



Image shown may not reflect actual configuration

## Cat® Photovoltaic Module PVT117

The Cat® thin film high photovoltaic efficiency modules provide a proven performance advantage over conventional crystalline silicon solar modules. Generating more energy than competing modules with the same power rating, the Cat PVT117 module delivers superior performance and reliability to our customers. The photovoltaic panels lower your cost of energy – reducing utility bills for grid-connected systems and offsetting the cost of fuel and maintenance for generator set powered facilities. And when integrated with Cat energy storage and microgrid master controls, the renewable energy can replace virtually all of the energy from traditional sources.

## Features

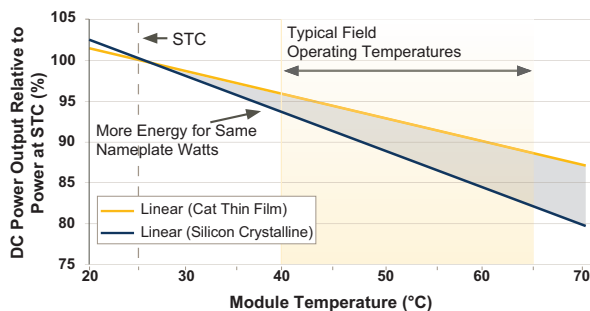
### Proven Energy Yield Advantage

- 17.0% maximum efficiency
- -0/+5W positive power tolerance
- Generates more energy than conventional crystalline silicon solar.
- Higher yield when compared to typical c-SI modules, resulting in more installed capacity per square meter.
- Superior temperature coefficient, better spectral response in humid conditions and better shading response means more specific annual energy yield than c-SI modules.

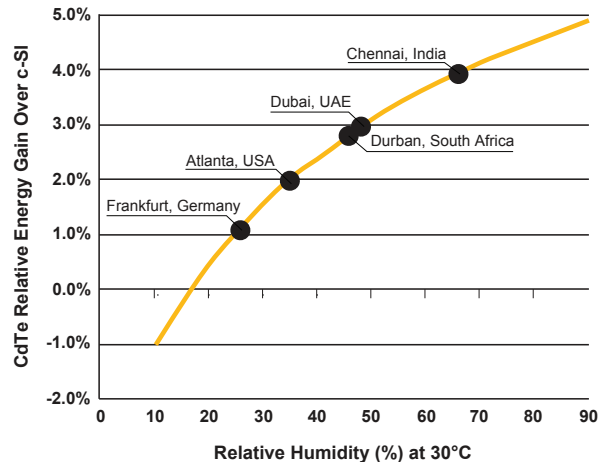
### Advanced Performance and Reliability

- Compatible with advanced 1500V plant architectures.
- Independently tested to pass accelerated life and stress tests beyond industry standards
- Highly predictable energy in all climates and applications
- Independently certified for reliable performance in high temperature, high humidity, extreme desert and coastal environments

### SUPERIOR TEMPERATURE COEFFICIENT

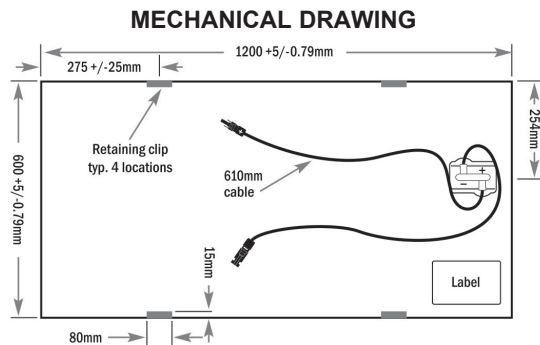


### SUPERIOR SPECTRAL RESPONSE



## Technical Data

Mechanical Description	
Length	1200 mm (47.2 in)
Width	600 mm (23.6 in)
Thickness	6.8 mm (0.27 in)
Weight	12 kg (26.5 lbs)
Area	0.72 m <sup>2</sup>
Leadwire	2.5 mm <sup>2</sup> , 610 mm
Connectors	488-1778 (female) 488-1779 (male)
Bypass Diode	None
Cell Type	Thin-film CdTe semiconductor, up to 216 cells
Frame Material	None
Front Glass	3.2 mm heat strengthened
Back Glass	3.2 mm tempered
Encapsulation	Laminate material with edge seal
Load Rating	2400 Pa



### Certification and Tests

- Thresher Test, Long-Term Sequential Test, and ATLAS 25+
- IEC 61646 1500V, IEC 61730 1500V, CE
- IEC 61701 Salt Mist Corrosion, IEC 60068-2-68 Dust and Sand Resistance
- ISO 9001:2008 and ISO 14001:2004
- UL 1703 and ULC 1703 Listed Class B Fire Rating (Class A Spread of Flame)
- CSI Eligible (CA-USA), FSEC (FL-USA), MCS (UK), CEC Listed (Australia), SII (Israel), InMetro (Brazil)

Module Rating at Standard Test Conditions (STC) 1000 W/m <sup>2</sup> , AM 1.5, 25°C		
Nominal Values	PVT117	
Nominal Power (-0/+5 W)	P <sub>MPP</sub> (W)	117.5
Voltage at P <sub>MAX</sub>	V <sub>MPP</sub> (V)	70.1
Current at P <sub>MAX</sub>	I <sub>MPP</sub> (A)	1.68
Open Circuit Voltage	V <sub>OC</sub> (V)	88.1
Short Circuit Current	I <sub>SC</sub> (A)	1.83
Module Efficiency	%	16.3
Maximum System Voltage	V <sub>SYS</sub> (V)	1500
Limiting Reversing Current	I <sub>R</sub> (A)	4.0
Maximum Series Fuse	I <sub>CF</sub> (A)	4.0

Rating at Nominal Operating Cell Temperature of 45°C 800 W/m <sup>2</sup> , 20°C Air Temperature, AM 1.5, 1 m/w Wind Speed		
Nominal Power	P <sub>MPP</sub> (W)	89.0
Voltage at P <sub>MAX</sub>	V <sub>MPP</sub> (V)	65.9
Current at P <sub>MAX</sub>	I <sub>MPP</sub> (A)	1.35
Open Circuit Voltage	V <sub>OC</sub> (V)	83.2
Short Circuit Current	I <sub>SC</sub> (A)	1.5

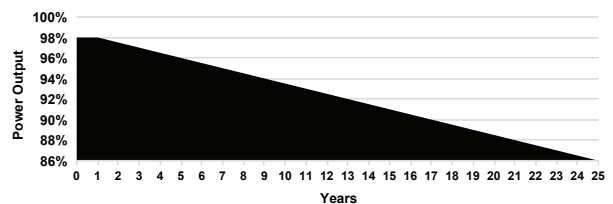
Temperature Characteristics		
Module Operating Range	(°C)	-40 to +85
Coefficient of P <sub>MPP</sub>	T <sub>K</sub> (P <sub>MPP</sub> )	-0.28%/°C
Coefficient of V <sub>OC</sub>	T <sub>K</sub> (V <sub>OC</sub> )	-0.28%/°C
Coefficient of I <sub>SC</sub>	T <sub>K</sub> (I <sub>SC</sub> )	+0.04%/°C

### End of Life Recycling

- Recycling services available through the Caterpillar industry-leading recycling program or customer selected third-party recycler.

### Module Warranty

- 10-year limited product warranty
- 25-year power assurance program



[www.cat.com/electricpower](http://www.cat.com/electricpower)

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