Premium Quality

Solar PV Modules

36 Cells | Polycrystalline Solar PV Modules 160-170 W

bluebird SOLAR
co-powering the future

- Increased module power output.
- Maximum system voltage of 1000 V DC.
- Reduced BOS cost.
- High area efficiency.
- Easy installation & handling for various application.

Why Bluebird ?

- Backed by a 40 year old reputed brand name.
- Use of Tier-1 raw material.
- Intensive R&D, and stringent QC.
- Highest standards of product performance.
- Robust supply chain & logistics.

More Reliable Products

- PID Resistant 5BB cells and encapsulants.
- Salt mist & ammonia resistant.
- AR Coated tempered PV grade glass.
- Only positive power tolerance.
- Excellent low light performance.
- Certified to withstand harsh environmental conditions.
- 100% EL Inspected to ensure micro crack free modules.

5 MW+ Installations

3 MW+ Under Execution

25 MW+ Proposal & Design Consultancy Delivered

30 MW+ PV Module Sales

Applications

On-grid Large scale utility projects

On-grid rooftop Industrial & commercial system

Off-grid rooftop systems for residential buildings

Solar water pumping systems

Off-grid systems for Filling Stations

Electric Vehicles charging station

Street lighting applications

IEC IECEE c UL us LISTED CE ISO 9001:2015 ISO 14001:2015 ISO 45001:2018 RoHS MNRE NSIC ISO 9001 : 2008 MAKE IN INDIA

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TECHNICAL DATA

Module Series	POLYCRYSTALLINE		
	BBS P 160	BBS P 165	BBS P 170
Electrical Characteristics at STC:			
Maximum Power Pmax (Wp)	160.00	165.00	170.00
Maximum Voltage Vmpp (V)	18.95	19.25	19.50
Maximum Current Impp (A)	8.44	8.57	8.72
Open Circuit Voltage Voc (V)	22.80	23.00	23.40
Short Circuit Current Isc (A)	9.04	9.09	9.20
Module Efficiency (%)	15.20	15.40	15.60

STC:1000W/m2 irradiance, 25°C cell temperature, AM1.5G spectrum according to EN 60904-3
Average relative efficiency reduction of<5% for every 200W/m² reduction in Irradiance, according to EN 60904-1

Electrical Characteristics at NOCT:			
Maximum Power Pmax (Wp)	116.50	121.00	125.00
Maximum Voltage Vmpp (V)	16.75	16.90	17.17
Maximum Current Impp (A)	6.96	7.16	7.28
Open Circuit Voltage Voc (V)	20.41	20.53	20.68
Short Circuit Current Isc (A)	7.29	7.40	7.52

NOCT:800W/m2 irradiance, 20°C ambient temperature, Wind Speed 1m/sec

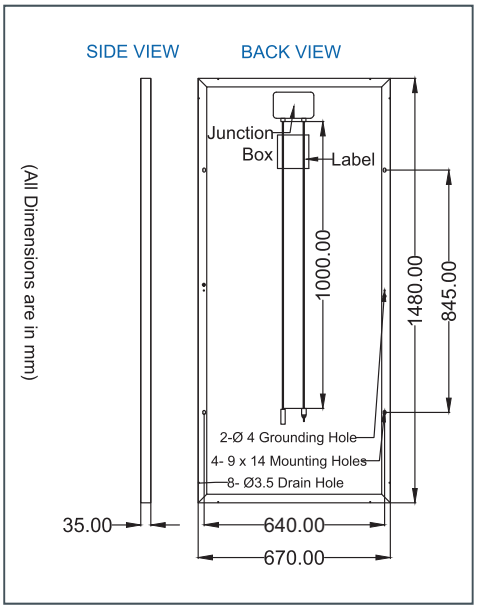
Temperature coefficient (Tc) and permissible operating conditions

Tc of Open Circuit Voltage (β)	-0.310%/°K
Tc of Short Circuit Current (α)	0.050%/°K
Tc of Power (γ)	-0.410%/°K
NOCT	46 ± 2°C
Maximum series fuse ratings	15A
Temperature Range	-40°C to +85°C
Maximum System Voltage	1000 V DC

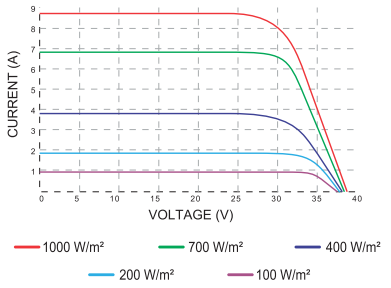
Mechanical Data

Dimension (LxWxH)	1480mm x 670mm x 35mm (± 1.5mm)
Solar Cells (PID Free)	36(9x4) Polycrystalline Solar cells, 5BB, (156.75 x 156.75mm - 6 inch)
Weight	11.6 Kg
Junction Box	IP 67 rated with 2 bypass diodes
Superstrate	3.2 mm high transmission low iron tempered glass (AR coated)
Cell Encapsulant	PID Free EVA (Ethylene Vinyl Acetate) - FC/UFC
Backsheet	Composite Film - White (Black & Transparent optional)**
Frame	Silver Anodized Aluminum frame with twin wall profile
Application Class	Class A (safety class II)
Mechanical Load Test	Sustain heavy static load (2400 Pa & 5400 Pa or 550 kg/m2)

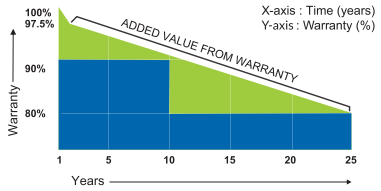
**Refer to Bluebird Solar's warranty documents for terms and conditions
**Black and transparent backsheet without ICE certification
Specification and electrical data included in this datasheet are subject to change without notice. Please confirm your requirements with the company representative while placing your order.
Note: It is mandatory to make negative grounding of modules in all installation to avoid PID Issue.



I-V Curve (for different irradiance)



Warranty Graph



Product Warranty:	10 Years
Performance Warranty:	Guaranteed Power output of 90% warranty for 10 years and 80% for 25 years

Approvals and certifications

Products:	IEC 61215 Ed 2, ROHS, IEC 61730, IEC 61701, CE, UL 1703, CEC, CE
Manufacturing:	ISO 9001:2015, ISO 14001: 2015 ISO 45001:2018

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