

High Performance Full Cell Photovoltaic Modules

5BB POLY CRYSTALLINE MODULE 275W-280W-285W-290W

Key Features:

-  High Efficiency Poly Perc Solar Cells
-  Higher Power Output
-  High Snow (5400Pa) and Wind Loads (2400Pa)
-  Excellent Outstanding Weather-Resistance
-  Dual EL Inspection
-  Excellent Low Light Performance
-  Excellent PID Resistance



Linear High Performance Guaranteed

10 Years Product Warranty on 91.20% of the Nominal Performance¹

25 Years Linear Power Output Warranty on 80.70% of the Nominal Performance¹



Certifications

- IEC 61215, IEC 61730: ID 1111220240
- IEC 61701:2011, EN 61701:2012: ID 1111223964
- IEC 62716:2013, EN 62716:2013: ID 1111223965
- IS 14286 / IEC 61215, IS/IEC 61730 - 1&2: R- 41151432
- Management system TÜV-Certified**
- ISO 9001:2015: ID 011001317684
- ISO 14001: 2015: ID 011041317684
- ISO 45001:2018: ID 011131815622



¹According to the IFRI-SOL Product and Performance Warranty

IF-P275-60
IF-P280-60
IF-P285-60
IF-P290-60

Electrical Specification

Module Type	Nominal Power Pmpp	Nominal Voltage Umpp	Nominal Current Impp	Open Circuit Voltage (Uoc)	Short Circuit Current (Isc)	Module Conversion Efficiency
IF-P275-60	275Wp	31.08V	8.85A	38.19V	9.38A	16.57%
IF-P280-60	280Wp	31.25V	8.96A	38.41V	9.49A	16.87%
IF-P285-60	285Wp	31.43V	9.07A	38.63V	9.60A	17.18%
IF-P290-60	290Wp	31.59V	9.18A	38.85V	9.71A	17.48%

Electrical Data At STC (STANDARD TEST CONDITIONS): 1000W/m² Irradiance, 25°C Cell Temperature, AM1.5g Spectrum According to EN 60904-3.
 Manufacturing Tolerance (Pmax,Voc,Isc) : ±3%

NMOT

Module Type	Nominal Power Pmpp	Nominal Voltage Umpp	Nominal Current Impp	Open Circuit Voltage (Uoc)	Short Circuit Current (Isc)
IF-P275-60	222.20Wp	28.58V	7.77A	35.20V	7.63A
IF-P280-60	226.25Wp	28.75V	7.87A	35.41V	7.74A
IF-P285-60	230.30Wp	28.92V	7.97A	35.62V	7.85A
IF-P290-60	234.35Wp	29.09V	8.07A	35.83V	7.96A

Electrical Data At NMOT: 800W/m² Irradiance, 20°C Ambient Temperature, 1m/s Wind Speed.
 Manufacturing Tolerance (Pmax,Voc,Isc) : ±3%

Design

Front Glass	3.2mm High Transmission Low Iron Tempered Glass, AR Coated
Encapsulant	Ethylene Vinyl Acetate (E.V.A)
Cell	5BB PERC Polycrystalline /157×157mm/ 60 Pcs
Backside	Composite Film (White, Black, ...)
Frame	35mm Anodized Aluminum (Silver/Black)

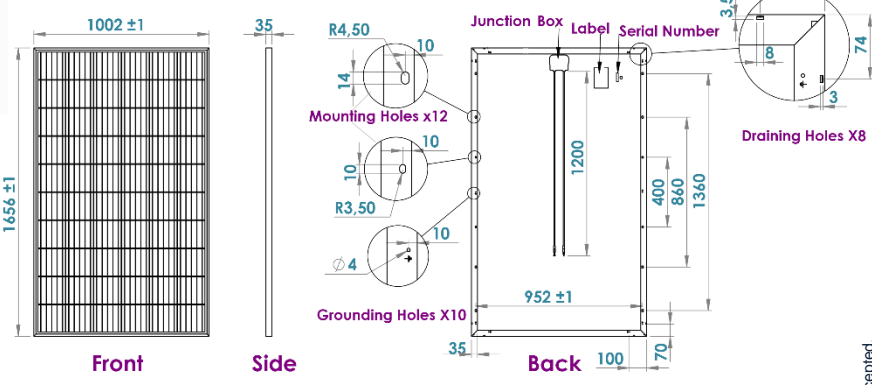
Power Connection

Junction Box	IP68 Junction Box With 3 Bypass Diodes
Solar Cable	Length 1200 mm , 4mm ² Prefabricated with latching type connectors
Safety Class	Class II (According to IEC 61140)

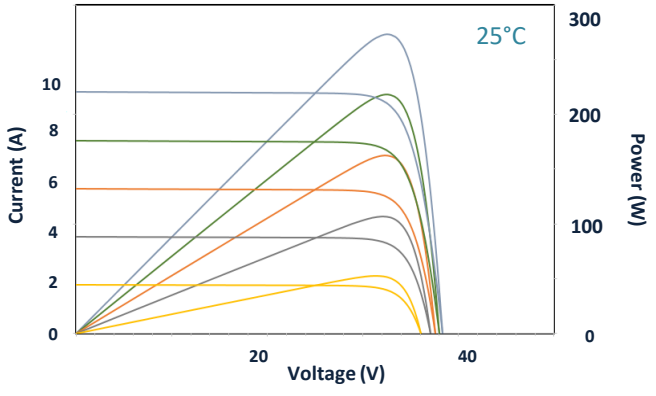
Packaging specification

Dimensions (L×W ×H)	1681mm ×1150mm×1145 mm
Modules Qty per Carton	31
Modules Qty per Container 20"	372
Modules Qty per Container 40" HC	938

Drawings



Current-Voltage/Power-Voltage Curves,IF-P285-60



— 1000 W/m² — 800 W/m² — 600 W/m² — 400 W/m² — 200 W/m²

Performance at low irradiance :

Outstanding performance at low irradiance, with an average relative efficiency of 96.48% from irradiances, between 1000 W/m² and 200 W/m² (AM 1.5, 25°C).

Temperature Coefficients

Voltage Uoc (β)	-0.32%/°C
Current Isc (α)	+0.05%/°C
Output Power (γ)	-0.41%/°C
NMOT	45±2°C

Operating conditions

Maximum System Voltage	1500VDC
Maximum Series Fuse	20A
Operating Temperature Range	From -40°C to 85°C
Mechanical Load Test (Front/back)	5400Pa/2400Pa



Frame

Mechanical Specification

Dimensions (L×W ×H)	1656mm×1002mm ×35mm (±1mm)
Weight	19.7Kg



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