

## 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
- **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 tests<sup>1</sup> based on IEC 61215 conducted at Fraunhofer ISE<sup>2</sup>
- 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. 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 325-340W
- ☀ Positive only power tolerance
- ☀ Marine grade aluminum frame with hard anodized 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



MANUFACTURED IN

Georgia & Michigan

[www.suniva.com](http://www.suniva.com)

# OPTIMUS SERIES: OPT 72 CELL MODULES

## ELECTRICAL DATA (NOMINAL)

The rated power may only vary by -0/+10W and all other electrical parameters by  $\pm 5\%$

| Module Type                       | OPT325-72-4-100 | OPT330-72-4-100 | OPT335-72-4-100 | OPT340-72-4-100 |
|-----------------------------------|-----------------|-----------------|-----------------|-----------------|
| Power Classification (Pmax)       | 325 W           | 330 W           | 335 W           | 340 W           |
| Module Efficiency (%)             | 16.66%          | 16.92%          | 17.18%          | 17.43%          |
| Voltage at Max. Power Point (Vmp) | 37.5 V          | 37.6 V          | 37.7 V          | 37.8 V          |
| Current at Max. Power Point (Imp) | 8.67 A          | 8.78 A          | 8.89 A          | 8.99 A          |
| Open Circuit Voltage (Voc)        | 45.8 V          | 45.9 V          | 45.9 V          | 46.0 V          |
| Short Circuit Current (Isc)       | 9.42 A          | 9.54 A          | 9.66 A          | 9.78 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, 3 and 5 busbar options available                              |
| Frame              | Silver anodized aluminum alloy  |
| Glass              | Tempered (low-iron), anti-reflective coating  |
| Junction Box       | NEMA IP67 rated; 6 internal diodes  |
| Cable & Connectors | 12 AWG (4 mm <sup>2</sup> ) PV Wire with multiple connector options available; cable length 1300 mm |

## MECHANICALS

|                          |                               |
|--------------------------|-------------------------------|
| Cells / Module           | 72 (6 x 12)                   |
| Module Dimensions        | 1970 x 990 mm (77.6 x 39 in.) |
| Module Thickness (Depth) | 38 mm (1.5 in.)               |
| Approximate Weight       | 23 kg (50.7 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   |

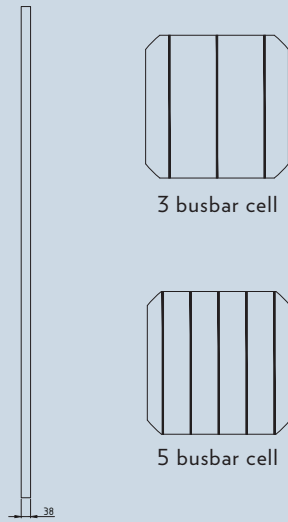
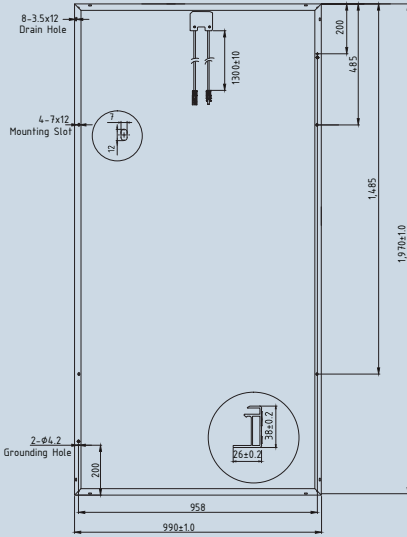
## LIMITS

|                              |  |
|------------------------------|--|
| 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.

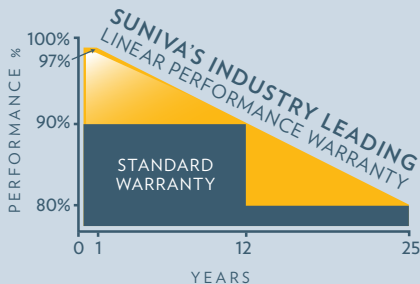
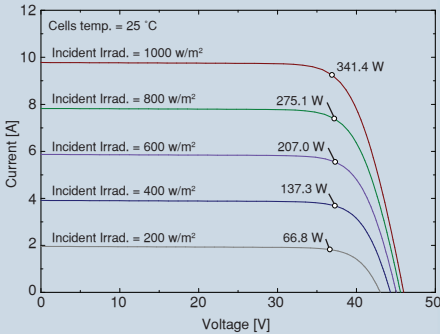
<sup>1</sup>UV 90 kWh, TC 400, DH 2000. <sup>2</sup>Tests were conducted on module type OPT 60 silver frame.

Please read installation manual before installing or working with module.



PV module: Suniva, OPT340-72-4-100

Current-Voltage (IV) as a Function of Isolation (W/m<sup>2</sup>) and Temperature



**PLEASE RECYCLE**

AUGUST 19, 2015 (REV. 6) [SAMD\_0051]

| Product       | Modules per pallet: | Modules per full 53 ft. truck load, double stacked |
|---------------|---------------------|--|
| OPT - 72 cell | 22                  | 660  |

**HEADQUARTERS**  
5765 Peachtree Industrial Blvd.,  
Norcross, Georgia 30092 USA  
Tel: +1 404 477 2700  
[www.suniva.com](http://www.suniva.com)

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