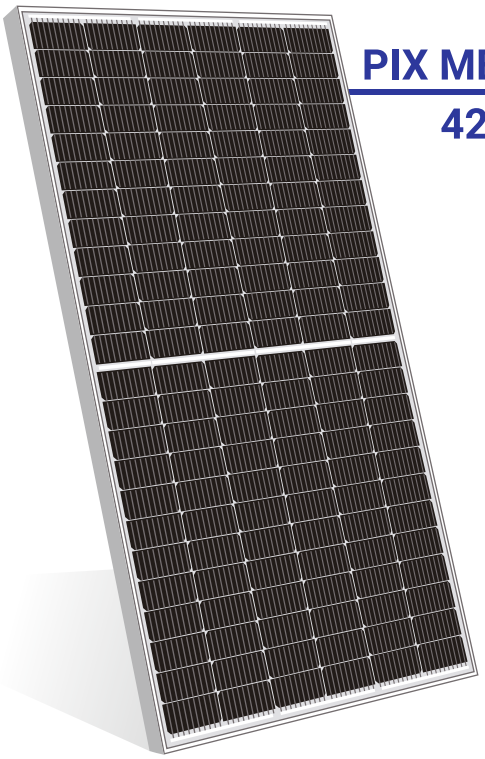
Mono PERC Bifacial Half-Cut DCR Glass to Transparent Backsheet PV Modules

PIXON
Redefining Solar



PIX MBHDTB 120
420 - 455 Wp

Power Tolerance
+4.99Wp

Efficiency Upto
20.96 %

Module Warranty
12 Years

Output Warranty
27 Years

KEY FEATURES

- **PID Resistance** with long term reliability.
- **Better Performance** even at low irradiation.
- Maximum System Voltage: **1500 V DC**.
- Increased string length & **low BOS Cost.**
- Withstand upto **5400 Pa of snow load.**
- Withstand upto **2400 Pa of wind load.**
- **Rigorous Testing Criteria** 100% EL Inspection ensuring defect-free modules.

IDEAL FOR: Utility Projects, Commercial & Industrial Projects, Residential Projects, Institutional Projects, Off-grid Projects

ABOUT PIXON

PIXON is a venture of the Marwadi group. It is equipped with the state-of-the-art technology and turnkey machinery of 1GW line capacity for solar modules and houses clean room environment facility to 1GW manufacturing line for EVA films. As the world adheres to solar energy revolution, PIXON envisions to globally provide efficient solar energy products and solutions. Thus, enhance and contribute to Global Climate Sustainability.

CERTIFICATIONS

ALMM APPROVED

IEC (International Electrotechnical Commission
- IEC 61215-1:2021
- IEC 61215-1-1:2021
- IEC 61215-2:2021
- IEC 61730-1:2016
- IEC 61730-2:2016
- IEC TS 61701 Ed.3 :2020 Severity-6
- IEC TS 62804-1:2015
- IEC 61853-1:2011
- IEC 61853-2:2016
- IEC 62716:2013
- IEC 60068-2-68:1994-08
- IEC TS 63342:2022

BIS: Bureau of Indian Standards
- IS 14286:2010
- IS 61730-1:2004
- IS 61730-2:2004

US Certification
- UL 61730-1:2022
- UL 61730-2:2022

ISO Certification
- ISO 9001:2015
- ISO 14001:2015
- ISO 45001:2018(OHSAS)

CE Mark Testing & Certification

CLASS II

*Due to continuous product updation, specifications may change without notice.

Solar is the new Green!

PIXON GREEN ENERGY PRIVATE LIMITED

Manufacturing Unit: R.S. No.: 157/1, 158/1, 158/2, 165/1, 166 of Khijadiya Nana, R.S. No.: 15/1, Rajkot – Jamnagar Highway, Paddhari, Rajkot – 360110

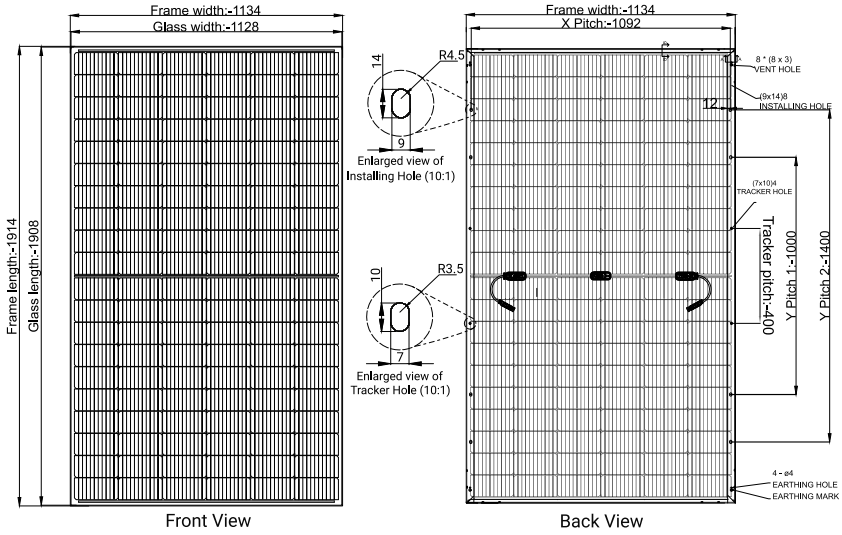
1800 108 8800 | sales@pixonenergy.com

D/MBHDTB/120/100924/E-01-01

PIXON
Redefining Solar

TECHNICAL DATASHEET
BIFACIAL M10 SERIES

PIX MBHDTB 120 455	M10	455W	20.96%	+4.99Wp	≤2.0%
Mono Crystalline Perc DCR PV Modules	10 BB HALF-CUT CELL MODULE	MAXIMUM POWER OUTPUT	MAXIMUM EFFICIENCY	POWER TOLERANCE	FIRST YEAR POWER DEGRADATION



*All Dimensions are in mm.
*Cable Length may vary based on Requirements.

MECHANICAL DATA

Cells Specifications (Number, Size)	120 Cells , 182 mm X 91 mm
Module Dimensions	1914 mm X 1134 mm X 35 mm
Weight	23 kg
Glass	High Transmission Low Iron Tempered Glass, AR coated, 3.2 mm (T)
Embedding	Low shrinkage PID Resistance EVA/POE/EPE, UV Resistant.
Backsheet	PVDF / Tedlar (Transparent)
Junction Box	IP 68 Rated
Number of Diodes	3 Bypass Diodes
Cables & Connectors	Cable Length 400mm, 4mm^2, MC4 Connectors / MC4 Compatible
Frame	Anodized Aluminum Alloy Silver Profile (Black Frame Available on Request)

MECHANICAL LOAD TEST PARAMETERS

Front Side Maximum Static Load	5400Pa
Rear Side Maximum Static Load	2400Pa

TEMPERATURE RATING

NOCT (Nominal Operating Cell Temperature)	45°C (±2°C)
Temperature Coefficient of Current (Isc)	0.04% / °C
Temperature Coefficient of Voltage (Voc)	-0.24% / °C
Temperature Coefficient of Power (Pmax)	-0.31% / °C

OPERATING PARAMETERS

Operational Temperature	-40°C ~ +85°C
Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	30A

ELECTRICAL PARAMETERS AT STC (25°C) & NMOT (20°C) (AM 1.5g, 1000 W/m²,1m/s) According to EN 60904-3

Test Conditions		STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Peak Power	Pmax [Wp]	420	316.64	425	320.40	430	324.36	435	327.98	440	331.89	445	335.64	450	339.31	455	342.99
Module Efficiency	η [%]	19.35	-	19.58	-	19.83	-	20.05	-	20.29	-	20.52	-	20.74	-	20.96	-
Open-Circuit Voltage	Voc [V]	40.87	38.83	40.98	38.93	41.11	39.05	41.22	39.16	41.31	39.24	41.43	39.36	41.52	39.44	41.62	39.54
Short-Circuit Current	Isc [A]	13.27	14.54	13.38	14.66	13.47	14.78	13.57	14.9	13.68	15.02	13.79	15.14	13.89	15.26	13.97	15.38
Max Rated Voltage	Vmp [V]	35.69	33.91	35.81	34.02	35.98	34.18	36.05	34.25	36.18	34.37	36.29	34.48	36.42	34.60	36.52	34.69
Max Rated Current	Imp [A]	13.02	9.34	13.10	9.42	13.20	9.49	13.31	9.58	13.41	9.66	13.52	9.74	13.59	9.81	13.74	9.89

STC :- Irradiance 1000W/m2, Cell Temperature 25°C and AM 1.5
NOCT :- Irradiance 800 W/m2, AM 1.5, Ambient Temperature 20°C and Wind Speed 1 m/s

BIFACIAL OUTPUT-REARSIDE POWER GAIN

	Peak Power (STC)	420	425	430	435	440	445	450	455
10%	Maximum Power (Pmax)	462	468	473	479	484	490	495	501
	Module Efficiency (%)	21.29%	21.54%	21.79%	22.05%	22.30%	22.55%	22.81%	23.06%
20%	Maximum Power (Pmax)	504	510	516	522	528	534	540	546
	Module Efficiency (%)	23.22%	23.50%	23.77%	24.05%	24.33%	24.60%	24.88%	25.16%
30%	Maximum Power (Pmax)	546	553	559	566	572	579	585	592
	Module Efficiency (%)	25.16%	25.46%	25.75%	26.05%	26.35%	26.65%	26.95%	27.25%

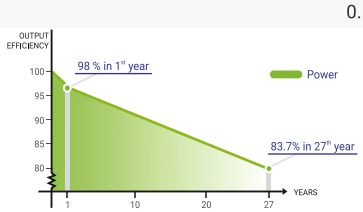
*Power gain from rear side depends upon the ground Reflectance & Bifaciality factor.

PACKAGING CONFIGURATION

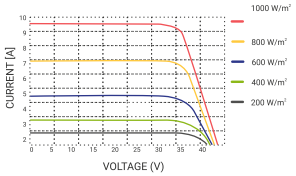
Modules per Box	31 Pieces
Modules per 40' Container	620 Pieces

WARRANTY

Product Warranty	12 Years
Performance Warranty	27 Years Linear Power Warranty 0.55% Annual Degradation Over 27 Years



PERFORMANCE WARRANTY



TYPICAL I-V CURVES

Average relative efficiency reduction of 5% at 200 W/m² According to EN 60904-1.
Measuring uncertainty ±3%

CERTIFICATIONS

ALMM

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