



UNI-SOLAR.

# PowerTilt™

## Key Attributes and Specifications (10 Panel Array)

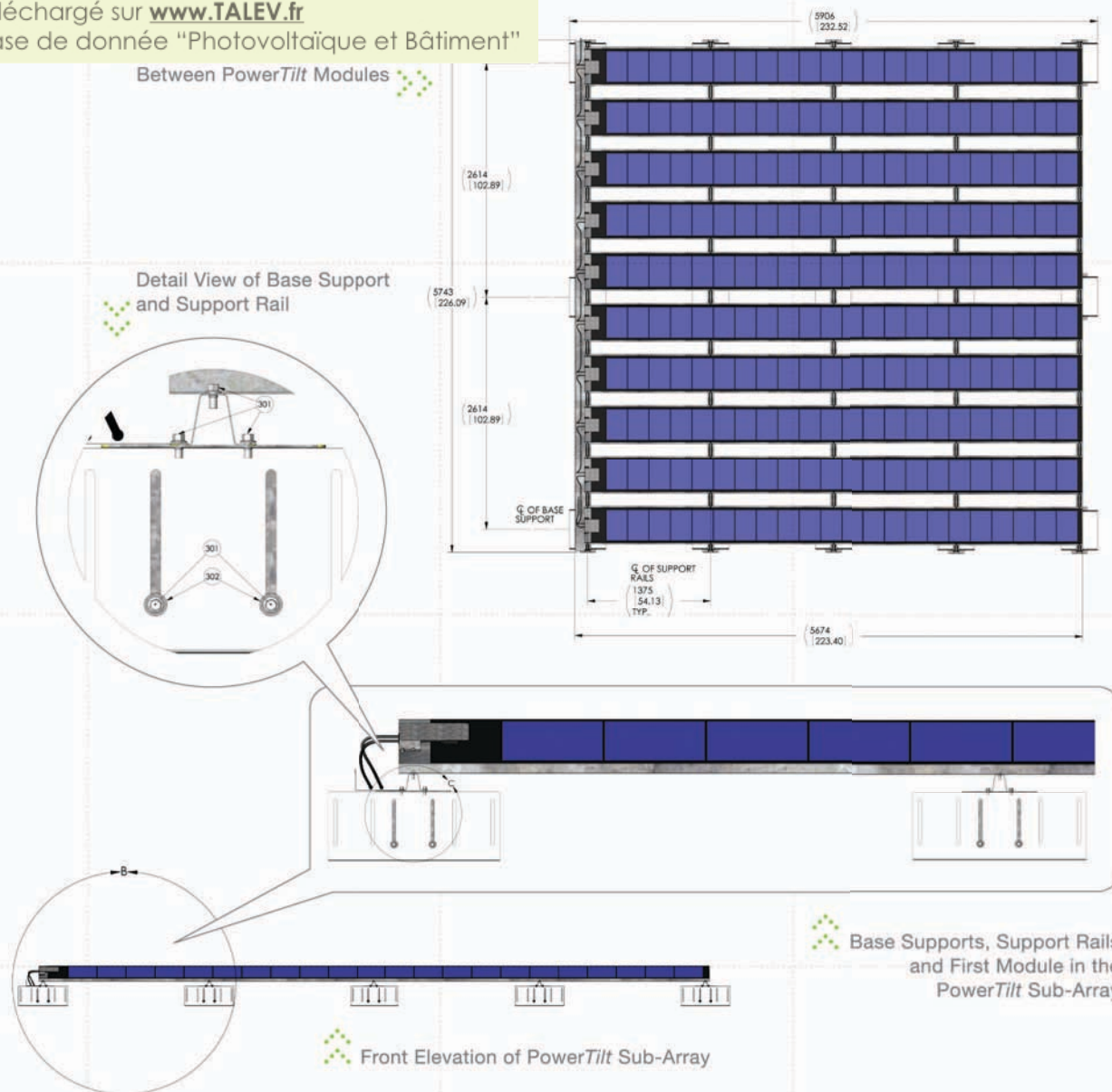
<b>Total System Weight</b>	740 lbs
<b>Power</b>	1440 Watts
<b>Wind Rating</b>	120 mph (193 kph)
<b>Tilt</b>	15 degrees for increased performance
<b>Roof Penetration</b>	None
<b>Roof Attachment</b>	Ballasted shown
<b>Weighted Area</b>	359.0 ft <sup>2</sup>
<b>PV Area</b>	334.9 ft <sup>2</sup>
<b>Power Density</b>	4.30 Wp/ft <sup>2</sup>
<b>Number of Base Supports</b>	15
<b>Minimum Ballasted System Density*</b>	4.09 lbs/ft <sup>2</sup>
<b>Unballasted Point Load</b>	49.33 lbs/ft <sup>2</sup>
<b>Warranty</b>	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



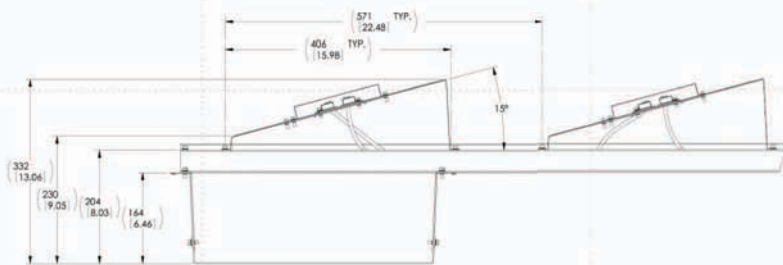
PowerTilt photovoltaic panels can be applied with a simple, concrete-ballasted attachment, adjustable to conform to uneven rooftop surfaces.



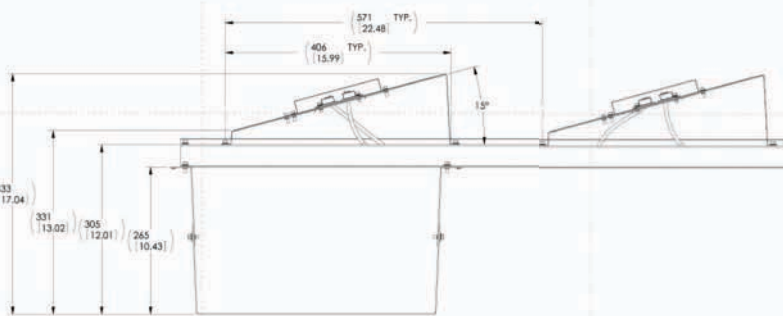
Item #	Qty.	Description
1	5	Support Rail
2	30	Riser
3	15	Base Support
4	1	Wiring Tray
5	10	Tilt Pan
6	10	Terminal Housing Cover
7	10	Nut Member
201	10	Solar Panel, 22L
202	20	Grommet Clamp
203	20	Cable Tie, 6" Black
204	20	Strain Relief Adhesive Mounting Pad
301	220	Hex Head, Thread Rolling Screw, M6 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



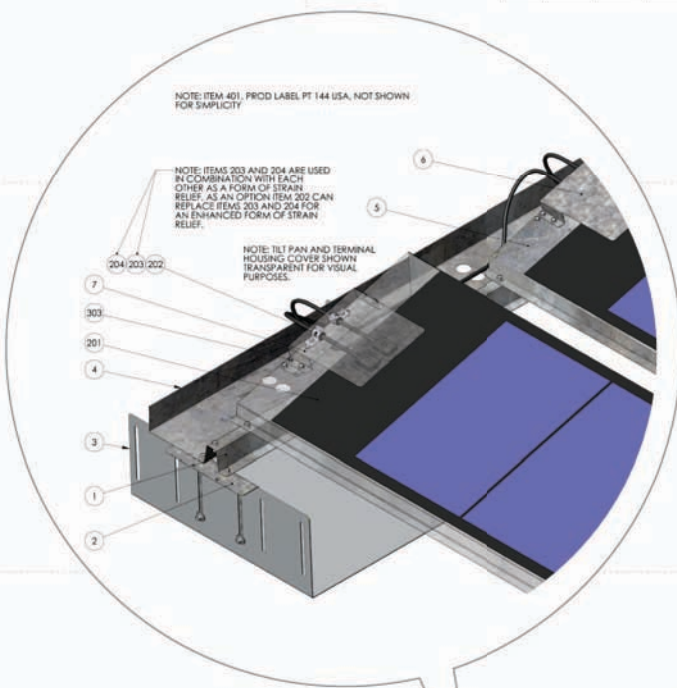
Side Elevation of PowerTilt Sub-Array



Minimum Height Position of Base Support

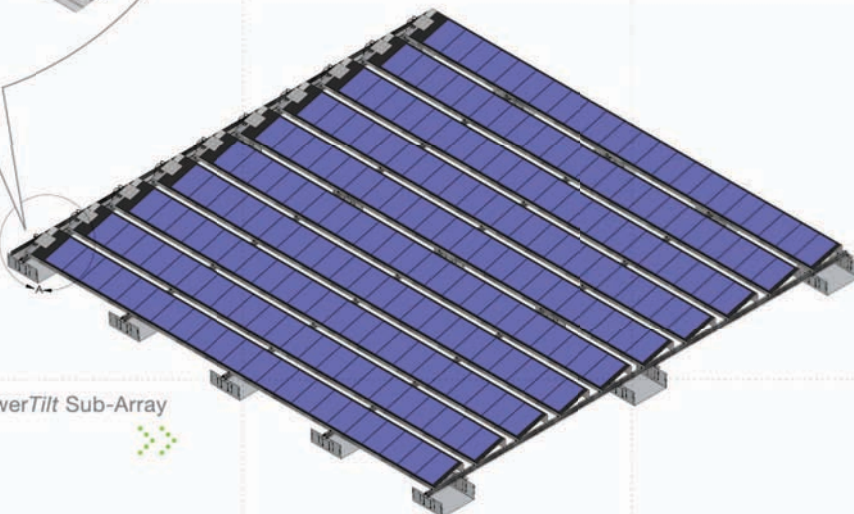


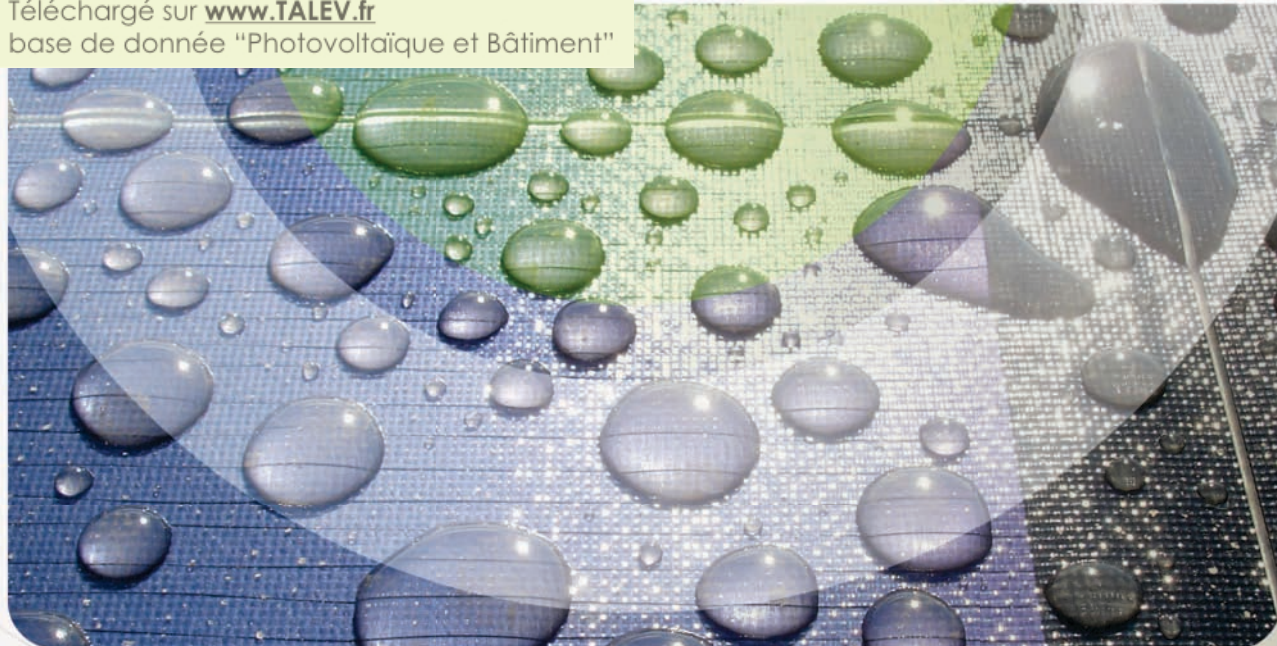
Maximum Height Position of Base Support



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

45° Overhead View of PowerTilt Sub-Array





### Electrical Specifications

#### STC

(Standard Test Conditions)  
(1000 W/m<sup>2</sup>, AM 1.5, 25 °C Cell Temp.)

Maximum Power (P<sub>max</sub>): 144 W  
Voltage at P<sub>max</sub> (V<sub>mp</sub>): 33.0 V  
Current at P<sub>max</sub> (I<sub>mp</sub>): 4.36 A  
Short-circuit Current (I<sub>sc</sub>): 5.3 A  
Open-circuit Voltage (V<sub>oc</sub>): 46.2 V  
Maximum Series Fuse Rating: 8 A

#### Temperature Coefficients

(at AM 1.5, 1000 W/m<sup>2</sup> irradiance)

Temperature Coefficient (TC) of I<sub>sc</sub>:  
0.001/K (0.10%/C)

Temperature Coefficient (TC) of V<sub>oc</sub>:  
-0.0038/K (-0.38%/C)

Temperature Coefficient (TC) of P<sub>max</sub>:  
-0.0021/K (-0.21%/C)

Temperature Coefficient (TC) of I<sub>mp</sub>:  
0.001/K (0.10%/C)

Temperature Coefficient (TC) of V<sub>mp</sub>:  
-0.0031/K (-0.31%/C)

y = y<sub>reference</sub> • [1 + TC • (T - T<sub>reference</sub>)]

#### NOCT

(Nominal Operating Cell Temp.)  
(800 W/m<sup>2</sup>, AM 1.5, 1 m/sec. wind)

#### 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 P<sub>max</sub> is +/-5% and for other parameters is +/-10%. Electrical specifications are based on measurements performed at standard test conditions of 1000 W/m<sup>2</sup> irradiance, air mass 1.5, and cell temperature of 25°C (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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**PowerTilt™**

To learn more about PowerTilt and other UNI-SOLAR products,  
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