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# PowerTilt™

## Key Attributes and Specifications (10 Panel Array)

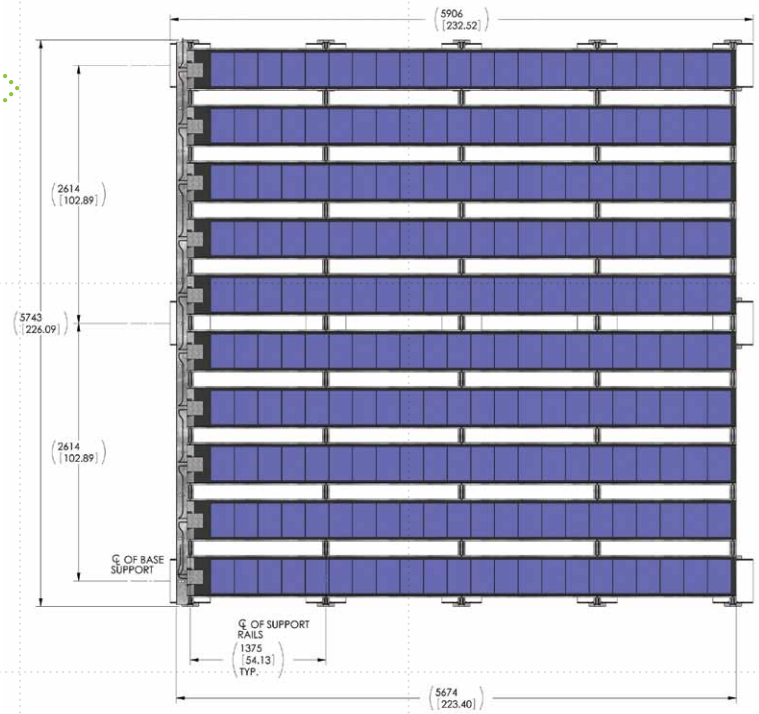
| | |
|---|---|
| **Total System Weight** | 740 lbs |
| **Power** | 1440 Watts |
| **Wind Rating** | 120 mph (193 kph) |
| **Tilt** | 15 degrees for increased performance |
| **Roof Penetration** | None |
| **Roof Attachment** | Ballasted shown |
| **Weighted Area** | 359.0 $ft^2$ |
| **PV Area** | 334.9 $ft^2$ |
| **Power Density** | 4.30 $Wp/ft^2$ |
| **Number of Base Supports** | 15 |
| **Minimum Ballasted System Density*** | 4.09 $lbs/ft^2$ |
| **Unballasted Point Load** | 49.33 lbs |
| **Warranty** | Limited power output warranty: 92% at 10 years; 84% at 20 years; 80% at 25 years (of minimum power). 5-Year limited product warranty. |

**The minimum value represents an array oriented <10° to the building edges at a 90mph wind speed.*

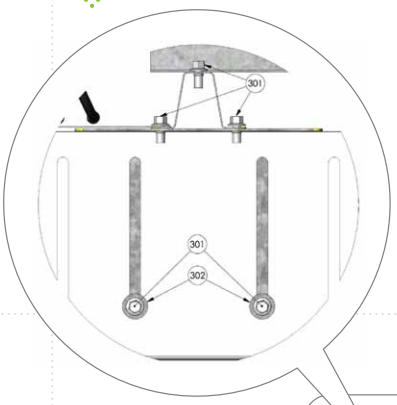
## Concrete-Ballasted

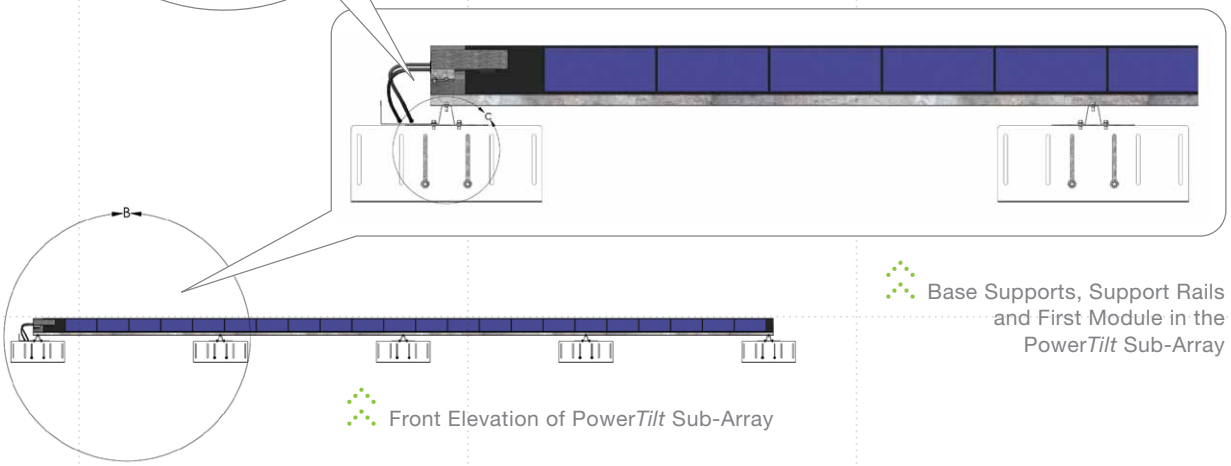
PowerTilt photovoltaic panels can be applied with a simple, concrete-ballasted attachment, adjustable to conform to uneven rooftop surfaces.

Overhead View Showing Spacing Between Power*Tilt* Modules




Detail View of Base Support and Support Rail




Base Supports, Support Rails and First Module in the Power*Tilt* Sub-Array




Front Elevation of Power*Tilt* Sub-Array

| Item # | Qty. | Description |
|---|---|---|
| 1 | 5 | Support Rail |
| 2 | 30 | Riser |
| 3 | 15 | Base Support |
| 4 | 1 | Wiring Tray |
| 5 | 10 | Tilt Pan |
| 6 | 10 | Terminal Housing Cover |
| 7 | 10 | Nut Member |
| | | |
| 201 | 10 | Solar Panel, 22L |
| 202 | 20 | Grommet Clamp |
| 203 | 20 | Cable Tie, 6" Black |
| 204 | 20 | Strain Relief Adhesive Mounting Pad |
| | | |
| 301 | 220 | Hex Head, Thread Rolling Screw, M6 x 12 LG |
| 302 | 60 | M6, Flat Washer, 18mm O.D. |
| 303 | 70 | Hex Head, Thread Rolling screw, M5 x 12 LG |
| | | |
| 401 | 10 | Prod Label PT 144 |

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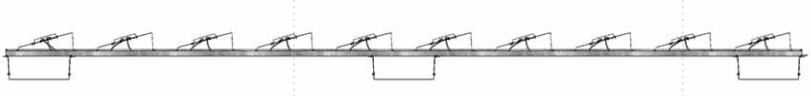
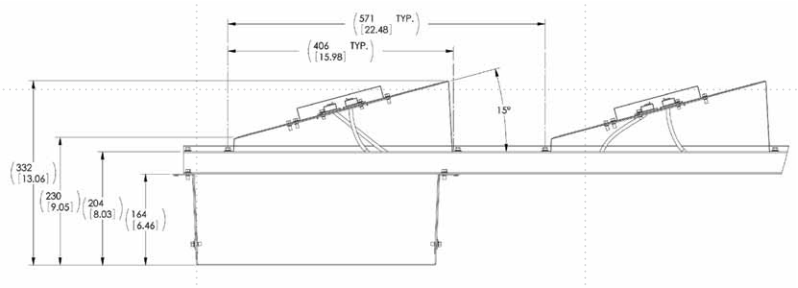
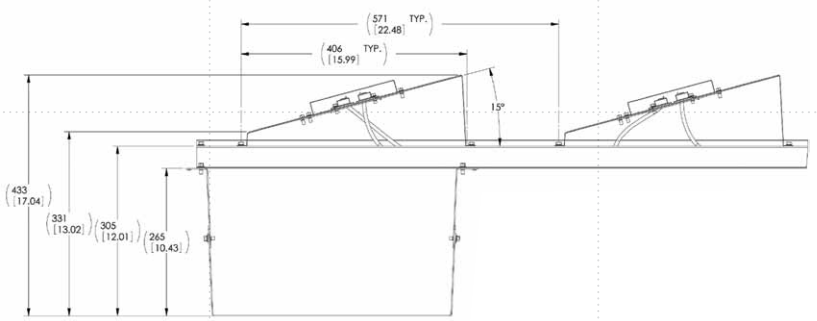


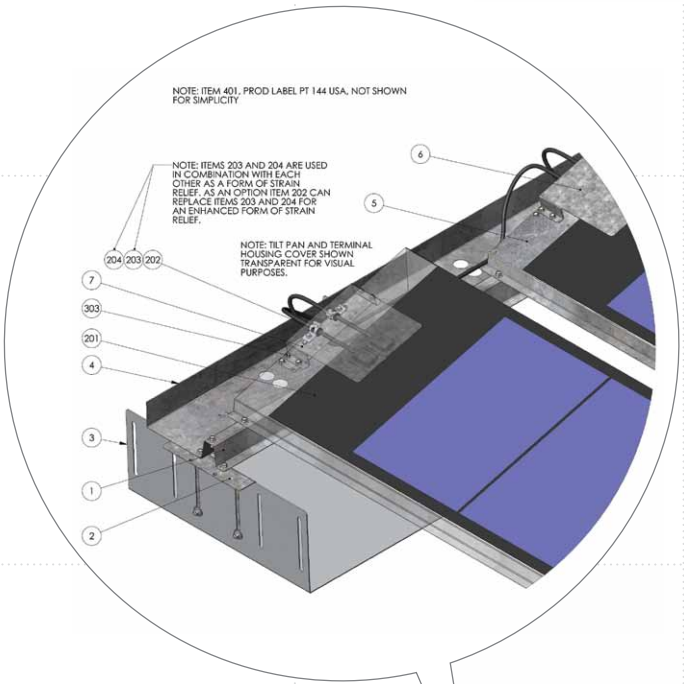
Side Elevation of Power*Tilt* Sub-Array

Minimum Height Position of Base Support

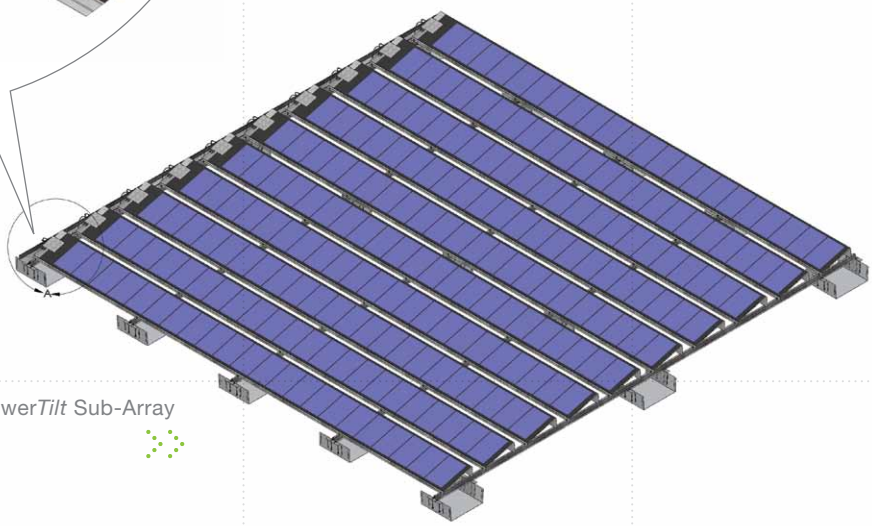



Maximum Height Position of Base Support

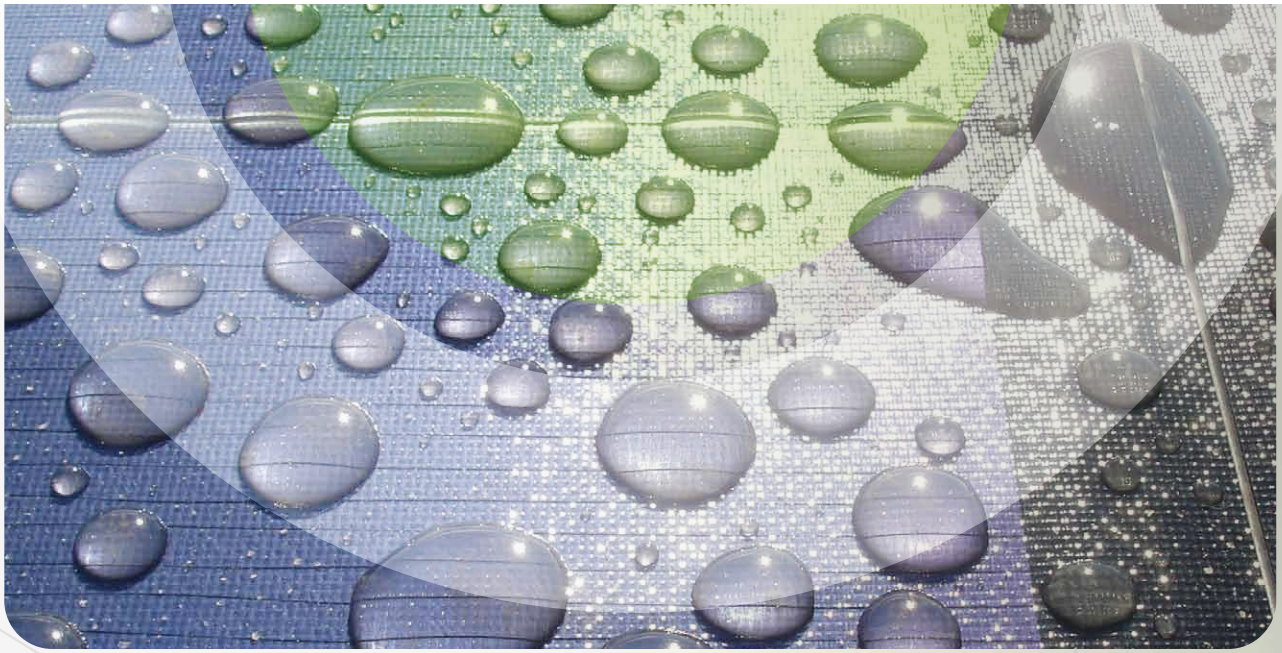



Detail View of Base Support, Support Rail, Tilt Pan and Terminal Housing Cover




45° Overhead View of Power*Tilt* Sub-Array



## Electrical Specifications

### STC

**(Standard Test Conditions)**
**(1000 W/m², AM 1.5, 25 °C Cell Temp.)**

**Maximum Power ($P_{max}$): 144 W**
**Voltage at Pmax ($V_{mp}$): 33.0 V**
**Current at Pmax ($I_{mp}$): 4.36 A**
**Short-circuit Current ($I_{sc}$): 5.3 A**
**Open-circuit Voltage ($V_{oc}$): 46.2 V**
**Maximum Series Fuse Rating: 8 A**

### NOCT

**(Nominal Operating Cell Temp.)**
**(800 W/m², AM 1.5, 1 m/sec. wind)**

### Temperature Coefficients

**(at AM 1.5, 1000 W/m2 irradiance)**

**Temperature Coefficient (TC) of $I_{sc}$: 0.001/K(0.10%/C)**

**Temperature Coefficient (TC) of $V_{oc}$: -0.0038/K (-0.38%/C)**

**Temperature Coefficient (TC) of $P_{max}$: -0.0021/K (-0.21%/C)**

**Temperature Coefficient (TC) of $I_{mp}$: 0.001/K (0.10%/C)**

**Temperature Coefficient (TC) of $V_{mp}$: -0.0031/K (-0.31%/C)**

**y = yreference • [1 + TC • (T- Treference)]**

**Notes:**

**1. During the first 8-10 weeks of operation, electrical output exceeds specified ratings. Power output may be higher by 15%, operating voltage may be higher by 11% and operating current may be higher by 4%.**

**2. Electrical specifications tolerance for Pmax is +/-5% and for other parameters is +/-10%. Electrical specifications are based on measurements performed at standard test conditions of 1000 W/m2 irradiance, air mass 1.5, and cell temperature of 25ºC (per ASTM E892) after long-term stabilization.**

**3. Actual performance may vary up to 10% from rated power due to low temperature operation, spectral and other related effects. Maximum system open-circuit voltage not to exceed 600 VDC (NEC rating)**

**4. Specifications subject to change without notice.**

## Global Contact Information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**To learn more about Power*Tilt* and other *UNI-SOLAR* products, please call 1.800.528.0617, or visit us at uni-solar.com**