

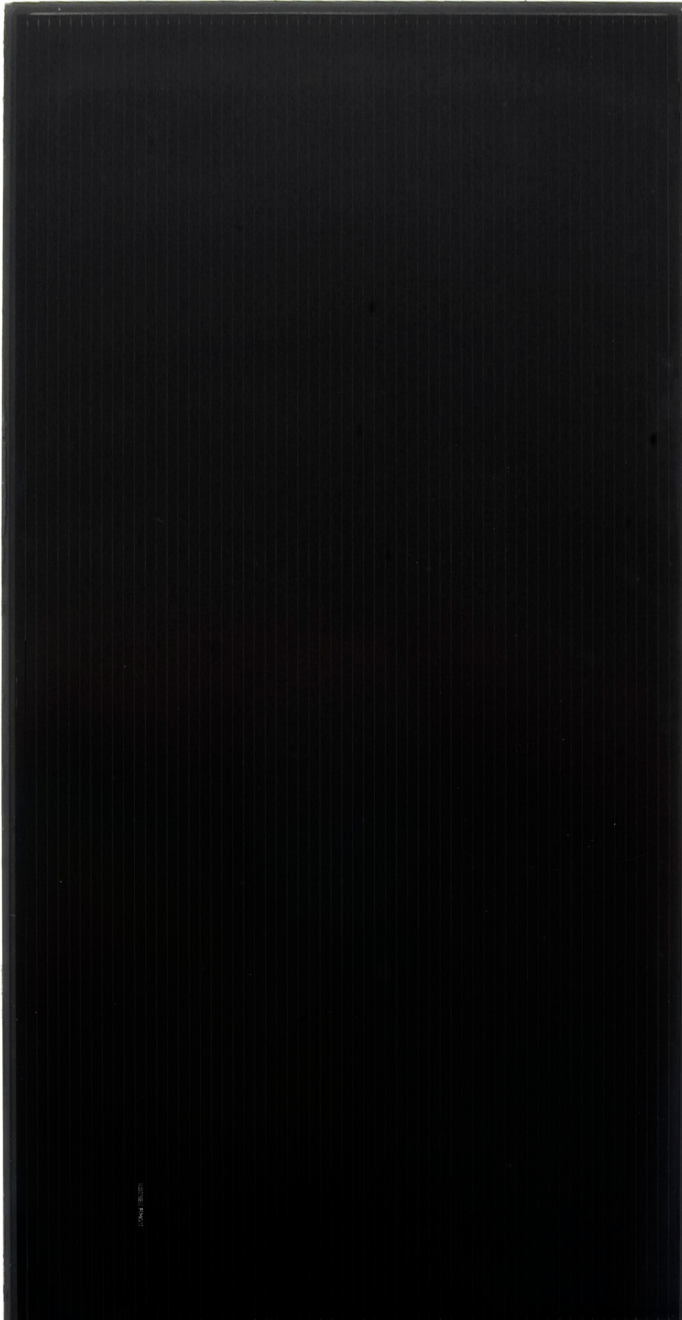


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AB1 Series

Thin-Film
Photovoltaic
Module



*Each module features a white barcode (shown at bottom left) to allow for tracking throughout manufacturing and isolation scribes (parallel to the 1200mm dimension).

Designed to meet the unique needs of large-scale installations

Abound Solar's AB1-Series offers high-performance, cost-effective modules employing next-generation thin-film solar technology tailored to minimize total cost of electricity generation.

High energy to power ratio (kWh / kWp)

- Better performance in low-light and high-temperature conditions than crystalline silicon

Tight power output bins (+5%/-0% P_{MPP})

- Better field performance
- Eliminates risk of underperformance

TruLock™ seal against the elements

- Enhanced dual moisture / vapor barrier
- Increases reliability and module life for long-term installations

Lower voltages at given power output

- Enables longer module strings and lower balance of system costs

Fully automated end-to-end manufacturing based in the USA

- Reduces manufacturing cost while maximizing reliability
- ISO 9001, 14000 and 17025 in process

Industry leading warranty

- 5 year materials and workmanship
- 25 year power output guarantee for 90% of nominal output during first 10 years and 80% over 25 years

Abound Solar's Collection and Recycling program eliminates recycling costs and residual liability for module owners.

- Product designed for recyclability
- Collection and recycling of modules at end-of-life
- Pre-funded at purchase

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Electrical Specifications

Performance at STC (1000W/m², 25°C, AM 1.5)

Product Class		AB1-50	AB1-52	AB1-55	AB1-57	AB1-60
Nominal Power (+5/-0%)	P_{MPP} (W)	50.0	52.5	55.0	57.5	60.0
Voltage at P_{MPP}	V_{MPP} (V)	30.6	31.7	32.5	33.2	34.2
Current at P_{MPP}	I_{MPP} (A)	1.68	1.69	1.72	1.76	1.78
Short Circuit Current	I_{SC} (A)	2.12	2.13	2.14	2.14	2.14
Open Circuit Voltage	V_{OC} (V)	43.1	43.2	43.4	43.6	44.0

Performance at NOCT (800W/m², 45°C, AM 1.5)

Product Class		AB1-50	AB1-52	AB1-55	AB1-57	AB1-60
Nominal Power (+5/-0%)	P_{MPP} (W)	39.2	40.5	41.4	42.9	44.8
Voltage at P_{MPP}	V_{MPP} (V)	28.7	29.0	28.9	29.4	31.5
Current at P_{MPP}	I_{MPP} (A)	1.37	1.40	1.43	1.46	1.42
Short Circuit Current	I_{SC} (A)	1.72	1.73	1.73	1.73	1.73
Open Circuit Voltage	V_{OC} (V)	39.3	39.3	39.4	39.6	40.0

Product Class

Maximum System Voltage	V_{SYS} (V)	1000
Maximum Reverse Current	I_R (A)	4A
Maximum Short Circuit Fuse	I_{CF} (A)	4A (UL)

Thermal Properties (at STC)

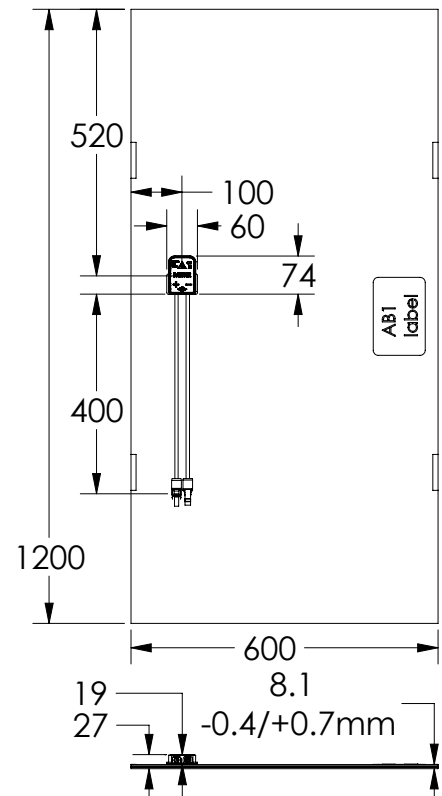
Temperature Coefficient of P_{MPP}	% / °C	-0.25
Temperature Coefficient of V_{OC}	% / °C	-0.25
Temperature Coefficient of I_{SC}	% / °C	+0.04

Certifications

UL (1703) – Class C, CE Mark, CEC; Pending: IEC (61646), IEC (61730) – Class A

Mechanical Specifications

Length x Width	1200 mm x 600 mm
Weight	12 kg
Thickness	8.1 mm
Front glass	3.1 mm heat strengthened glass
Back glass	3.1 mm tempered glass
Frame	None
Cell type	Cadmium Telluride (CdTe)
Cell orientation	Parallel to the 1200 mm dimension
Bypass diode	None
Cable length	400 mm
Connectors	Multi-Contact MC4
Encapsulation	TruLock™ Dual moisture / vapor barrier edge seal



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