

ENGINEERING EXCELLENCE

- Built exclusively with **Suniva's premium ARTisun Select cells**, providing one of the highest power outputs per square meter at an affordable price
- **The leading US-born, US-operated crystalline silicon cell and module manufacturer**, spun out of Georgia Tech's University Center of Excellence in Photovoltaics; one of only two such research centers in the U.S.
- Suniva's state-of-the art manufacturing and module lab facilities feature the most advanced equipment and technology

QUALITY & RELIABILITY

- Suniva Optimus modules are manufactured and warranted to our specifications assuring consistent high performance and high quality.
- Rigorous in-house quality management tests beyond standard UL and IEC standards
- Performance longevity with advanced polymer backsheet
- UL1703 listed Type 2 PV module
- Passed the most stringent salt spray tests based on IEC 61701
- Passed enhanced stress tests¹ based on IEC 61215 conducted at Fraunhofer ISE²
- PAN files are independently validated



SUNIVA OPTIMUS® SERIES MONOCRYSTALLINE SOLAR MODULES

OPT SERIES: OPT 60 CELL MODULES (BLACK FRAME)

Optimus® modules are known for their superior quality and long-term reliability. These high-powered modules consist of Suniva's premium ARTisun® Select cell technology and are designed and manufactured in the U.S.A. and North America using our pioneering ion implantation technology. Suniva's high power-density Optimus modules provide excellent performance and value.

FEATURES

- Utilizes our premier American-made cell technology, ARTisun Select®
- Superior performance and reliability; enhanced stress tests conducted at Fraunhofer ISE
- Module families ranging from 275-285W
- Marine grade aluminum frame with hard anodization or powder coating
- Certified PID-free by PV Evolution Labs (PVEL)
- Made in North America
- Qualifies for Ex-Im Financing
- 1000V UL
- 25 year linear power warranty;
10 year product warranty



CERTIFICATIONS



OPTIMUS SERIES: OPT 60 CELL MODULES

ELECTRICAL DATA (NOMINAL)

The rated power may only vary by +/- 2.5Wp and all other electrical parameters by ± 5%

| Model Number | OPT275-60-4-1B0 | OPT280-60-4-1B0 | OPT285-60-4-1B0 |
|-----------------------------------|-----------------|-----------------|-----------------|
| Power Classification (Pmax) | 275 W | 280 W | 285 W |
| Module Efficiency (%) | 16.73% | 17.04% | 17.34% |
| Voltage at Max. Power Point (Vmp) | 32.0 V | 32.1 V | 32.2 V |
| Current at Max. Power Point (Imp) | 8.59 A | 8.72 A | 8.84 A |
| Open Circuit Voltage (Voc) | 39.1 V | 39.2 V | 39.2 V |
| Short Circuit Current (Isc) | 9.34 A | 9.47 A | 9.61 A |

The electrical data apply to standard test conditions (STC): Irradiance of 1000 W/m² with AM 1.5 spectra at 25°C.

CHARACTERISTIC DATA

| | |
|--------------------|---|
| Type of Solar Cell | High-efficiency ARTisun Select cells, 3 and 5 busbar options available |
| Frame | Anodized or powder coated aluminum alloy |
| Glass | Tempered (low-iron), anti-reflective coating |
| Junction Box | NEMA IP67 rated; 3 internal bypass diodes |
| Cable & Connectors | 12 AWG (4 mm ²) PV Wire cable with multiple connector options available; cable length approx. 1000 mm |

MECHANICALS

| | |
|--------------------------|--------------------------------------|
| Cells / Module | 60 (6 x 10) |
| Module Dimensions | 1660 x 990 mm (65.35 x 38.98 in.) |
| Module Thickness (Depth) | 35 mm (1.37 in.) |
| Approximate Weight | 17.9 +/- 0.25 kg. (39.5 +/- 0.5 lb.) |

TEMPERATURE COEFFICIENTS

| | | |
|----------|----------------|--------|
| Voltage | β, Voc (%/°C) | -0.335 |
| Current | α, Isc (%/°C) | +0.047 |
| Power | γ, Pmax (%/°C) | -0.420 |
| NOCT Avg | (+/- 2 °C) | 46.0 |

LIMITS

| | |
|------------------------------|---|
| Max. System Voltage | 1000 VDC for IEC, 1000 VDC for UL |
| Max Series Fuse Rating | 15 Amps |
| Operating Module Temperature | -40°C to +85°C (-40°F to +185°F) |
| Storm Resistance/Static Load | Tested to IEC 61215 for loads of 5400 Pa (113 psf); hail and wind resistant |

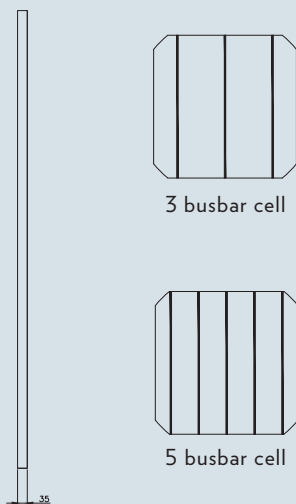
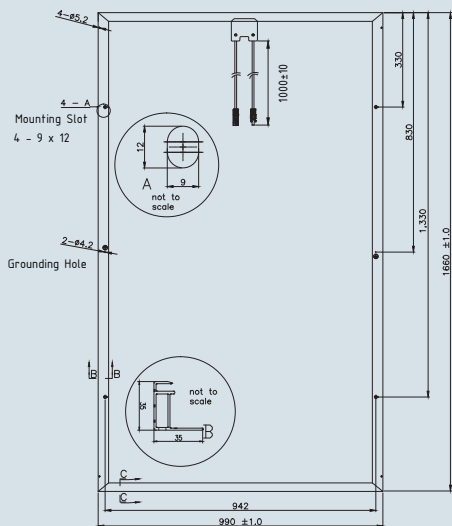
Suniva® reserves the right to change the data at any time. View manual at suniva.com.

¹UV 90 kWh, TC 400, DH 2000. ²Tests were conducted on module type OPT 60 silver frame.

Please read installation manual before installing or working with module.

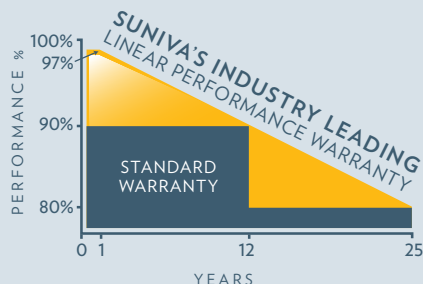
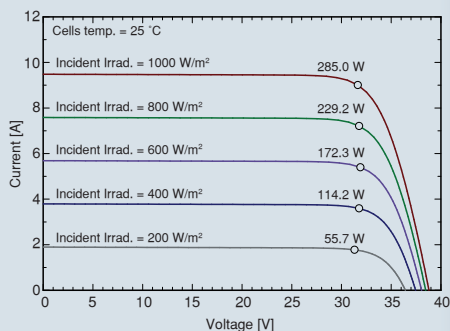
| Product | Modules per pallet | Pallets per 53' truck | Total modules |
|----------------------------------|--------------------|-----------------------|---------------|
| OPT - 60 cell (silver and black) | 25 | 36 | 900 |

HEADQUARTERS
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PV module: Suniva, OPT285-60-4-100

Current-Voltage (IV) as a
Function of Isolation (W/m²) and Temperature



PLEASE RECYCLE

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