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Solar Panel Guide Specification Data Sheet

**Moser Baer Solar Limited
MBPV Max 200-240
MBPV - CAAP210**

Also available on the web at
EnergyPal.com/moser-baer-solar-limited-solar-panels/mbpv-caap210

MBPV Max Series (200W_p - 240W_p) (Model No. MBPV - CAAP)



We are Moser Baer Solar

MBPV Max Series modules are specifically designed to generate optimum energy from sunlight and can withstand the roughest of conditions. They are designed for versatility in applications suited for residential, commercial and industrial purposes.

High Energy Yields (kW_h/kW_p) – Best-in-class diffused light response leading to less power degradation and potentially delivering one of the lowest leveled cost of energy

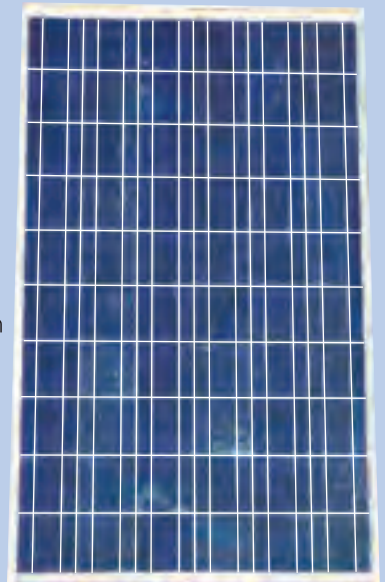
Rigorous Quality Control – Top-of-the-line manufacturing equipment from Europe and Japan along with raw materials from renowned international suppliers backed by in-house reliability testing capabilities

Highest Safety Standards – All modules conform to CE standards and are pre-fabricated with grounding holes to ensure highest safety standards

Robust Design – Anodized frames ensure protection in all-weather-conditions. High quality, low iron, high transmissivity, tempered and textured glass to ensure higher light absorption

Best-in-Class Warranty – Mechanical warranty of 5 years and performance warranty of 12 years at 90% of rated output power and 25 years at 80% of rated output power

Ease of Installation – IEC and UL approved IP65 rated junction box, pre-fitted with cables and plug & play connectors for quick and safe installation



With uniform cell color and high quality anodization on the frames, MBPV modules deliver superior aesthetics



Hybrid lamination technology for bubble-free lamination ensures long-term product performance



Certifications:
IEC 61215 (Edition II),
IEC 61730 (Safety Class II), CE, UL 1703



Certified as per:
ISO 9001, ISO 14001,
OHSAS 18001,
SA 8000, Awarded a 5-Star Rating from TUV Rheinland along with 100% rating for Quality Systems

MBPV Max Series (200W_p - 240W_p) (Model No. MBPV - CAAP)

	200 W _p	205 W _p	210 W _p	215 W _p	220 W _p	225 W _p	230 W _p	235 W _p	240 W _p
Electrical Characteristics									
Maximum Power, P _{max} (W)	200	205	210	215	220	225	230	235	240
Voltage at Pmax, V _{mp} (V)	28.81	28.90	29.12	29.21	29.42	29.80	30.12	30.59	30.80
Current at Pmax, I _{mp} (A)	6.97	7.11	7.21	7.36	7.47	7.55	7.62	7.68	7.80
Open Circuit Voltage V _{oc} (V)	35.99	35.92	36.02	36.21	36.46	36.85	37.11	37.34	37.69
Short Circuit Current I _{sc} (A)	7.65	7.71	7.85	7.93	8.00	8.09	8.18	8.24	8.34
Temperature Coefficient of P _{max} (%/K)	-0.43								
Temperature Coefficient of V _{oc} (%/K)	-0.344								
Temperature Coefficient of I _{sc} (%/K)	0.11								
Power Tolerance (%)	± 3								
Maximum System Voltage (IEC/UL) (V DC)	1000/600								
Cells per By-pass Diode (Nos)	20								

- Standard Test Conditions (STC): Irradiance 1000W/m², Module temperature at 25°C and AM 1.5G Spectrum
- Max Series fuse ratings: 10A
- Operating Temperature (°C): (-)40 to (+)85
- NOCT (Nominal Operating Cell Temperature) (°C): 47.0±2

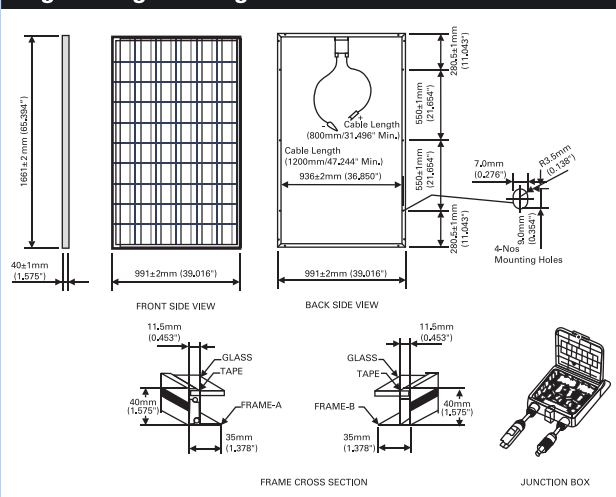
Environmental Test Conditions

- Operating Temperature (temperature cycling range): (-)40°C to (+)85°C for 200 cycles
- Static Load Front and Back (e.g. wind): 50 lbs/ft² or 2400 Pa
- Impact Resistance (e.g., hail): 25mm at 23 m/s (1" at 52 mph) at 11 impact locations
- Humidity Freeze, Damp Heat: 85°C and 85% relative humidity for 1,000 hours
- Front Loading (e.g., snow): 113 lbs/ft² or 5400 Pa

Mechanical Characteristics

Number and Arrangement of Cells	156mmx156mm (6") Multicrystalline Silicon Solar PV Cells, 6x10 configuration
Dimensions	1661mmx991mmx40mm/65.394" x 39.016" x 1.575"
Weight (lbs/kgs)	43/19.5
Frame	Anodized aluminium frame with twin-wall profile
Anodization Thickness	17 µm
Front Glass	High transmission, low iron, tempered and textured glass, 3.2mm/0.126"
Junction Box	IEC/UL approved IP65 rated 4 terminal junction box with 3 by-pass diodes (12A, 200V)
Output Cables	USE-2 Solar cables, 4mm ² /0.0062" cross-section, asymmetric length 800mmx1200mm/31.496"x47.244"
Type of Connector	Low resistance, IEC/UL approved (compatible with MC4)
Mounting Holes	Elliptical and 4 nos (9mmx7mm/0.354"x0.276")
Grounding Hole	Circular and 2 nos (4mm/0.157" dia) – In accordance with NEC Article 250 (USA) or CEC (Canada)
Drainage Hole	Circular and 8 nos (4mm/0.157" dia)

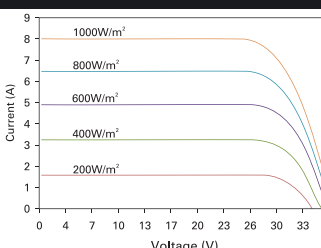
Engineering Drawing



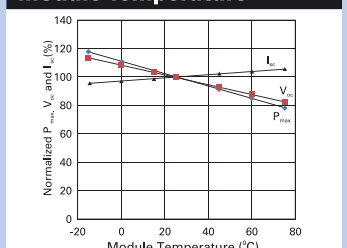
Packaging

Dimensions of pallets (mm/inch)	1690 x 750 x 1157/66.535 x 29.528 x 45.551
No of modules per pallet	17
No of pallets per 40ft HC container	42 (714 modules)
Gross weight per pallet (Kgs/lbs)	355/783

IV Curves at Various Irradiance Levels at 25°C



P_{max}, V_{oc}, I_{sc} as a Function of Module Temperature



*Specifications are subject to change without notice