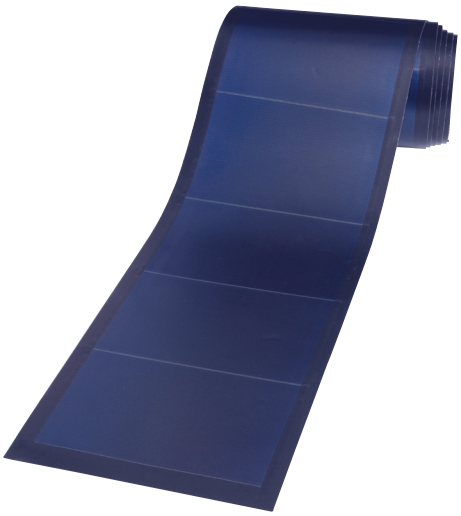
UNI-SOLAR®

Solar Laminate PVL-Series
Model: PVL-124



- High Temperature and Low Light Performance
- 20 Year Warranty on Power Output at 80%
- Quick-Connect Terminals* and Adhesive Backing
- Bypass Diodes for Shadow Tolerance
- UL 1703 Listed to 600 VDC
- IEC 61646 v1 certified
- IEC 61646 v2 and 61730, TUV certification pending

Performance Characteristics

Rated Power (P_{max}): 124 Wp

Production P_{max} Tolerance: ± 5 %

Construction Characteristics

Dimensions:	Length: 5007 mm (197.1"), Width: 394 mm (15.5"), Depth: 4 mm (0.2"), 16 mm (0.6") including potted terminal housing assembly
Weight:	7.0 kg (15.5 lbs)
Output Cables:	4 mm^2 (12 AWG) cable with weatherproof DC rated quick-connect terminals* 560mm (22“) length.
By-pass Diodes:	Connected across every solar cell
Encapsulation:	Durable ETFE high light-transmissive polymer
Adhesive:	Ethylene propylene copolymer adhesive-sealant with microbial inhibitor
Cell Type:	20 triple junction amorphous silicon solar cells 356 mm x 239 mm (14" x 9.4") connected in series

Qualifications and Safety

Listed by Underwriter’s Laboratories for electrical and fire safety (Class A Max. Slope 2/12, Class B Max. Slope 3/12, Class C Unlimited Slope fire ratings) for use in systems up to 600 VDC.

Laminate Standard Configuration

Photovoltaic laminate with potted terminal housing assembly with output cables and quick-connect terminals*

Application Criterion

- New or qualified new roof installations
- Installation by certified installers only
- Installation temperature between 10 °C - 40 °C (50 °F - 100 °F)
- Maximum roof temperature 85 °C (185 °F)
- Minimum slope: 5/8:12 (3°)
- Maximum slope 21:12 (60°)
- Membrane: Select EPDM and TPO substrates from approved manufacturers only
- Metal: PVDF Coated (Galvalume® or Zincalume®) steel metal roofing pan with flat surface (without pencil beads or decorative stippling) and 406 mm (16“) minimum width

Refer to manufacturers installation guide for approved substrates and installation methods

*e.g., Multi-Contact (MC®) Connectors

Flexible

Lightweight

No-Glass

Durable

Shadow Tolerant

High Temp Performance

Technical Data Sheet

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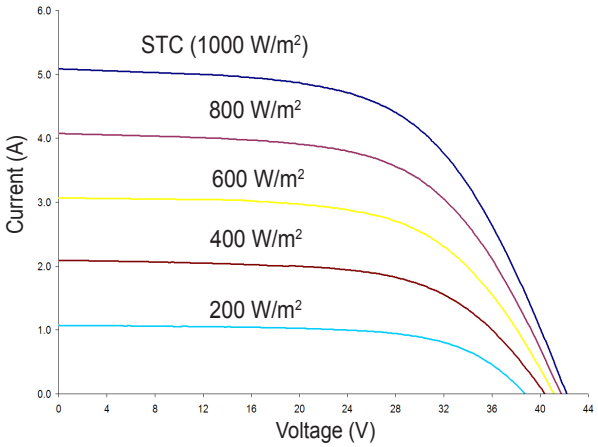
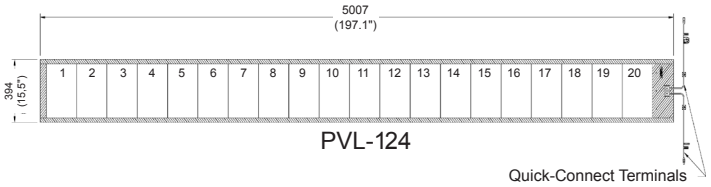
IV Curves at various Levels of Irradiance at
Air Mass 1.5 and 25 °C Cell Temperature





All measurements in mm.
Inches in parentheses.
Tolerances: Length: ± 5 mm (1/4"), Width: ± 3 mm (1/8")

Electrical Specifications

STC

(Standard Test Conditions)
(1000 W/m², AM 1.5, 25 °C Cell Temperature)

Maximum Power (P_{max}): 124 W
Voltage at Pmax (V_{mp}): 30.0 V
Current at Pmax (I_{mp}): 4.13 A
Short-circuit Current (I_{sc}): 5.1 A
Open-circuit Voltage (V_{oc}): 42.0 V
Maximum Series Fuse Rating: 8 A

NOCT

(Nominal Operating Cell Temperature)
(800 W/m², AM 1.5, 1 m/sec. wind)

Maximum Power (P_{max}): 96 W
Voltage at Pmax (V_{mp}): 28 V
Current at Pmax (I_{mp}): 3.42 A
Short-circuit Current (I_{sc}): 4.1 A
Open-circuit Voltage (V_{oc}): 38.4 V
NOCT: 46 °C

Temperature Coefficients

(at AM 1.5, 1000 W/m² irradiance)

Temperature Coefficient (TC) of I_{sc}: 0.001/°K(0.10%/°C)
Temperature Coefficient (TC) of V_{oc}: -0.0038/°K (-0.38%/°C)
Temperature Coefficient (TC) of P_{max}: 0.0021/°K (-0.21%/°C)
Temperature Coefficient (TC) of I_{mp}: 0.001/°K (0.10%/°C)
Temperature Coefficient (TC) of V_{mp}: -0.0031/°K (-0.31%/°C)

$y = y_{reference} \cdot [1 + TC \cdot (T - T_{reference})]$

Notes:
1. During the first 8-10 weeks of operation, electrical output exceeds specified ratings. Power output may be higher by 15 %, operating voltage may be higher by 11 % and operating current may be higher by 4 %.
2. Electrical specifications are based on measurements performed at standard test conditions of 1000 W/m² irradiance, Air Mass 1.5, and cell temperature of 25 °C after stabilization.
3. Actual performance may vary up to 10 % from rated power due to low temperature operation, spectral and other related effects. Maximum system open-circuit voltage not to exceed 600 VDC per UL.
4. Specifications subject to change without notice.

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