

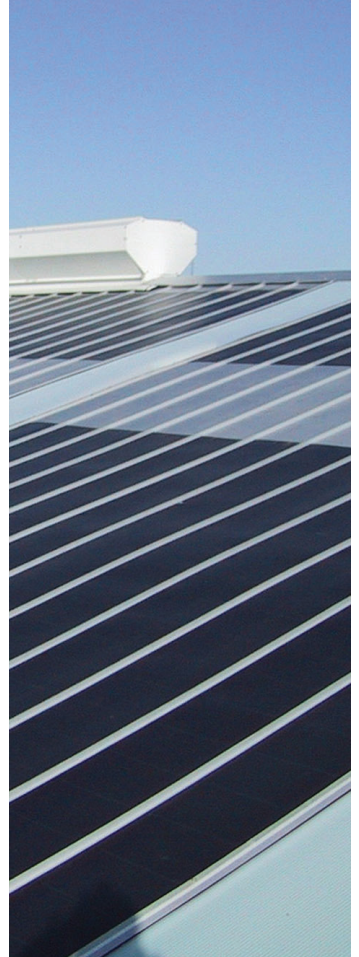
UNI-SOLAR[®]

FORM, FIT + FUNCTION

SOLAR ENERGY SYSTEMS FOR ARCHITECTURAL STEEL ROOFS

ARCHITECTURAL STEEL ROOFS

A COMPLETE SYSTEM TO CONVERT ARCHITECTURAL STEEL ROOFS INTO AN ENERGY SOURCE



UNIQUE BENEFITS

The Architectural Roof Solution is ideal for architecturally designed roofing systems. The “peel and apply” laminates are easy to install, lowering installation cost compared to traditional PV systems. The UNI-SOLAR® system solutions provide everything for complete electricity generating solar roofs.



23.8 kW, Brisbane, Australia

SYSTEM HIGHLIGHTS

- UL approved for Galvalume® steel roofs
- Weather-Tight Quick Connect System
- Durable, glass-free construction offers a level of safety that exceeds glass based PV products
- 20-year warranty on PV power output and physical integrity, and 5-year system warranty
- Favorable return on investment (ROI) due in part to low installation costs
- Provides more real energy (Kilowatt hours) than crystalline panels of same power rating (based on independent studies*) *Source: NREL, ECN, and TISO
- No additional structural support hardware required
- Complete system design and engineering support



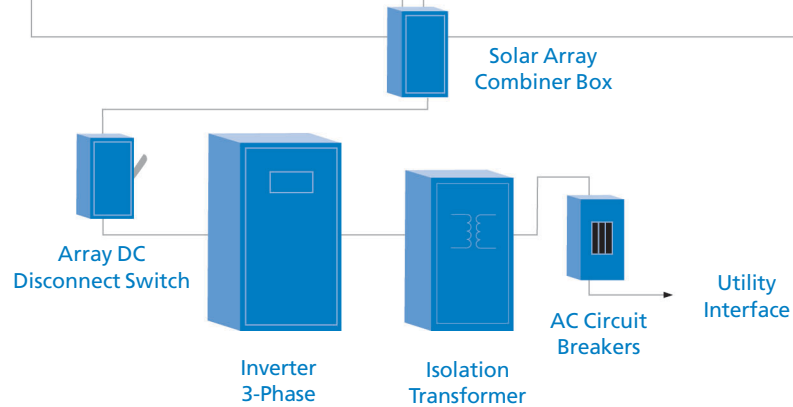
University of California, Irvine CA



LIGHTWEIGHT +
ADAPTABLE

SYSTEM DETAIL

Data Acquisition System (optional)



UNI-SOLAR® QUALITY SYSTEM SOLUTIONS

UNI-SOLAR® systems are designed with the highest quality, UL approved components. The key component in all our building integrated photovoltaic roofing solutions is the UNI-SOLAR triple junction silicon solar panel, which has the highest relative power output under high temperature and low light (cloudy) conditions of all comparable technologies. The system solutions are comprised of pre-engineered components designed to meet your specific solar electric generating requirements.

Pre-engineered systems conform to the aesthetic architecture of buildings.

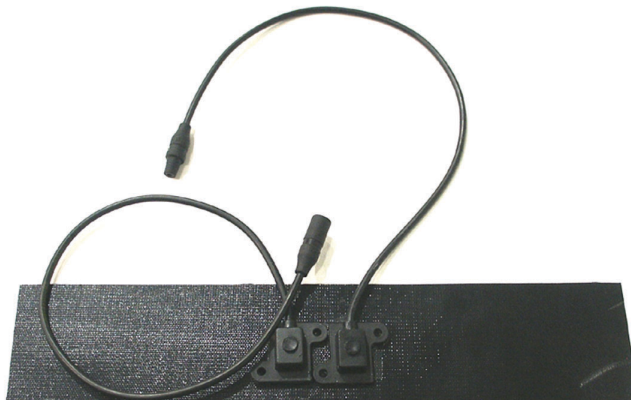


*10 kW, Jarecki Center, Aquinas College
Grand Rapids, MI*

UNBREAKABLE

SAFE +
SECURE

Weather-Tight Quick
Connect System



UNI-SOLAR®

PV LAMINATE SPECIFICATIONS, SYSTEM SIZES & ENERGY OUTPUT[†]

Laminate Type	Rated Power	Operating Voltage	Operating Current
PVL-128	128 W	33.0 V	3.88A
PVL-116	116 W	30.0 V	3.88A
PVL-87	87 W	22.5 V	3.88A
PVL-64	64 W	16.5 V	3.88A

Laminate Type	Length	Width	Thickness	Weight
PVL-128	18 ft.	1.3 ft.	.12 in.	17 lbs.
PVL-116	16.44 ft.	1.3 ft.	.12 in.	16.5 lbs.
PVL-87	12.5 ft.	1.3 ft.	.12 in.	12.3 lbs.
PVL-64	9.34 ft.	1.3 ft.	.12 in.	9 lbs.

System Solution	Avg. System Area [^]	Avg. Yearly kWh [§]
10 kWAC	2,880 ft ²	17,900
20 kWAC	5,760 ft ²	36,400
30 kWAC	8,640 ft ²	54,800
50 kWAC	14,040 ft ²	89,500
100 kWAC	28,080 ft ²	180,400



[†] Electrical specifications (±10%) are based on measurements performed at standard test conditions of 1000W/m² irradiance, Air Mass of 1.5, and Temperature of 25°C. During the first 8-10 weeks of operation, electrical output exceeds specified ratings. Cell Power output may be higher by 15%, operating voltage may be higher by 4%.
[^] Average system area required is approximately equal to 20% more than the area covered by PV.
[§] Derived from computer model analysis using solar data for Los Angeles, CA.

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