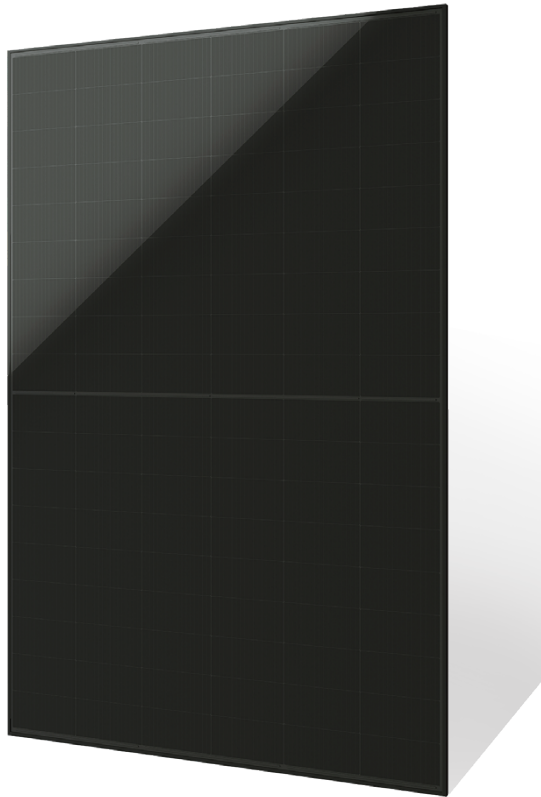


SOLAR MODULE 430 - 455 W



**G12R - TOPCON
HALF CUT PV MODULE
HIGH EFFICIENCY
DUAL GLASS**



N-TYPE TOPCON CELL TECHNOLOGY

Based on G12R-182 x 210 mm wafer with multi-busbar
N-Type wafer and TOPCon technology



MODULE TECHNOLOGY

Double-sided power generation
Low breakage rate; Annual power degradation 0.4%
Less power loss by minimizing the shading impact



HOT SPOT LOSS

Optimized electrical design and lower operating current
Reduced hot spot loss and better temperature coefficient



FAST & SAFE

Easy installation and handling
Environmentally friendly



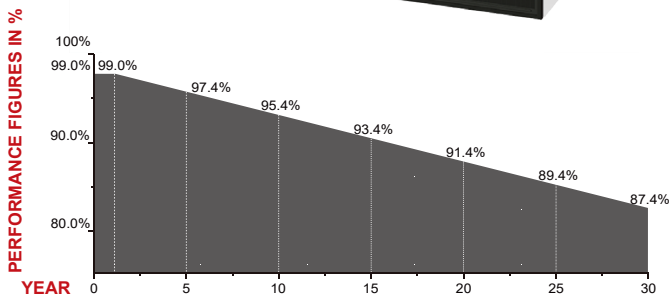
MODULE DURABILITY

Mechanical load test Front side 5400Pa/Rear side 2400Pa
Ideal for PV rooftops, ground mount, floating



THE #1 DOMESTIC PV MANUFACTURER IN VIETNAM

100% Automatic production line
International quality PV technology



GUARANTEED MODULE PERFORMANCE FROM IREX ENERGY JSC

CERTIFICATES



ISO 9001:2015: Quality Management System
ISO 14001:2015: Environmental Management System
IEC 61215: Terrestrial Photovoltaic (PV) Modules – Design
Qualification and Type Approval
IEC 61730: Photovoltaic (PV) Module Safety Qualification

IREX ENERGY JOINT STOCK COMPANY

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Tan Phuoc Ward, HCMC, Vietnam.

Tel: +84 (0)28 7300 1559 | Email: info@irex.vn | Website: www.irex.vn

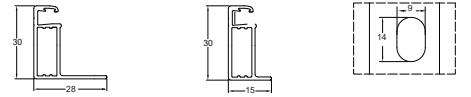
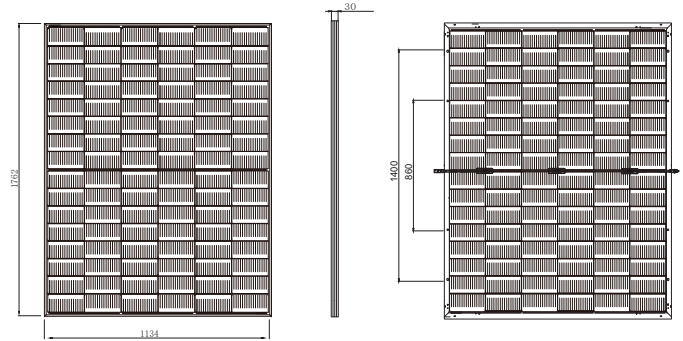


SOLAR MODULE 430 - 455 W



Mechanical Specifications

| | |
|---------------------|---|
| External Dimensions | 1762 x 1134 x 30 mm |
| Weight | 24.1 kg |
| Solar Cells | N-type TOPCon Mono 105 x 182 mm (96 pcs) |
| Glass | Front: 2.0 mm, AR coating, semi-tempered |
| | Rear: 2.0 mm, semi-tempered |
| Frame | Anodized aluminium alloy |
| Junction Box | IP68, 3 diodes |
| Output Cables | 4.0 mm ² , 300 mm(+)/ 200 mm(-) or Customized Length |
| Mechanical Load | Front Side Maximum Static Loading 5400Pa Rear Side Maximum Static Loading 2400Pa |



*Tolerance: Length: ±2mm Width: ±2mm Height: ±1mm Row Pitch: ±2mm

Electrical Characteristics

| Module Type | IRM48HTBD5-430 | | IRM48HTBD5-435 | | IRM48HTBD5-440 | | IRM48HTBD5-445 | | IRM48HTBD5-450 | | IRM48HTBD5-455 | |
|------------------------------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|
| | STC | NMOT | STC | NMOT | STC | NMOT | STC | NMOT | STC | NMOT | STC | NMOT |
| Maximum Power (Pmax) | 430 | 323 | 435 | 454 | 440 | 331 | 445 | 335 | 450 | 338 | 455 | 342 |
| Open Circuit Voltage (Voc) | 34.55 | 32.60 | 34.72 | 32.75 | 34.89 | 32.91 | 35.06 | 33.08 | 35.23 | 33.25 | 35.40 | 33.42 |
| Short Circuit Current (Isc) | 15.80 | 12.82 | 15.87 | 12.86 | 15.94 | 12.90 | 16.01 | 12.94 | 16.08 | 12.98 | 16.15 | 13.02 |
| Maximum Power Voltage (Vmp) | 29.18 | 27.27 | 29.36 | 27.49 | 29.54 | 27.66 | 29.72 | 27.83 | 29.90 | 27.96 | 30.08 | 28.15 |
| Maximum Power Current (Imp) | 14.74 | 11.85 | 14.82 | 11.90 | 14.90 | 11.97 | 14.98 | 12.04 | 15.05 | 12.09 | 15.13 | 12.15 |
| Module Efficiency at STC(ηm) | 21.5 | | 21.8 | | 22.0 | | 22.3 | | 22.5 | | 22.8 | |
| Power Tolerance | (0 ~ +5 W) | | | | | | | | | | | |
| Maximum System Voltage | 1500 VDC | | | | | | | | | | | |
| Maximum Series Fuse Rating | 30 A | | | | | | | | | | | |

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

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

Different Rearside Power Gain

| | (Reference to 435 W) | | |
|-------------------------------|----------------------|-------|-------|
| Rearside Power Gain | 5% | 10% | 20% |
| Maximum Power at STC (Pmax) | 456.8 | 478.5 | 522.0 |
| Open-circuit Voltage (Voc/V) | 34.7 | 34.7 | 38.7 |
| Short-circuit Current (Isc/A) | 16.7 | 17.5 | 19.0 |
| Maximum Power Voltage (Vmp/V) | 29.4 | 29.4 | 29.4 |
| Maximum Power Current (Imp/A) | 15.6 | 16.3 | 14.8 |
| Module Efficiency (%) | 22.9 | 23.9 | 26.1 |

*The above data is for reference only. When signing a contract, the latest version of the product specification shall prevail.

Temperature Characteristics

| | |
|---|--------------|
| Pmax Temperature Coefficient | -0.290 %/°C |
| Voc Temperature Coefficient | -0.250 %/°C |
| Isc Temperature Coefficient | +0.045 %/°C |
| Operating Temperature | -40 ~ +85 °C |
| Nominal Module Operating Temperature (NMOT) | 45 ± 2 °C |

Packing Configuration

| | 1762 x 1134 x 30 mm |
|-----------------------|---------------------|
| Container | 40'HQ |
| Pieces per Pallet | 37 |
| Pallets per Container | 26 |
| Pieces per Container | 962 |