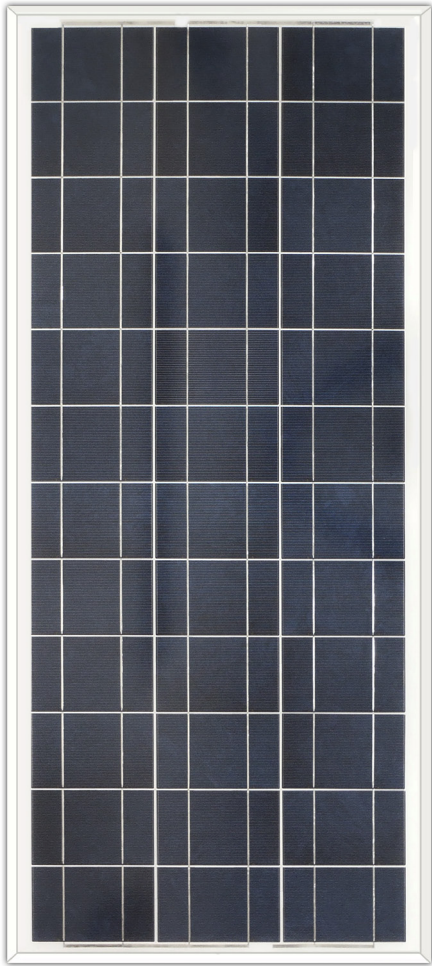


VLS

Value
Line
Series

Value Line Series (VLS) - 50W Panel

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. The VLS line offers the rugged and reliable construction, materials, and performance.



The VLS-50W Panel features:

Rugged construction, precision engineering and quality components

Tempered glass, EVA lamination and weatherproof backskin that fosters long-life and enhanced cell performance

Manufactured according to International Quality and Environment Management System (ISO9001, ISO14001)

ELECTRICAL CHARACTERISTICS

Maximum power (P_{max}) ⁽¹⁾	50W
Tolerance (P_{max})	±5%
Open circuit voltage (V_{oc})	22.3V
Maximum power voltage (V_{mp})	18.0V
Short circuit current (I_{sc})	3.03A
Maximum power current at (I_{mp})	2.78A
Maximum system (DC) voltage	80V
Operation temperature range	-40°C - 85°C
NOCT ⁽²⁾	48±3°C
Temperature coefficient of I_{sc}	0.084%/°C
Temperature coefficient of V_{oc}	-0.390%/°C

CERTIFICATIONS

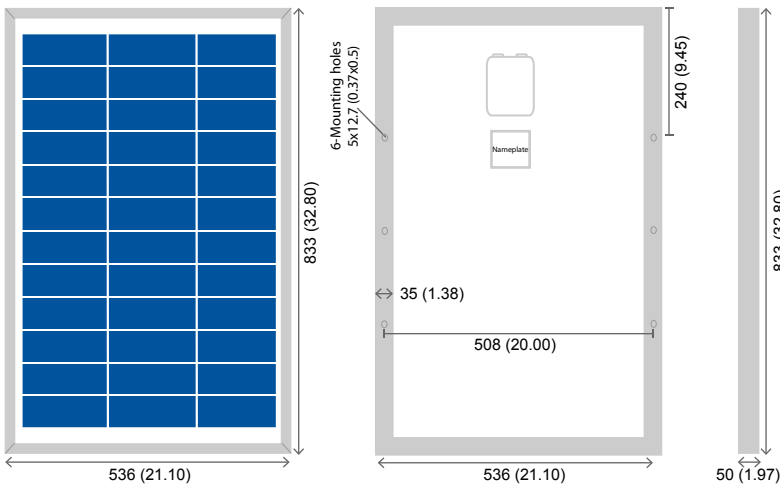


1. Values at Standard Test Conditions (STC): 1000W/m² irradiance, AM 1.5 solar spectrum and 25°C module temperature
2. Nominal Operation Cell Temperature: Module operation temperature at 800W/m² irradiance, 20°C air temperature, 1m/s wind speed

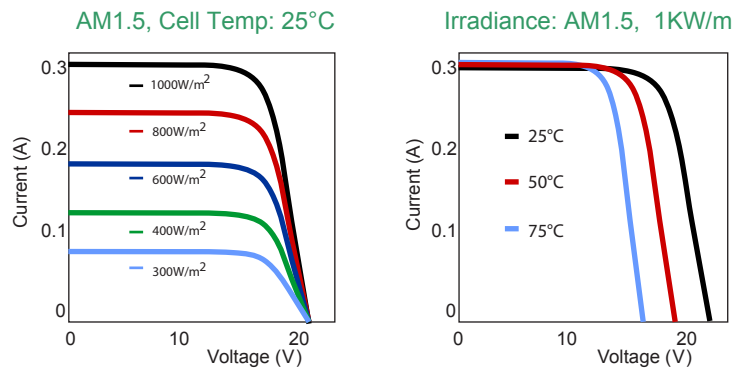
MECHANICAL CHARACTERISTICS

Dimensions	833 × 536 × 50mm / 32.80 × 21.10 × 1.97in
Weight	5.2kg / 11.5lbs

DIMENSIONS



IV CURVES



Photographs are intended to portray typical module appearance, actual module appearance may vary. Diagrams may not be proportionate and are intended for illustrative purposes only. 02/02/14