

G12R⁺-66P

N-type Bifacial Double Glass Module

HSM-GHF-NM605~630

630W

Maximum Power Output

23.3%

Maximum Efficiency

High Energy Yield

- High-density cell package, increasing 2% cells
- Lower temperature coefficient (Pmax): -0.29%/°C
- Up to 80% power bifaciality

Industry-leading G12 Wafer

- <1% degradation in the first year
- Smaller wafer chamfer, larger light receiving area
- Wafer: 210R⁺, Thickness: ≤130μm

Superior Customer Value

- Integrated technology: TOPCon + Shingling
- Optimized dimension design for all scenarios
- More artistic beauty with no-gap design

Long-term Reliability

- 1/3 cell technology, lower current loss and hot spot risk
- Harsh environment resistance
- Damage-free laser cutting, lower micro-crack risk
- Mechanical load: Front 5400 Pa, Back 2400 Pa

Comprehensive Products and System Certificates



IEC 61215 / IEC 61730 ISO 9001:2015 ISO 45001:2018 ISO 14001:2015

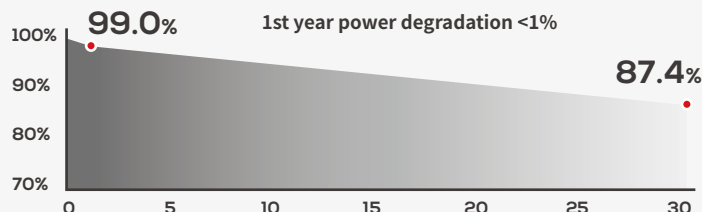
Linear Performance Warranty



15 Years
Product Warranty



30 Years Linear
Performance Warranty



G12R*-66P N-type Bifacial Double Glass Module

HSM-GHF-NM605~630

630W

Maximum Power

23.3%

Maximum Efficiency

0~+5W

Power Tolerance

Electrical Parameters (STC*)

* STC: Irradiance 1000W/m², Cell Temperature 25°C, AM1.5, Measuring Tolerance: ±2%

Maximum Power	P _{max} (W)	605	610	615	620	625	630
Open Circuit Voltage	V _{oc} (V)	47.90	48.10	48.30	48.50	48.70	48.90
Short Circuit Current	I _{sc} (A)	15.79	15.82	15.85	15.88	15.91	15.94
Maximum Power Voltage	V _{mp} (V)	40.50	40.75	41.00	41.25	41.50	41.75
Maximum Power Current	I _{mp} (A)	14.94	14.97	15.00	15.03	15.06	15.09
Module Efficiency	(%)	22.4	22.6	22.8	23.0	23.1	23.3

Electrical Characteristics with 10% Bifacial Gain*

* The additional gain from the back side depends on mounting (structure, height, tilt angle etc.) and albedo of the ground.

Maximum Power	P _{max} (W)	666	671	677	682	688	693
Open Circuit Voltage	V _{oc} (V)	47.90	48.10	48.30	48.50	48.70	48.90
Short Circuit Current	I _{sc} (A)	17.37	17.40	17.44	17.47	17.50	17.53
Maximum Power Voltage	V _{mp} (V)	40.50	40.75	41.00	41.25	41.50	41.75
Maximum Power Current	I _{mp} (A)	16.43	16.47	16.50	16.53	16.57	16.60

Mechanical Data

* Please refer to installation manual for details

No. of Cells	198pcs (6×33)
Dimension	2382×1134×30mm
Weight	32.9kg
Front Glass	2.0mm High Transmission, Heat Strengthened Glass
Back Glass	2.0mm Heat Strengthened Glass
Frame	Anodized Aluminium Alloy
J-Box	IP68
Cables	4.0mm ² , +350mm, -280mm/±1400mm (can be customized)
Diodes	3
Maximum Static Load	Front: 5400Pa/Back: 2400Pa*

Temperature Coefficient

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

Nominal Module Operating Temperature*	43±2°C	Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of I _{sc}	+0.045%/°C	Temperature Coefficient of P _{max}	-0.29%/°C

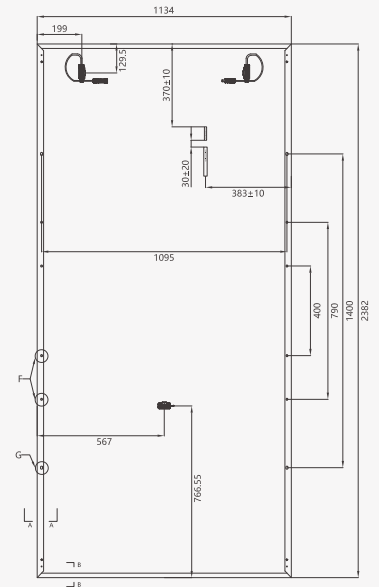
Operating Parameters

Operating Temperature	-40~+85°C
Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	30A
Power Bifaciality	80±5%

Packaging Configuration

Modules per Pallet	36pcs
Modules per 40'HQ Container	720pcs
Pallets per 40'HQ Container	20plt

Engineering Drawing [Unit: mm]



Back

F-Installation
HoleG-Installation
Hole

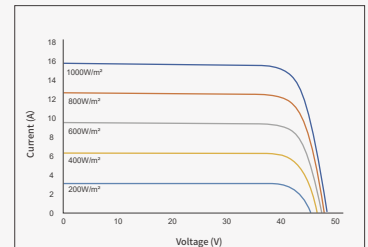
A-A



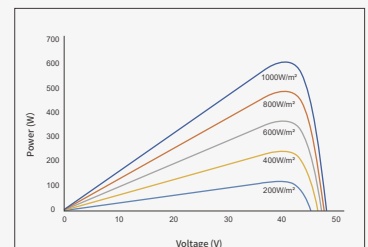
B-B

Curve Graph

I-V Curves (610W)



P-V Curves (610W)



TCL

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Datasheets