



# THE PANEL: SUNIVA OPTIMUS® SERIES MONOCRYSTALLINE SOLAR MODULES

OPT SERIES: OPT 60CELL MODULES (BLACK FRAME)

UPC: 00861416000301

## THE PANEL 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 275-290W
- Positive only power tolerance
- Marine grade aluminum frame with hard anodization or powder coating
- Certified PID-free by PV Evolution Labs (PVEL)
- Made in North America,
- Manufactured in Michigan and Georgia
- Qualifies for EX-IM financing
- 1000V UL
- 25 Year linear power warranty; 10-year product warranty

### *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.

### *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 Photovoltaic; one of only two research centers in the U.S.

Suniva's state-of-the art manufacturing and module lab facilities feature the most advanced equipment and technologies.

### *Quality & Reliability*

Manufactured and warranted to the specifications assuring consistent high performance and quality.

Rigorous in-house quality management tests beyond UL standard and IEC standard.

Performance longevity with advanced polymer backsheets

UL 1703 listed Type 2 PV module

Passed IEC 61701; The most stringent salt spray tests

Passes IEC 61215, Stress test at Fraunhofer ISE

PAN files are independently validated



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*Please read the instruction manual before installing or working with module.*

## ELECTRICAL DATA (NOMINAL)

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

Model number	OPT 280-60-4-100
Power classification (Pmax)	280W
Module efficiency (%)	17.04%
Voltage at Max. Power Point (Vmp)	31.8V
Current at Max. Power Point (Imp)	8.81A
Open Circuit Voltage (VoC)	38.8 V
Short Circuit Current (Isc)	9.57 A

*The electrical data apply to standard test conditions (STC): irradiance of 1000W/m<sup>2</sup> with AM 1.5 spectra at 25 degrees Celsius*

## CHARACTERISTIC DATA

Type of Solar Cell	High-efficiency ARTisun 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 codes
Cable and connections	12 AWG (4mm <sup>2</sup> ) PV wire with multiple connectors options available, cable length 1000 mm

## MECHANICALS



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

## TEMPERATURE COEFFICIENTS

Voltage	B Voc (% / °C)	-0.335
Current	$\alpha$ , $i_{cs}$ (% / °C)	+0.047
Power	$\gamma$ , Pmax (%/ °C)	-0.42
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 loads of 5400 Pa (113 psf); hail and wind resistance

## CERTIFICATIONS

