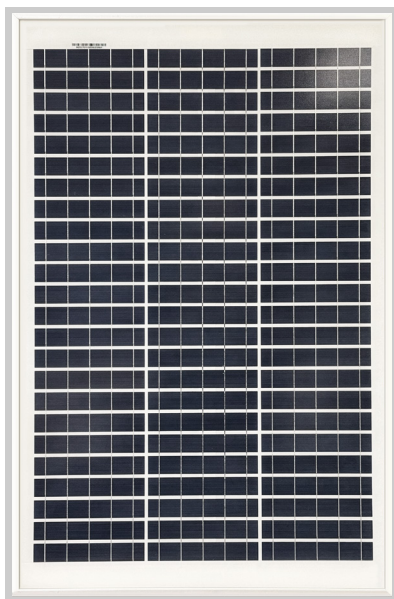




50W Photovoltaic Module 50JB-V

Ameresco Solar's line of solar modules certified for hazardous locations is the direct result of over four decades of design, manufacturing, and proven field use.

Our use of quality materials, rigorous testing, and process control delivers a solar module with optimized life and electrical energy production that our industrial customers depend on.

From mountaintops to off-shore platforms, weather stations in the bitter cold of Antarctica to telephone signal repeaters in the hot Australian outback, our modules perform in the harshest environments.



Accessible junction box

J-type junction box has accessible terminals for easier module interconnections in off-grid applications, and it allows fitting cable glands for various sections.



Durable scratch-resistant back sheet

The thick back sheet provides extra insulation and increased resistance to protect your module against rough handling. Made of white polyester, it ensures longer term performance and increased energy production.



High reliability

Cell interconnections and diode placement use well-established industry practice and are field-proven to provide excellent reliability.

Quality and certifications



UL61730-1, UL61730-2, UL61215-1, UL61215-1-1, UL61215-2, CSA C22.2 No. 61730-1, CSA C22.2 No. 61730-2



UL121201, CSA C22.2 No. 213 Class I, Division 2 Groups A, B, C, D



IEC 61730-1, IEC 61730-2, EN / IEC 61215-1, EN / IEC 61215-1-1, EN / IEC 61215-2



Conforms with European Directive 2014/35/EU

ISO 9001
ISO 14001
ISO 45001

ISO9001, ISO14001, and ISO45001 factory certifications ensure that our facilities use proven manufacturing and quality control processes, provide safe workplaces, and maintain environmental integrity.

Photographs are intended to portray typical module appearance, actual module appearance may vary.

Electrical characteristics

	(1) STC 1000W/m ²	(2) NMOT 800W/m ²
Maximum power (P_{max})	50W	36.83W
Voltage at P_{max} (V_{mpp})	38.95V	35.74V
Current at P_{max} (I_{mpp})	1.29A	1.04A
Short circuit current (I_{sc})	1.36A	1.10A
Open circuit voltage (V_{oc})	46.01V	43.50V
Module efficiency	13.4%	
Tolerance (P_{max})	-0/+3%	
Nominal voltage	24V	
Efficiency reduction at 200W/m ²	<5% reduction efficiency 12.7%	
Limiting reverse current	1.40A	
Temperature coefficient of I_{sc}	0.0373%/°C	
Temperature coefficient of V_{oc}	-0.2810%/°C	
Temperature coefficient of (P_{max})	-0.3983%/°C	
(3) NMOT	38.7°C	
Maximum series fuse rating	4A	
Maximum system voltage	80V	

1: Values at Standard Test Conditions (STC): 1000W/m² irradiance, AM1.5 solar spectrum and 25°C module temperature. 2: Values at 800W/m² irradiance, Nominal Module Operation Temperature (NMOT) and AM1.5 solar spectrum. 3: Nominal Module Operation Temperature: Module operation temperature at 800W/m² irradiance, 20°C air temperature, 1m/s wind speed.

Mechanical characteristics

Solar cells	72 crystalline silicon cells in series
Front cover	High transmission 3.2mm (1/8th in) glass
Encapsulant	EVA
Back cover	White polyester
Frame	Silver anodized aluminum
Junction box	IP65 with 4 terminal screw connection block; accepts PG 13.5, M20 13mm (1/2") conduit, or cable fittings accepting 6-12mm diameter cable. Terminals accept 2.5-10mm ² (8-14 AWG) wire
Dimensions	835 x 537 x 50mm / 32.8 x 21.1 x 2in
Weight	6kg / 13.2lbs

All dimensional tolerances within ±1% unless otherwise stated.

Certifications

Certified conformance to ANSI/UL Standard UL61730-1:2022 Ed-2, UL61730-2:2022 Ed.2+R:25Apr2023, UL61215-1:2021 Ed.2, UL61215-1-1:2021 Ed.2, and UL61215-2:2021 Ed.2

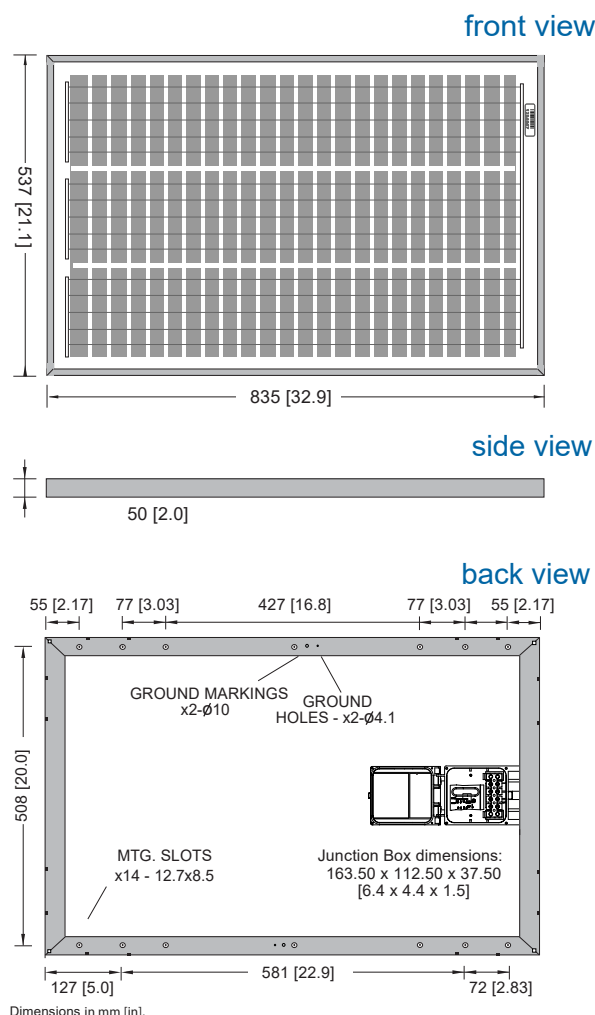
Certified to CAN/CSA Standard C22.2 No.61730-1:2019 Ed.2 and C22.2 No.61730-2:2019 Ed.2

Certified in Accordance with IEC61730-1:2023, IEC61730-2:2023, IEC61215-1:2021, IEC61215-1-1:2021, IEC61215-2:2021, EN IEC61215-1:2021, EN IEC61215-1-1:2021, and EN IEC61215-2:2021

Approved by Intertek ETL according to UL 121201:2017 Ed.9+R:01Apr2021, and according to CSA C22.2#213:2017 Ed.3+U1;U2;U3, for use in a Class I, Division 2, Group A, B, C, D Hazardous (Classified) Location

Conforms with European Directive 2014/35/EU

Dimensions



Warranty*

- Defect-free in materials and workmanship for 2 years
- 90% min. power output over 12 years
- Optional 25 years available

* Refer to warranty document for terms and conditions.

**For more information,
call 1-855-437-6527
or visit amerescosolar.com.**

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