



# SUNIVA OPTIMUS® SERIES MONOCRYSTALLINE SOLAR MODULES

OPT SERIES: OPT 60 CELL MODULES (SILVER FRAME)

## 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
- Suniva is a U.S. based company spun out from the Georgia Tech 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
- Passed the most stringent salt spray tests based on IEC 61701
- Passed enhanced stress tests<sup>1</sup> based on IEC 61215 conducted at Fraunhofer ISE
- Certified PID free by PV Evolution Labs (PVEL)
- PAN files are independently validated

**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. using our pioneering ion implantation technology. Suniva's high power-density Optimus modules provide excellent performance and value.

## FEATURES

- ☀ Contains premium ARTisun Select cell technology - over 19%
- ☀ Extensive materials testing and certifications safeguard reliability
- ☀ Positive only tolerance ensures predictable output
- ☀ Marine grade aluminum frame with hard anodized coating
- ☀ Buy America-compliant upon request
- ☀ Qualifies for U.S. EXIM financing
- ☀ System and design services available
- ☀ Industry leading linear warranty: 10 year warranty on workmanship and materials; 25 year linear performance warranty delivering 80% power at STC



## CERTIFICATIONS



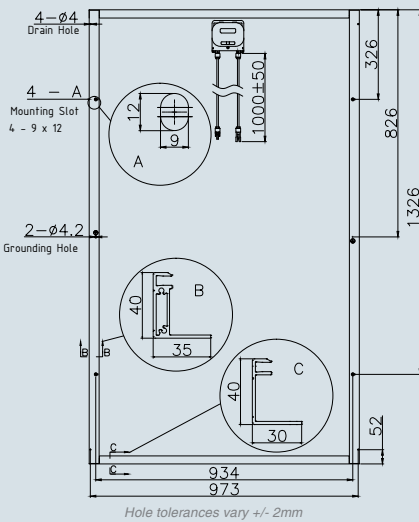
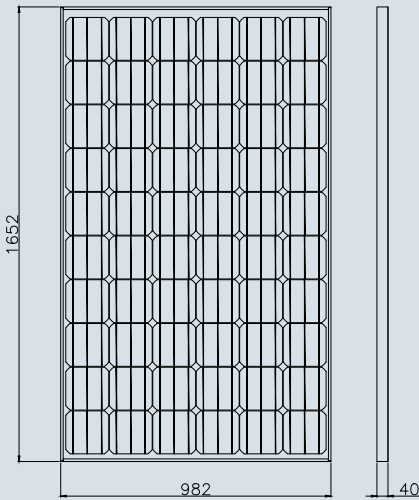
# OPTIMUS SERIES: OPT 60 CELL MODULES

## ELECTRICAL DATA (NOMINAL)

The rated power may only vary by -0/+3% and all other electrical parameters by ± 5%

Model Number	OPT 265-60-4-100	OPT 270-60-4-100	OPT 275-60-4-100	OPT 280-60-4-100
Power Classification (Pmax)	265 W	270 W	275 W	280 W
Module Efficiency (%)	16.33%	16.60%	16.95%	17.26%
Voltage at Max. Power Point (Vmp)	30.70 V	31.20 V	31.50 V	31.70 V
Current at Max. Power Point (Imp)	8.64 A	8.68 A	8.74 A	8.84 A
Open Circuit Voltage (Voc)	38.30 V	38.50 V	38.60 V	38.70 V
Short Circuit Current (Isc)	9.12 A	9.15 A	9.25 A	9.30 A

The electrical data apply to standard test conditions (STC): Irradiance of 1000 W/m<sup>2</sup> with AM 1.5 spectra at 25°C.



Hole tolerances vary +/- 2mm

## CHARACTERISTIC DATA

Type of Solar Cell	High-efficiency ARTisun Select cells of 156 x 156 mm (6 in.)
Frame	Silver anodized aluminum alloy
Glass	Tempered (low-iron), anti-reflective coating
Junction Box	NEMA IP67 rated; 3 internal bypass diodes
Cable & Connectors	12 AWG (4 mm <sup>2</sup> ) PV Wire cable with multiple connector options available; cable length 1000 mm

## MECHANICALS

Cells / Module	60 (6 x 10)
Module Dimensions	1652 x 982 mm (65.04 x 38.66 in.)
Module Thickness (Depth)	40 mm (1.57 in.)
Approximate Weight	17.9 +/- 0.25 kg. (39.5 +/- 0.5 lb.)

## TEMPERATURE COEFFICIENTS

Voltage	$\beta$ , Voc (%/°C)	-0.335
Current	$\alpha$ , Isc (%/°C)	+0.047
Power	$\gamma$ , Pmax (%/°C)	-0.420
NOCT Avg	(+/- 2 °C)	46.0

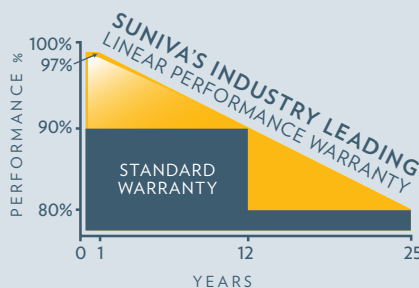
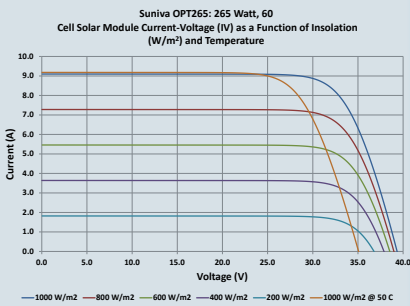
## LIMITS

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.

<sup>1</sup>UV 90 kWh, TC 400, DH 2000.

**Please read installation manual before installing or working with module.**



**PLEASE RECYCLE**  
AUGUST 8, 2014 (REV. 21) [SAM0\_0010]

Product	Modules per pallet	Pallets per Container	Total Modules
OPT - 60 cell (silver and black)	25	28	700

**HEADQUARTERS**  
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**Suniva**  
The Brilliance of Solar Made Sensible®