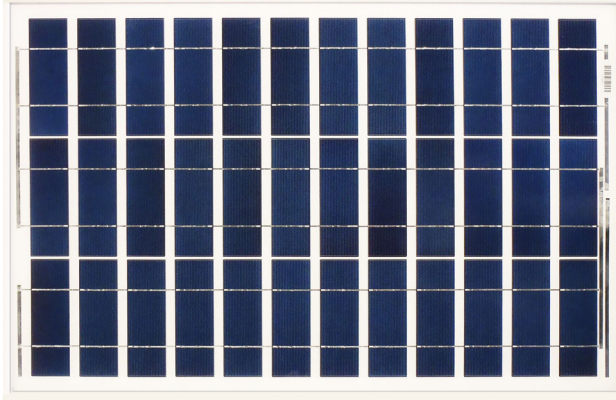
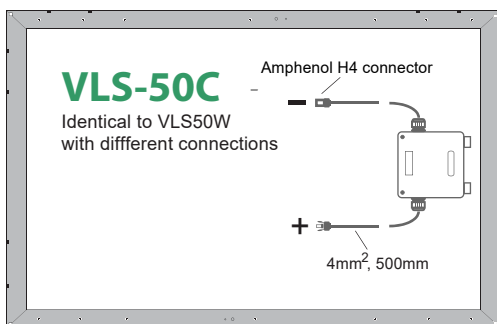
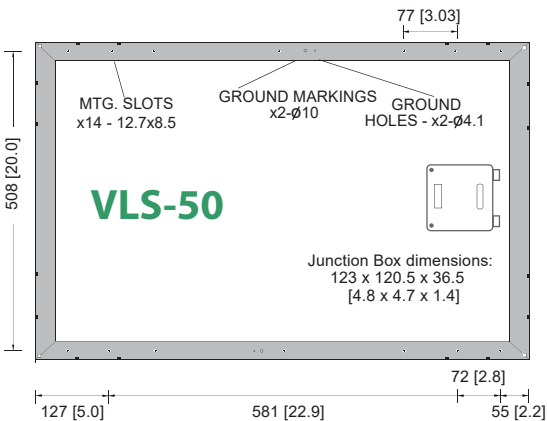
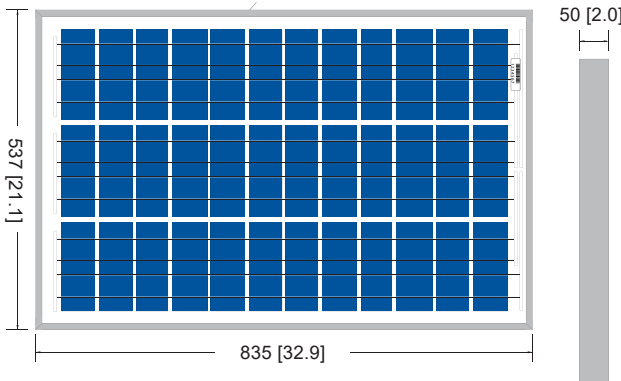


## Value Line Series (VLS) 50W Panel - VLS-50 and VLS-50C

The Value Line Series (VLS) family of solar modules, offered by Ameresco Solar, is a reliable, rugged, and economic panel engineered for off-grid solar applications.



### DIMENSIONS



Dimensions in mm [in].

### Electrical characteristics

	(1) STC 1000W/m <sup>2</sup>	(2) NOCT 800W/m <sup>2</sup>
Maximum power (P <sub>max</sub> )	50W	36W
Voltage at P <sub>max</sub> (V <sub>mpp</sub> )	18.9V	16.9V
Current at P <sub>max</sub> (I <sub>mpp</sub> )	2.65A	2.13A
Short circuit current (I <sub>sc</sub> )	2.80A	2.29A
Open circuit voltage (V <sub>oc</sub> )	22.3V	20.2V
Module efficiency		11.1%
Tolerance (P <sub>max</sub> )		-0/+3%
Nominal voltage		12V
Efficiency reduction at 200W/m <sup>2</sup>	<5% reduction (efficiency 10.5%)	
Limiting reverse current		3.20A
Temperature coefficient of I <sub>sc</sub>		0.105%/°C
Temperature coefficient of V <sub>oc</sub>		-0.360%/°C
Temperature coefficient of (P <sub>max</sub> )		-0.45%/°C
(3) NOCT		47±2°C
Maximum series fuse rating		8A
Maximum system voltage		80V (U.S. NEC)

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

### Mechanical characteristics

Solar cells	36 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
Diodes	Two Schottky bypass diode included
Junction box	IP65 with 4 terminal screw connection block; accepts PG 13.5, M20 13mm (1/2") conduit, or cable fittings
Cable (-C)	500mm, PV1-F/PV Wire, 4mm <sup>2</sup> /12AWG, DO:6±0.2mm
Connector (-C)	Amphenol H4
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.

### Warranty\*

- ▶ Free from defects in materials and workmanship for 2 years
- ▶ 90% minimum power output over 10 years

\* Refer to warranty document for terms and conditions.

### Certification

**ISO 9001** ISO 9001 factory certification ensures that our manufacturing facilities use proven manufacturing and quality control processes.