

FRAMED SOLAR MODULES US-SERIES

- No Glass
- Durable
- Lightweight
- Long Life
- UL Listed (UL)
- Weather Resistant
- Extremely Shadow Tolerant
- Delivers Up To 20% More Energy (Ah)*



Photo Courtesy of Solar Century (UK)



Gate Operator Photo Courtesy of GTO Inc.

UNI-SOLAR framed panels are for permanent, fixed position mounting with optimum tilt, wind resistance and exposure to sunlight. These glass-free, lightweight, unbreakable modules can be utilized in a wide variety of applications from fence charging to telecommunications.

The larger framed panels are often used as building blocks in photovoltaic arrays, which can be assembled to meet virtually any load, eg. from 10 watts to 10 megawatts.

Applications

- Telecommunications
- Signaling And Traffic Control Systems
- Environmental Data Monitoring Systems
- Bus Shelters
- Village Power
- Water Pumping
- Solar Home Systems
- Desalination Systems
- Automatic Gate Opening
- Cathodic Protection Systems
- Off-Grid PV-Systems On Cottages And Remote Homes
- Signage And Billboards
- Fence Charging
- Agricultural



Photo Courtesy of Kellin Solar



Photo Courtesy of Solar Electric, Inc.

* Source Solfest '98, "Module Shoot Out", June 20-21, 1998.



NO-GLASS



DURABLE



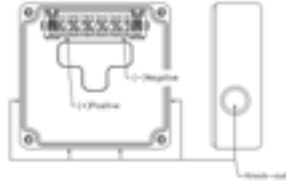
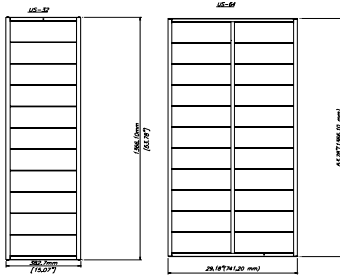
LIGHTWEIGHT



SHADOW TOLERANT



HIGH TEMP PERFORMANCE



US-32

US-64

Junction Box With Quick Connect
(Standard On US-116 Only)

Junction Box Without Quick Connect
(Standard On US-3 – US-64)



Specifications

| Product | US-116 | US-64 | US-42 | US-32 | US-21 | US-11 | US-5 | US-3 |
|-------------------------------|--------|--------|--------|--------|--------|--------|--------|----------------|
| Rated Power (Wp) | 116 | 64 | 42 | 32 | 21 | 10.3 | 5 | 2.68 |
| Operating Voltage VMPP (V) | 30.0 | 16.5 | 16.5 | 16.5 | 16.5 | 16.5 | 16.5 | 8.1 |
| Operating Current IMPP (A) | 3.88 | 3.88 | 2.54 | 1.94 | 1.27 | 0.62 | 0.3 | 0.33 |
| Open Circuit Voltage VOC (V) | 43.2 | 23.8 | 23.8 | 23.8 | 23.8 | 23.8 | 23.8 | 12.0 |
| Short Circuit Current ISC (A) | 4.8 | 4.80 | 3.17 | 2.40 | 1.59 | 0.78 | 0.37 | 0.40 |
| Bypass Diode Included | Yes | Yes | Yes | Yes | Yes | Yes | No | No |
| Blocking Diode Included | No | No | No | No | No | No | No | Yes |
| Minimum blocking diode (A) | 8.0 | 8.0 | 6.0 | 4.0 | 3.0 | 1.5 | 1.0 | 1.0 (included) |
| Weight (lbs) | 44 | 20.2 | 13.8 | 10.6 | 6.6 | 3.6 | 2.5 | 1.7 |
| Length of the panel (inch) | 96.03 | 53.8 | 36.6 | 53.8 | 36.6 | 19.3 | 19.3 | 11.3 |
| Width of the panel (inch) | 30.16 | 29.2 | 29.2 | 15.1 | 15.1 | 15.1 | 8.1 | 8.1 |
| Cable length (feet) | – | – | – | – | 8 | 8 | 8 | – |
| Warranty On Power Output | 20 yr. | 20 yr. | 20 yr. | 20 yr. | 10 yr. | 10 yr. | 10 yr. | 3 yr. |

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 ($\pm 10\%$) 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 long-term stabilization. Maximum system open-circuit voltage not to exceed 600 VDC. Specifications subject to change without notice.

The *UNI-SOLAR* modules are exceptionally durable. They are encapsulated in UV-stabilized polymers and framed with anodized aluminum. The polymer encapsulation includes EVA and the fluoropolymer ETFE. A Galvalume® backing plate provides stiffness.

Bypass diodes are connected across each cell, allowing the modules to produce power even when partially shaded (exception : US-3 and US-5). US-3 has a built-in blocking diode.

The US-116 comes standard with a weather resistant junction box with quick connects. The US-64, US-42 and US-32 have a weather resistant *UNI-SOLAR* junction box with knock-outs for customization by the customer. All other US-modules have a potted pig tail with integral wiring. The cable is a 2-conductor 18 AWG with insulation rated at 158°F.

The *UNI-SOLAR* US-116, US-64, US-42 and US-32 modules are appropriate for all applications from simple single module requirements to larger grid-connected applications. All other *UNI-SOLAR* US modules under 30 watts should not be connected in series.

To Purchase Call:



Corporate Sales & Marketing Office:

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

North American Sales Office:

United Solar Ovonic
4520 Viewridge Ave.
San Diego, CA 92123
Tel: 858.614.1435
Toll Free: 800.397.2083
Fax: 858.514.8694
Email: westerninfo@uni-solar.com