | Full Black | Bifacial Module

NBS ENERGY GROUP CO., LTD.

ELECTRICAL PARAMETERS

* Measurement tolerance: Pmax:±3%, Voc:±3%, Isc:±5%.

Module Type: NB80M-G12PB-	FB390		FB395		FB400		FB405		FB410	
Testing Condition	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power - Pmax (W)	390	295	395	298	400	302	405	306	410	310
Maximum Power Voltage - Vmpp (V)	33.8	31.8	34.0	32.0	34.2	32.2	34.4	32.5	34.6	32.8
Maximum Power Current - Impp (A)	11.54	9.26	11.62	9.32	11.70	9.38	11.77	9.41	11.84	9.45
Open Circuit Voltage - Voc (V)	40.8	38.4	41.0	38.6	41.2	38.8	41.4	38.9	41.6	39.1
Short Circuit Current - Isc (A)	12.14	9.78	12.21	9.84	12.28	9.90	12.34	9.95	12.41	9.99
Module Efficiency (%)	20.3		20.5		20.8		21.1		21.2	

STC: irradiance 1,000 W/m2; Spectra at AM 1.5; module temperature 25°C. Power output tolerance: 0~+5W. Measuring tolerance of power: ±3%
NMOT: irradiance 800 W/m2; Spectra at AM 1.5; Cell temperature 45°C; Ambient temperature 20°C. Wind speed 1m/s

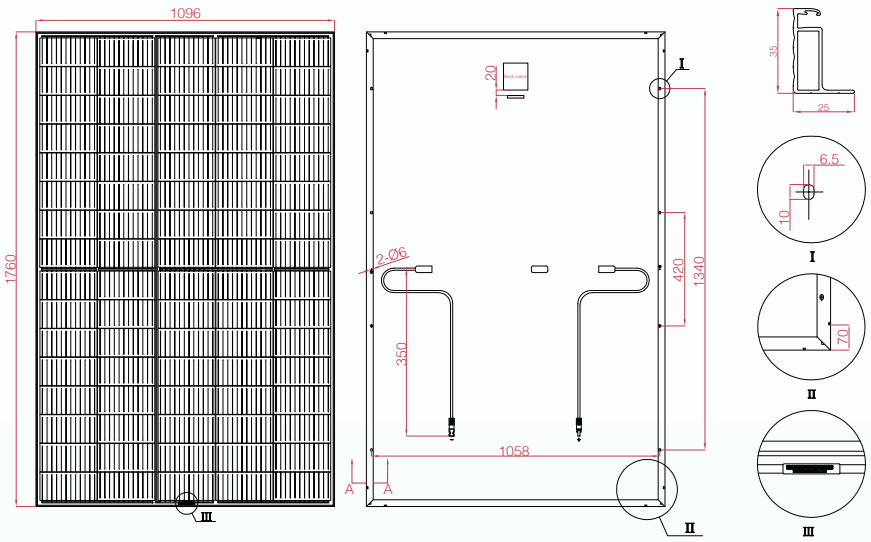
BIFACIAL REARSIDE POWER GAIN

Electrical characteristics with different rear side power gain for reference to 400W front.

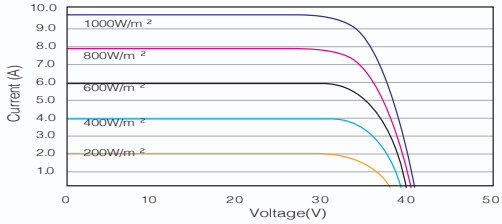
5% Maximum Power-PMAX (Wp)	409.5	420.0	420.0	425.25	430.5
5% Module Efficiency η m (%)	21.32	21.84	21.84	22.15	22.26
15% Maximum Power-PMAX (Wp)	448.5	460	460	465.75	471.5
15% Module Efficiency η m (%)	23.35	23.92	23.92	24.26	24.38
25% Maximum Power-PMAX (Wp)	487.5	500.0	500.0	506.25	512.5
25% Module Efficiency η m (%)	25.38	26.0	26.0	26.38	26.5

Bifacial gain: the additional gain from the rear side compared to the power of the front side at the standard test condition.
It depends on mounting (structure, height, tilt angle, etc.) and albedo of the ground.

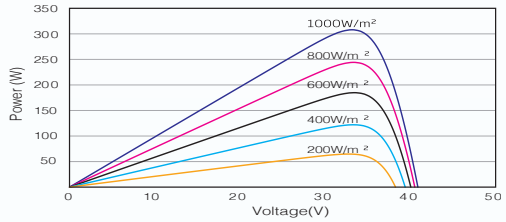
DIMENSIONS OF PV MODULE



I -V CURVES OF PV MODULE



P - V CURVES OF PV MODULE



MECHANICAL DATA

Solar Cells (mm)	210 x 105 Mono Bifacial PERC
Cell Orientation	80 Cells (10 x 8)
Module Dimensions (L*W*H)	1760 x 1096 x 35mm
Weight (Kg)	21.5 kg
Glass	3.2 mm coated tempered glass
Backsheet	Transparent
Frame	Black anodized aluminum alloy
J-Box	IP68, 3 bypass diodes
Cables	Length 350mm, 1x4.0mm²
Connector	MC4 and MC4 Compatible
PACKING CONFIGURATION	Module per box: 31 Pieces

TEMPERATURE RATINGS

NMOT	45°C (±2°C)
Temperature Coefficient of Pmax	-0.362%/°C
Temperature Coefficient of Voc	-0.262%/°C
Temperature Coefficient of Isc	+0.042%/°C

MAXIMUN RATING

Operational Temperature (°C)	-40°C to +85°C
Maximum System Voltage (VDC)	1500
Max Series Fuse Rating (A)	30
Mechanical Load Front (Pa)	5,400
Mechanical Load Back (Pa)	2,400
MODULE PER CONTAINER	832 Pieces

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCTS.