

# SUNIVA OPTIMUS® SERIES MONOCRYSTALLINE SOLAR MODULES

OPT SERIES: OPT 72 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
- Produced in an ISO 9001: 2008 certified facility
- 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<sup>2</sup>
- 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



AS5033  
Compliant



# OPTIMUS SERIES: OPT 72 CELL MODULES

## ELECTRICAL DATA (NOMINAL)

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

Model Number	OPT 310-72-4-100	OPT 315-72-4-100	OPT 320-72-4-100	OPT 325-72-4-100
Power Classification (Pmax)	310 W	315 W	320 W	325 W
Module Efficiency (%)	16.02%	16.27%	16.53%	16.79%
Voltage at Max. Power Point (Vmp)	36.40 V	36.60 V	36.90 V	37.10 V
Current at Max. Power Point (Imp)	8.51 A	8.62 A	8.68 A	8.76 A
Open Circuit Voltage (Voc)	45.80 V	45.90 V	46.20 V	46.40 V
Short Circuit Current (Isc)	8.79 A	9.05 A	9.08 A	9.12 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.

## CHARACTERISTIC DATA

Type of Solar Cell	High-efficiency ARTisun Select cells of 156 x 156mm (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 with multiple connector options available; cable length 1200 mm

## MECHANICALS

Cells / Module	72 (6 x 12)
Module Dimensions	1971 x 982 mm (77.6 x 38.7 in.)
Module Thickness (Depth)	46 mm (1.80 in.)
Approximate Weight	23 kg (50.70 lbs.)

## 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

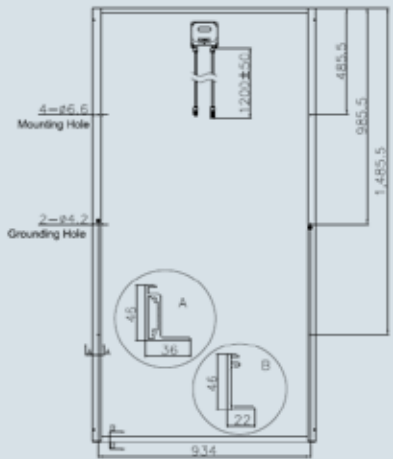
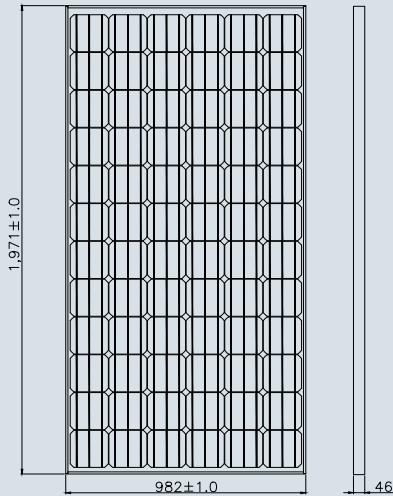
## LIMITS

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 2400 Pa (50 psf); hail and wind resistant

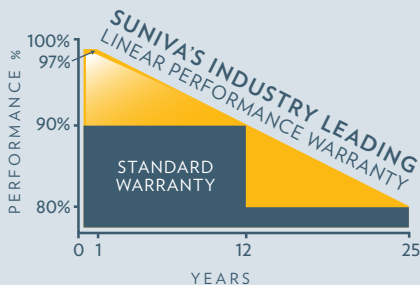
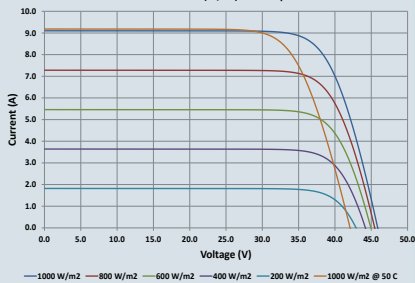
Suniva® reserves the right to change the data at any time. View manual at [suniva.com](http://suniva.com).

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

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



Suniva OPT315: 315 Watt, 72 Cell Solar Module Current-Voltage (IV) as a Function of Insolation (W/m<sup>2</sup>) and Temperature



**PLEASE RECYCLE**

JANUARY 23, 2014 (REV. 17) [SAMD\_0018]

Product	Modules per pallet	Pallets per Container	Total Modules
OPT - 72 cell	22	24	528

## HEADQUARTERS

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**Suniva**  
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