

Premium Quality Mono-facial & Bifacial Half-Cut Solar PV Modules

132
Cells

480W-510W



bluebird SOLAR
co-powering the future



MBB
Solar Cell
Technology



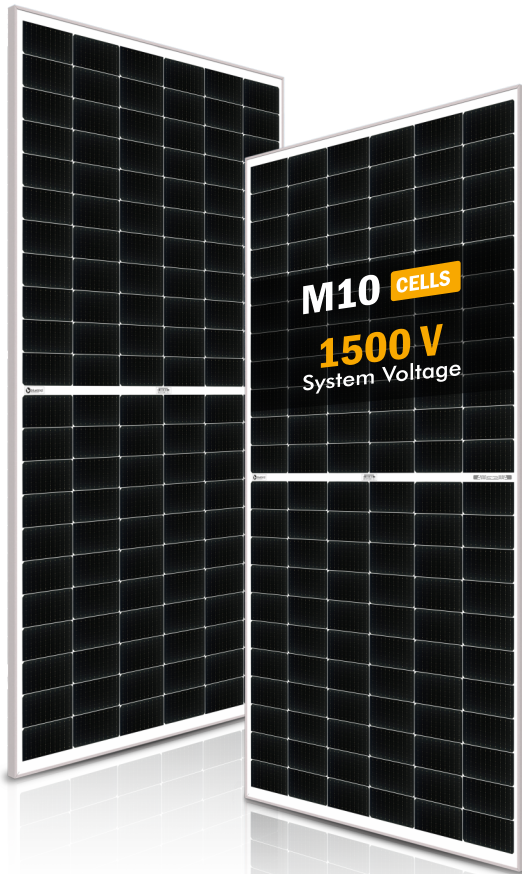
M10
132 Half
Cut Cells



Maximum
Efficiency
Upto 20.6%



+VE Power
Tolerance
0~+ 4.99wp



Also Available with DCR content



Multi-busbar technology based half-cut Mono PERC cells.



Better performance in partial shading & low light conditions.



Increased tolerance to microcracks and hotspots.



M10 sized solar cell for lower LCOE & Better ROI.



Reduced internal cell resistance & increased power output.



Double EL tested for 0% micro cracks



Superior module efficiency & better field reliability.

Why Bluebird ?

- ◆ Part of a 40+ years old reputed brand
- ◆ Widest range of PV modules
- ◆ Intensive R&D and 34 In house QCs
- ◆ Best in class BOM sourced from top suppliers
- ◆ First In industry 30 years warranty
- ◆ Robust supply chain & logistics
- ◆ Pre and post lamination EL testing

More Reliable Products

- ▮ PID Resistant M10 cells and encapsulants.
- ▮ Salt mist & ammonia resistant.
- ▮ AR Coated tempered PV grade glass.
- ▮ Excellent low light performance.
- ▮ Certified to withstand harsh environmental conditions.



On Grid Large
Scale Utility
System



Industrial &
Commercial
Rooftop Systems



Residential
Rooftop
Systems



Solar Water
Pumps
(PM KUSUM)

ALMM
APPROVED



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Module Series	BBS24MC480	BBS24MC485	BBS24MC490	BBS24MC495	BBS24MC500	BBS24MC505	BBS24MC510
ELECTRICAL CHARACTERISTICS (STC)							
Maximum Power P _{max} (Wp)	480	485	490	495	500	505	510
Maximum Voltage V _{mpp} (V)	37.78	37.93	38.08	38.23	38.38	38.53	38.70
Maximum Current I _{mpp} (A)	12.71	12.79	12.87	12.95	13.03	13.11	13.18
Open Circuit Voltage V _{oc} (V)	44.95	45.10	45.25	45.40	45.40	45.70	45.85
Short Circuit Current I _{sc} (A)	13.58	13.66	13.74	13.82	13.90	13.98	14.06
Module Efficiency (%)	19.45	19.65	19.85	20.05	20.25	20.46	20.66

*STC Irradiance 1000W/m², Module Temperature 25°C and AM 1.5
*No Negative Power Tolerance in Nominal Power

Test Uncertainty: ±3%

ELECTRICAL CHARACTERISTICS (NOCT)							
Maximum Power P _{max} (Wp)	359.04	362.78	366.52	370.26	374.00	377.74	381.48
Maximum Voltage V _{mpp} (V)	35.12	35.26	35.40	35.54	35.68	35.82	35.98
Maximum Current I _{mpp} (A)	10.23	10.29	10.36	10.42	10.49	10.55	10.61
Open Circuit Voltage V _{oc} (V)	42.03	42.17	42.31	42.45	42.45	42.73	42.87
Short Circuit Current I _{sc} (A)	10.94	11.00	11.07	11.13	11.20	11.26	11.33

*NOCT-Irradiance 800 W/m², AM 1.5, Ambient Temperature 20°C and Wind Speed 1m/s
*No Negative Power Tolerance in Nominal Power

Test Uncertainty: ±3%

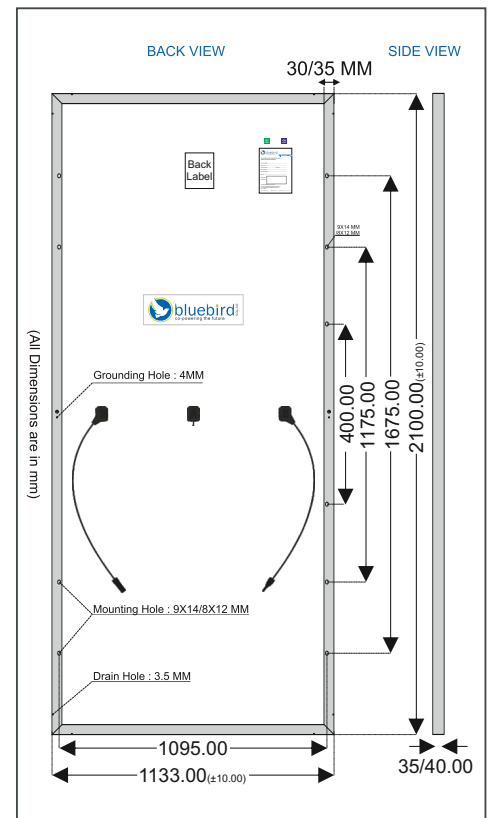
Temperature coefficient (Tc) and permissible operating conditions

Tc of Open Circuit Voltage (β)	-0.27%/°C
Tc of Short Circuit Current (α)	0.050%/°C
Tc of Power (γ)	-0.35%/°C
NOCT	45 ± 2°C
Maximum series fuse ratings	25A
Temperature Range	-40°C to +85°C
Maximum System Voltage	1500 V DC

Mechanical Data

Dimension (LxWxH)	2100mm x 1133mm x 35mm
Weight	27 Kg
Solar Cells (PID Free)	132 (11 x 6 x 2), Mono Cut Cells, 10BB, (91 X182mm)
Junction Box	IP68, Split Junction Box with individual bypass diodes
Cables & Connectors	400 mm (+ve) and 400 mm (-ve) length cables, MC4 Compatible or MC4 Connectors
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)
Packaging	Standard 30 Modules per Pallet

**Refer to Bluebird Solar's warranty documents for terms and conditions.
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.

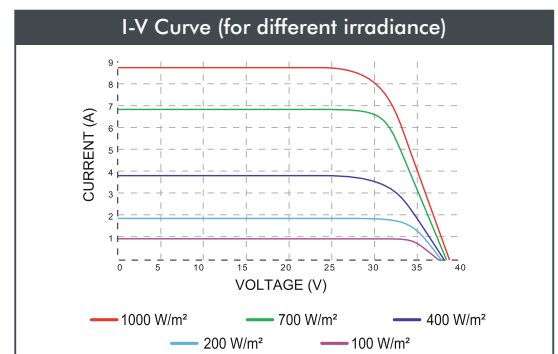
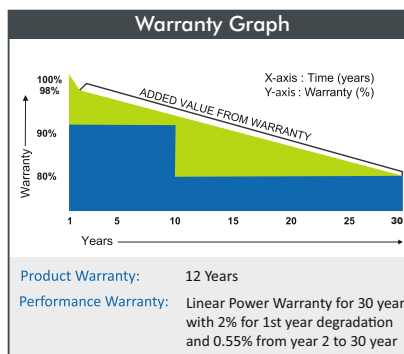


Approvals and certifications	
Products:	ALMM, BIS, IEC 61215/S 14286, IEC 61730-I & II, IEC 61701, IEC 61853, IEC 62804, IEC 62716
Manufacturing:	ISO 9001:2015, ISO 14001: 2015, ISO 45001:2018

*some certifications are under process

Packaging Information			
Truck Type	Pallet/Truck	Modules/Truck	KW/Truck(Approx)
19 ft.	10	300	150
22 ft.	12	360	180
32 ft.	18	540	270
40 ft.	22	660	330
Container Type	Pallet/Truck	Module/Truck	KW/Truck(Approx)
40 HQ	22	660	330

Above quantities are subject to variation depending on miscellaneous Factors
Trucks under consideration are all open body trucks.
Customized packaging available.



CORPORATE OFFICE

70, Rajasthani Udyog Nagar Industrial Area, G.T. Karnal Road,
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WORKS

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