

solar electricity

## 235 WATT

#### RESIDENTIAL MODULE



ND-Q235F4

# RESIDENTIAL 235 WATT MODULE FROM THE WORLD'S TRUSTED SOURCE FOR SOLAR.

SHARP's powerful residential module, the ND-Q235F4 blends high performance with advanced aesthetics. Black backsheet and sleek black frame create a modern silhouette on nearly any roof. Using breakthrough technology, made possible by nearly 50 years of proprietary research and development, this module incorporates an advanced cell surface texturing process to increase light absorption and improve efficiency. Versatile enough to permit installation on nearly any kind of roof.

Sharp's powerful residential solar module makes a beautiful addition to nearly any roof.

#### **ENGINEERING EXCELLENCE**

ND-Q235F4 is the perfect combination of high performance and design.

#### **ADVANCED AESTHETICS**

Sleek, black frame module provides an elegant appearance that blends beautifully with your home's roofline.

#### **DURABLE**

Tempered glass, EVA lamination and weatherproof backskin provide long life and enhanced cell performance.

#### **RELIABLE**

The ND-Q235F4 module is covered by both the Sharp 10-year warranty on materials or workmanship as well as the 25-year limited warranty on power output.

#### HIGH PERFORMANCE

This module uses an advanced solar cell surface texturing process to increase light absorption and improve efficiency.



Black frame improves aesthetics for residential roof top applications.



Laminated glass construction in a high torsion frame.

#### **SHARP: THE NAME TO TRUST**

When you choose Sharp, you get more than wellengineered products. You also get Sharp's proven reliablity, outstanding customer service and the assurance of both our 10-year warranty on materials or workmanship as well as the 25-year limited warranty on power output. A global leader in solar electricity, Sharp powers more homes and businesses than any other solar manufacturer worldwide.

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### ND-Q235F4

Module output cables: 12 AWG PV Wire

ELECTRICAL CHARACTERISTICS		
Maximum Power (Pmax)*	235 W	
Tolerance of Pmax	+5%/-0%	
Type of Cell	Polycrystalline silicon	
Cell Configuration	60 in series	
Open Circuit Voltage (Voc)	37.4 V	
Maximum Power Voltage (Vpm)	29.2 V	
Short Circuit Current (Isc)	8.59 A	
Maximum Power Current (Ipm)	8.05 A	
Module Efficiency (%)	14.4%	
Maximum System (DC) Voltage	600 V	
Series Fuse Rating	15 A	
NOCT	47.5°C	
Temperature Coefficient (Pmax)	-0.485%/°C	
Temperature Coefficient (Voc)	-0.351%/°C	
Temperature Coefficient (Isc)	0.053%/°C	

<sup>\*</sup>Illumination of 1 kW/m $^2$  (1 sun) at spectral distribution of AM 1.5 (ASTM E892 global spectral irradiance) at a cell temperature of 25°C.

MECHANICAL CHARACTERISTICS			
Dimensions (A x B x C to the right)	39.1" x 64.6" x 1.8"/994 x 1640 x 46 mm		
Cable Length (G)	43.3"/1100 mm		
Output Interconnect Cable	12 AWG with SMK Locking Connector		
Weight	41.9 lbs / 19.0 kg		
Max Load	50 psf (2400 Pascals)		
Operating Temperature (cell)	-40 to 194°F / -40 to 90°C		

<sup>\*\*</sup>PV Wire per UL Subject 4703

QUALIFICATIONS		
UL Listed	UL 1703	c (UL) us
Fire Rating	Class C	C GL OS

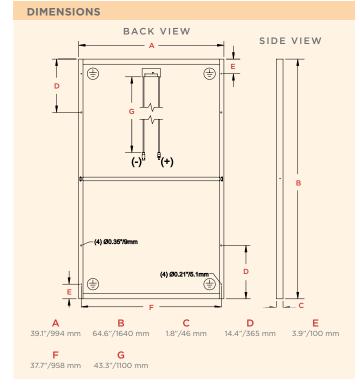
#### **WARRANTY**

25-year limited warranty on power output Contact Sharp for complete warranty information

Design and specifications are subject to change without notice.

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Contact Sharp for tolerance specifications

#### "BUY AMERICAN"

Sharp solar modules are manufactured in the United States and Japan, and qualify as "American" goods under the "Buy American" clause of the American Recovery and Reinvestment Act (ARRA).



SHARP ELECTRONICS CORPORATION 5700 NW Pacific Rim Boulevard, Camas, WA 98607 1-800-SOLAR-06 • Email: generalinfo@sharpusa.com www.sharpusa.com/solar