The Duomax Module

**72 Cell Multicrystalline Module**

**310-325W Power Output Range**

**16.6% Maximum Efficiency**

**0~+5W Positive Power Tolerance**

Highly reliable due to stringent quality control
- PID resistant and free of snail trails
- Increased module robustness to minimize micro-cracks
- 100% EL double inspection

Enhanced safety
- Fire class A certified by TUV Rheinland according to fire test IEC 61730-2 / MST 23
- Certified for fire type 13 (UL 1703)

Increased value
- Higher maximum system voltage reduces BOS costs
- 30 year linear warranty
- 0.5% annual degradation
- Low thermal coefficients for more energy production at higher temperatures

Certified to withstand the most challenging environmental conditions
- Module coating resistant to sand, acid, and alkali
- 2400 Pa wind load
- 5400 Pa snow load
- 35 mm hail stones at 97 km/h

Comprehensive products and system certificates
- IEC 61215/ IEC 61730/ UL 1703/ IEC 61701/ IEC 62716
- ISO 9001: Quality Management System
- ISO 14001: Environmental Management System
- ISO 14064: Greenhouse Gases Emissions Verification
- OHSAS 18001: Occupation Health and Safety Management System

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### THE DUOMAX MODULE

#### TSM-PEG14

### ELECTRICAL DATA (STC)
- Peak Power Watts-$P_{MAX}$ (Wp)*
  - 310
  - 315
  - 320
  - 325
- Power Output Tolerance-$P_{MAX}$ (%) 0 ~ +5
- Maximum Power Voltage-$V_{MAX}$ [V]
  - 36.8
  - 37.0
  - 37.2
  - 37.4
- Maximum Power Current-$I_{MAX}$ [A]
  - 8.42
  - 8.51
  - 8.60
  - 8.69
- Open Circuit Voltage-$V_{OC}$ [V]
  - 45.6
  - 45.7
  - 45.9
  - 46.1
- Short Circuit Current-$I_{SC}$ [A]
  - 8.91
  - 8.99
  - 9.07
  - 9.14
- Module Efficiency $\eta$ [%]
  - 15.8
  - 16.1
  - 16.3
  - 16.6

STC: Irradiance 1000 $W/m^2$, Cell Temperature 25°C, Air Mass AM 1.5.
*Measuring tolerance: ±3%.

### ELECTRICAL DATA (NOCT)
- Maximum Power-$P_{MAX}$ (Wp)
  - 230
  - 234
  - 238
  - 241
- Maximum Power Voltage-$V_{MAX}$ [V]
  - 34.1
  - 34.3
  - 34.4
  - 34.7
- Maximum Power Current-$I_{MAX}$ [A]
  - 6.75
  - 6.82
  - 6.92
  - 6.94
- Open Circuit Voltage-$V_{OC}$ [V]
  - 42.3
  - 42.4
  - 42.6
  - 42.6
- Short Circuit Current-$I_{SC}$ [A]
  - 7.20
  - 7.26
  - 7.32
  - 7.38

NOCT: Irradiance at 800 $W/m^2$, Ambient Temperature 20°C, Wind Speed 1 m/s.

### MECHANICAL DATA
- Solar Cells
  - Multicrystalline 156 x 156 mm (6 inches)
- Cell Orientation
  - 72 cells (6 x 12)
- Module Dimensions
  - 1978 x 992 x 6 mm (77.9 x 39.1 x 0.236 inches)
  - 1984 x 998 x 7.6 mm with corner (78.1 x 39.3 x 0.299 inches)
  - 1984 x 998 x 25 mm with corner and junction box (78.1 x 39.3 x 0.984 inches)
- Weight
  - 28.0 kg (61.7 lb)
- Front Glass
  - 2.5 mm (0.10 inches), High Transmission, AR Coated Heat Strengthened Glass
- EVA
  - White
- Back Glass
  - 2.5 mm (0.10 inches), Heat Strengthened Glass
- Frame
  - Frameless
- J-Box
  - IP 67 rated or IP 68 rated
- Cables
  - Photovoltaic Technology Cable 4.0 mm² (0.006 inches²)
    - Portrait: 140/285 mm (5.5/11.2 inches)
    - Landscape: 1400/1400 mm (55.1/55.1 inches)
- Connector
  - UTX

### TEMPERATURE RATINGS
- Nominal Operating Cell Temperature (NOCT)
  - 44°C (±2°C)
- Temperature Coefficient of $P_{MAX}$
  - -0.41%/°C
- Temperature Coefficient of $V_{OC}$
  - -0.32%/°C
- Temperature Coefficient of $I_{SC}$
  - 0.05%/°C

### MAXIMUM RATINGS
- Operational Temperature
  - -40~+85°C
- Maximum System Voltage
  - 1500V DC (IEC)
  - 1000V DC (UL)
- Max Series Fuse Rating
  - 15A

### WARRANTY
- 10 year Product Workmanship Warranty
- 30 year Linear Power Warranty
  (Please refer to product warranty for details)

### PACKAGING CONFIGURATION
- Modules per box: 30 pieces
- Modules per 40° container: 660 pieces

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**CAUTION:** READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

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