

# QUANTUM SERIES 285



SOLARTECH  
UNIVERSAL

60 CELL MONO-CRYSTALLINE PERC SMARTWIRE SOLAR MODULE



CERTIFICATIONS:

IEC61215

IEC61730

UL1703

Conformity to CE



SmartWire Technology lessens the effects of micro-fractures and shading

Mono-crystalline PERC Busbar-less cells

Anodized aluminum frame (Space Black or Metallic Silver)

A+ A+ A+

Highest rated solar module flasher in the industry

The national solar UL / TUV testing association

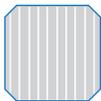


## SMART FEATURES



### Superior Energy Production

Module efficiency of 17.2% achieved by utilizing the most advanced technology in the solar industry.



### SmartWire Technology (SWT)

The revolutionary process for connecting solar cells that outperforms busbars by spreading the electric current through 18 micro-wires.



### Advanced PERC Technology

A specialized monocrystalline cell that improves the flow of energy by adding a layer that distributes the electric current passively.



### Exceptional at low-light Conditions

The round shape of SmartWire reduces the wire shading by 25% and introduces a light trapping effect.



### Remarkable Connection Durability

SWT acts as a protective layer for the solar cell, ensuring reliable contact points for decades of consistent performance.

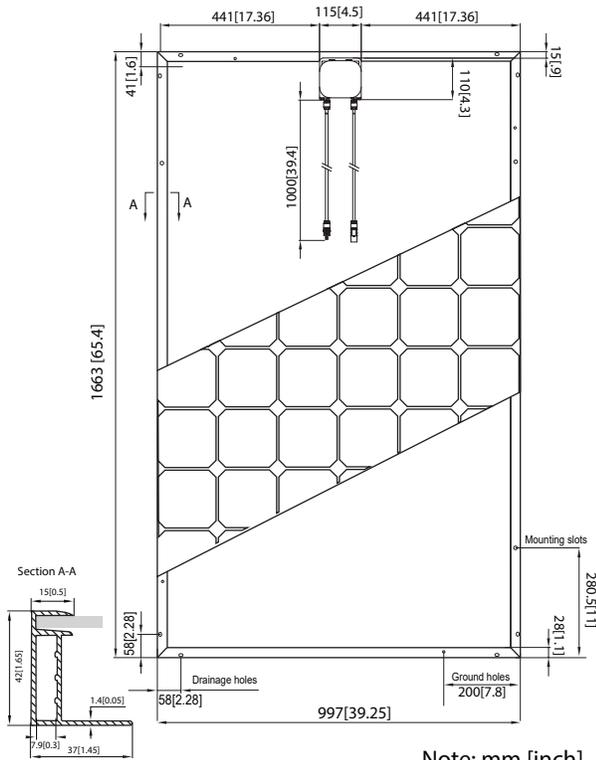


### Industry Leading Warranty

Accomplished with superior materials proven to perform better against potential induced degradation (PID).



# SOLARTECH UNIVERSAL



## Mechanical Characteristics

Laminate Structure	Glass / TPO / Cells / TPO / Backsheet
Weight	Approx. 18 kg [40lbs]
Cell Type [mm]	156 x156 Mono-Crystalline PERC
Cell connection	60 cells (serial)
(Electrical) Junction Box	3 bypass (Tyco) IP65/IP67
(Electrical) Connection Cable	Tyco Solar 4mm <sup>2</sup> ( 1m length each )
Electrical Connectors	Tyco PV4
Dimensions	997 x 1663 x 42mm [39.25 x 65.4 x 1.65]
Encapsulant	(TPO) Hydrophobic
Front Load (Snow)	5400 Pa / 112.8 Psf
Rear Load (Wind)	3800 Pa / 79.4 Psf
Collection Pathways	18 Micro-wires
Glass Thickness	3.2mm [.125] Anti-reflective tempered solar glass (94% Transmittance)

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## Electrical Characteristics STC

STU-285 PERC

Average Power	285W
Module Efficiency (%)	17.2%
Voltage at Max power (Vmp)	32.3V
Current at Max power (Imp)	8.9A
Open Circuit Voltage (Voc)	40V
Short Circuit Current (Isc)	9.5A
Operating Module Temperature	-40°C → 85°C
Maximum System Voltage	1000V DC ( IEC + UL )
Maximum Series Fuse Rating	20A
Power Sorting	-0/+5W

STC: Irradiance 1000 W/m<sup>2</sup>, module temperature 25 °C, AM=1.5; Best in Class AAA solar simulator (IEC 60904-9) used, power measurement uncertainty is within +/- 3%

## NOCT

Maximum Power at NOCT (Pmax)	204.4W
Voltage Maximum Power (Vmp)	29.2V
Current Maximum Power (Imp)	7.0A
Open Circuit Voltage (Voc)*	37.5V
Short Circuit Current (Isc)*	7.4A

NOCT: 800 W/m<sup>2</sup> Irradiance, 20 °C ambient temperature , AM=1.5, wind speed 1 m/s  
Values are based on TUV/PTL certified results from a light-soaked module.  
\*(Voc) & (Isc) based on Quantum Series 275W module

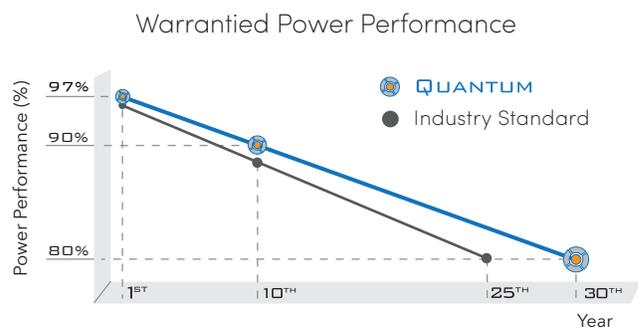
## Temperature Characteristics

Nominal Operating Cell Temp. (NOCT)	45.7°C
Temperature Coefficient of Pmax	-0.4079 %/°C
Temperature Coefficient of Voc	-0.2845 %/°C
Temperature Coefficient of Isc	+0.0406%/°C

NOCT: 800 W/m<sup>2</sup> Irradiance, 20 °C ambient temperature , AM=1.5, wind speed 1 m/s;  
NOCT values are based on TUV/PLC CEC certified results

## Maximum Power at PTC

260.6W



## Packing Configuration

Equipment	20' GP	53' Trailer
Modules per pallet	20	23
Pallets per unit	12	36
Modules per unit	240	828

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