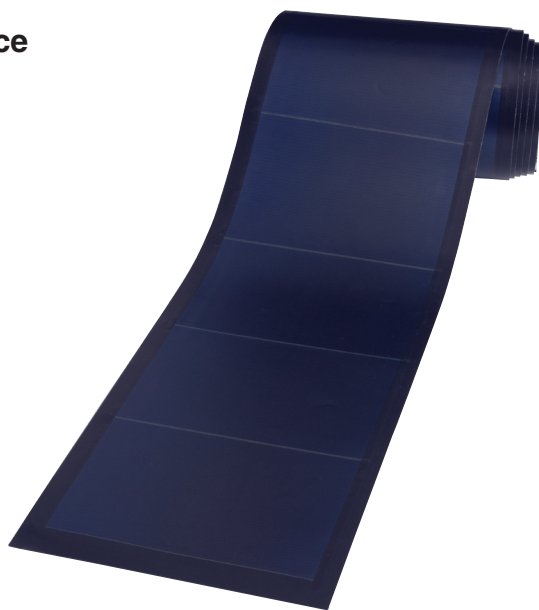


- High Temperature and Low Light Performance
- 20 Year Warranty on Power Output at 80%
- Quick-Connect Terminals*
- Bypass Diodes for Shadow Tolerance
- UL Listed to 600 VDC 
- Meets IEC 61646 Requirements



PERFORMANCE CHARACTERISTICS

Rated Power (Pmax): 136W

Production Tolerance: $\pm 5\%$

CONSTRUCTION CHARACTERISTICS

Dimensions: Length: 5486mm (216"), Width: 394mm (15.5"), Depth: 4mm (0.2"), 16mm (0.6") including junction box.

Weight: 7.7 kg (17.0 lbs.).

Output Cables: ~2.5mm² cable with weatherproof DC rated quick-connect terminals* 560mm (22") length.

By-pass Diodes: Connected across every solar cell.

Laminate Encapsulation: Durable ETFE (e.g. Tefzel®) high light-transmissive polymer.

Adhesive: Ethylene propylene copolymer adhesive-sealant with microbial inhibitor.

Cell Type: 22 triple junction amorphous silicon solar cells 356 x 239mm (14" x 9.4") connected in series.



FLEXIBLE



LIGHTWEIGHT



NO-GLASS



DURABLE



SHADOW TOLERANT



HIGH TEMP PERFORMANCE

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, and 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*.

OPTIONAL CONFIGURATION

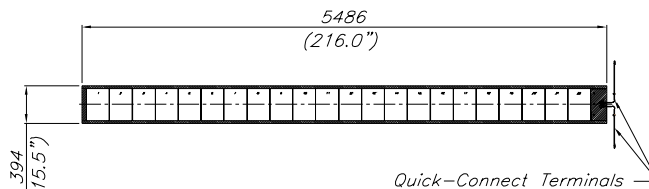
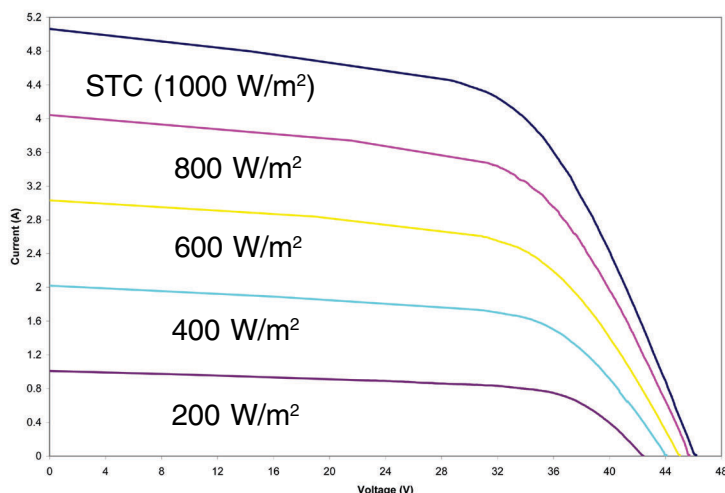
Photovoltaic laminate with junction box.

*e.g., Multi-Contact (MC®) connectors.

APPLICATION CRITERION

- New or other qualified roof installations
- 16" minimum steel pan width
- PVDF Coated (Galvalume® or Zinalume® steel metal pan)
- Steel pans with flat surface (without pencil beads, stiffening ribs, or decorative stippling)
- Installation by certified installers only
- Installation temperature between 10°C - 40°C (50°F - 100°F)
- Maximum roof temperature 85°C (185°F)
- Refer to manufacturer's installation guide for approved substrates & installation methods

IV Curves at various levels of irradiance at Air Mass 1.5 and 25° C Cell Temperature



PVL-136

All measurements in mm.
Inches in parentheses.
Tolerances Length: $\pm 5\text{mm}$ (1/4")
Width: $\pm 3\text{mm}$ (1/8")

ELECTRICAL SPECIFICATIONS: STC

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

Maximum Power (Pmax): 136 W

Voltage at Pmax (Vmp): 33.0 V

Current at Pmax (Imp): 4.1 A

Short-circuit Current (Isc): 5.1 A

Open-circuit Voltage (Voc): 46.2 V

Maximum Series Fuse Rating: 8 A

NOCT

(800 W/m², AM 1.5, 1 m/sec. wind)

Maximum Power (Pmax): 105 W

Voltage at Pmax (Vmp): 30.8 V

Current at Pmax (Imp): 3.42 A

Short-circuit Current (Isc): 4.1 A

Open-circuit Voltage (Voc): 42.2 V

NOCT: 46° C

TEMPERATURE COEFFICIENTS

(at AM 1.5, 1000 W/m² irradiance)

Temperature Coefficient of Isc: 5.1mA/K

Temperature Coefficient of Voc: -176mV/K

Temperature Coefficient of Pmax: -286mW/K

Temperature Coefficient of Imp: 4.1mA/K

Temperature Coefficient of Vmp: -102mV/K

NOTES:

- 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%.
- 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.
- 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.
- Specifications subject to change without notice.

Corporate Sales & Marketing Office:

United Solar Ovonic LLC

3800 Lapeer Rd.
Auburn Hills, MI 48326 USA
Tel: 248.475.0100
Toll Free: 800.843.3892
Fax: 248.364.0510
Email: info@uni-solar.com

North American Sales Office:

United Solar Ovonic LLC

8920 Kenamar Dr., Suite 205
San Diego, CA 92121 USA
Tel: 858.530.8586
Toll Free: 800.397.2083
Fax: 858.530.8686
Email: westerninfo@uni-solar.com

European Office:

United Solar Ovonic Europe GmbH

Dennewartstrasse 25-27
D-52068 Aachen — GERMANY
Tel: +49.241.9631131
Fax: +49.241.9631138
Email: europeinfo@uni-solar.com

Your **UNI-SOLAR** Distributor: