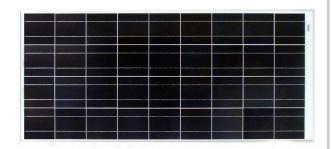
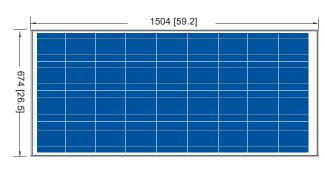


Value Line Series (VLS) 140W/150W Panel - VLS-140 and VLS-150C

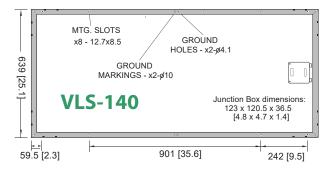
The Value Line Series (VLS) family of solar modules, offered by Ameresco Solar, is a reliable, rugged, and economic panel engineered for off-grid solar applications.

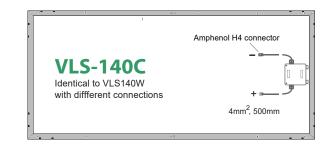












Dimensions in mm [in]

Electrical characteristics

	(1) STC 1000W/m ²	(2) NOCT 800W/m ²	
Maximum power (P _{max})	140W / 150W	101W / 108W	
Voltage at P _{max} (V _{mpp})	17.5V / 19.1	15.6V / 17.1	
Current at $P_{max}(I_{mpp})$	8.0A / 8.1A	6.4A / 6.5A	
Short circuit current (I _{sc})	8.2A / 8.8A	6.7A / 7.2A	
Open circuit voltage (V_{oc})	22.0V / 23.0V	19.9V / 20.8	
Module efficiency	13.7% / 14.6%		
Tolerance (P _{max})	-0/+3%		
Nominal voltage	12V		
Efficiency reduction at 200W/m ² <5% reduction (efficiency 13.0%)			
Limiting reverse current 8.2A / 8.78A		A / 8.78A	
Temperature coefficient of	I _{sc} 0.10	0.105%/°C	
Temperature coefficient of	V _{oc} -0.36	-0.360%/°C	
Temperature coefficient of	(P _{max}) -0.4	-0.45%/°C	
⁽³⁾ NOCT	47±2°C		
Maximum series fuse rating	g	20A	
Maximum system voltage 80V (U.S. NEC)			

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 Operation Cell Temperature (NOCT) and AM1.5 solar spectrum 3: Nominal Operation Cell Temperature: Module operation temperature at 800W/m² irradiance, 20°C air temperature, 1m/s wind speed

Mechanical characteristics

Solar cells	36 crystalling silicon colls in sorios	
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 (½") conduit, or cable fittings	
Cable (-C)	500mm, PV1-F/PV Wire, 4mm2/12AWG,DO:6±0.2mm	
Connector (-C)	Amphenol H4	
Dimensions	1504 x 674 x 50mm / 59.2 x 26.5 x 2in	
Weight	12kg / 26.5bs	
All dimensional tolerances within ±1% unless otherwise stated.		

All al tolerances within ±1% unless otherwise sta

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.