

Features

- High efficiency multi crystalline silicon solar cells.
- High transmission textured toughened glass.
- Module as per IEC-61215(2005); IEC-61730 part 1 & 2. IEC-61701 Salt Mist Test.
- Suitable for off-grid & grid connected systems.
- Narrow power tolerance for minimizing losses due to module power mismatch in an array.
- High quality screwless anodized aluminum frame to provide structural strength to the Laminate.
- TUV approved, IP65 rated 4 terminal junction box with 3 by-pass diodes (15A) for quick & safe installation.
- Bypass diodes to reduce the effect of partial shading of modules.
- Preassembled cable of length 1000 mm each with MC4 type +Ve and -Ve connectors.
- Manufacturing facility certified to ISO 9001:2008, ISO 14001:2004, BS OHSAS 18001:2007 and EN ISO 50001:2011.

Typical Electrical Characteristics*

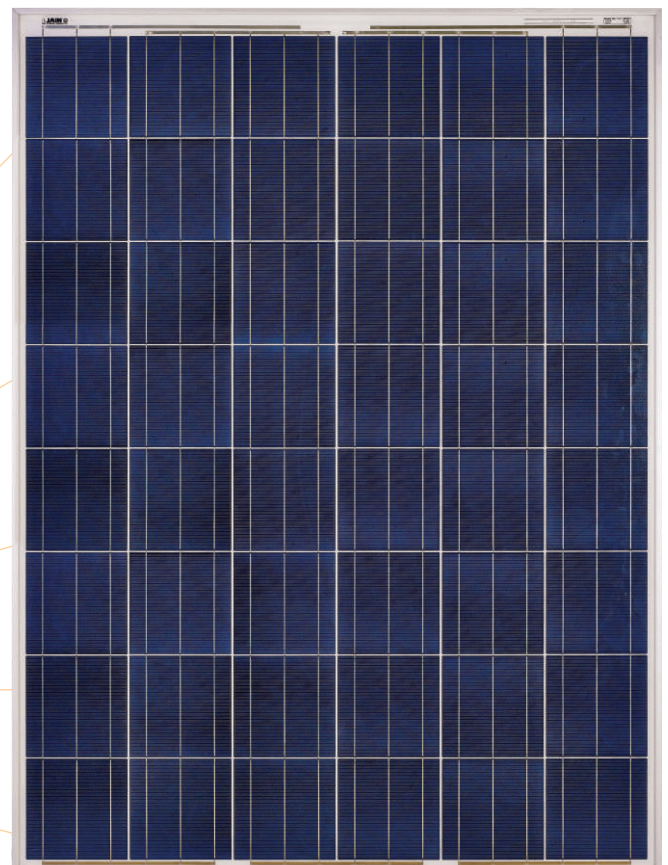
Module Type	JJ-M648			
Maximum Power [P _m (Wp)]	185	190	195	200
Power tolerance [Wp]	+ 4.99	+ 4.99	+ 4.99	+ 4.99
Maximum Power Voltage [V _{mp} (V)]	22.64	23.00	23.36	23.80
Maximum Power Current [I _{mp} (A)]	8.18	8.27	8.35	8.41
Open Circuit Voltage [V _{oc} (V)]	29.22	29.24	29.36	29.64
Short Circuit Current [I _{sc} (A)]	8.51	8.68	8.83	8.96
Module Efficiency [%]	14.00	14.38	14.75	15.13

*All electrical measurements are at STC (25° C, 1.5 AM, 1000 W/m²)

*Best in Class A Solar Sun simulator. (As per IEC 60904-9)

Thermal Characteristics:

Temperature coefficient of P _{max}	-0.43%/°K
Temperature coefficient of I _{sc}	0.046%/°K
Temperature coefficient of V _{oc}	-0.33%/°K
NOCT	45 ± 2 °C



Mechanical Characteristics

Front Cover	Low Iron tempered glass
Solar Cells (Quantity/type/arrangement/size)	48 pcs/Multicrystalline/6 x 8/156mm x 156m
Junction Box	TUV approved, IP65 rated 4 terminal junction box with 3 by-pass diodes (15 A)
Cable (length/size)	1000 mm/ 4.0mm ²
Connectors	MC4 type +Ve and -Ve
Dimensions (LxWxH)	1327 mm x 996 mm x 40 mm (± 1 mm)
Weight	16 kg approximate

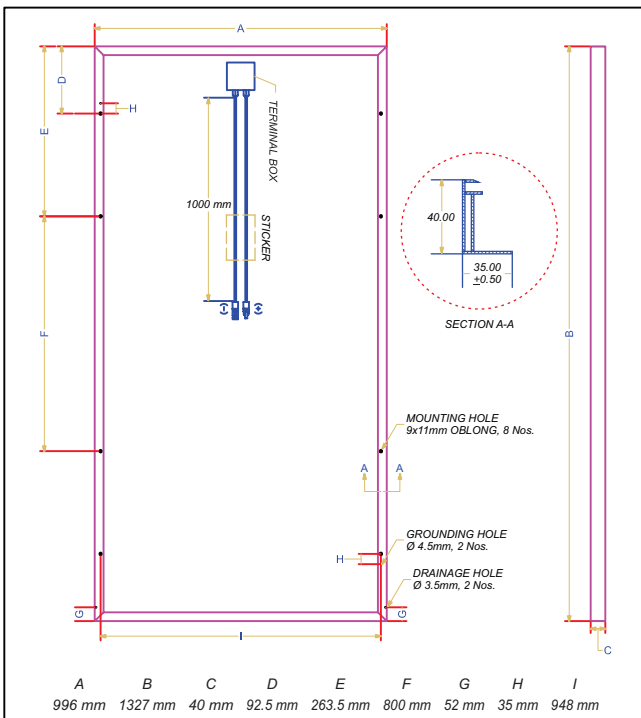
Operating Conditions

Max. System Voltage	1000 VDC
Safety Class	II
Maximum Series fuse	15A
Operating Temperature	-40°C to +85°C

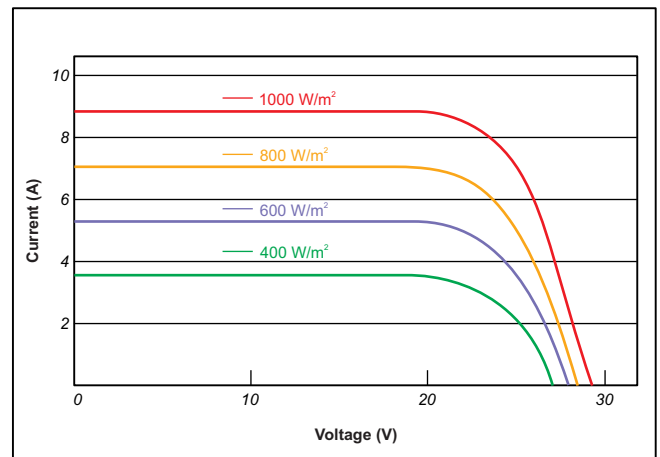
Warranty

- Manufacturing defect & workmanship: 5 Years
- Power Production (Limited Warranty): 90% for 10 years & 80% for 25 years
- In compliance with our warranty terms and conditions. Contact Jain Irrigation System Ltd. for complete warranty details.
- For any kind of technical or design support, you may contact Jain Irrigation System Ltd.

Module dimensions



I-V Curves



Positive power tolerance system applied while categorizing the module in various powers ranges.

*Above Specifications are subject to change without prior notice. The specifications may vary slightly.