

Image shown may not reflect actual configuration

Cat[®] Photovoltaic Module PVT117

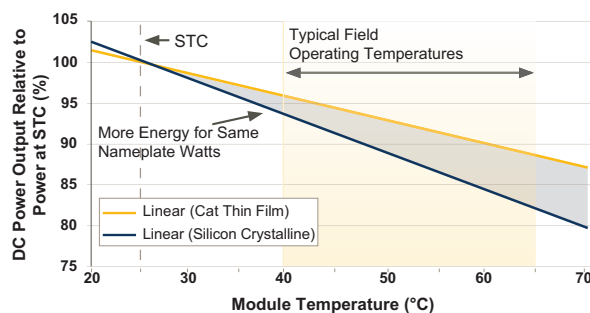
The Cat[®] thin film high photovoltaic efficiency modules provide a proven performance advantage over conventional crystalline silicon solar modules. Generating more energy than competing modules with the same power rating, the Cat PVT117 module delivers superior performance and reliability to our customers. 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.

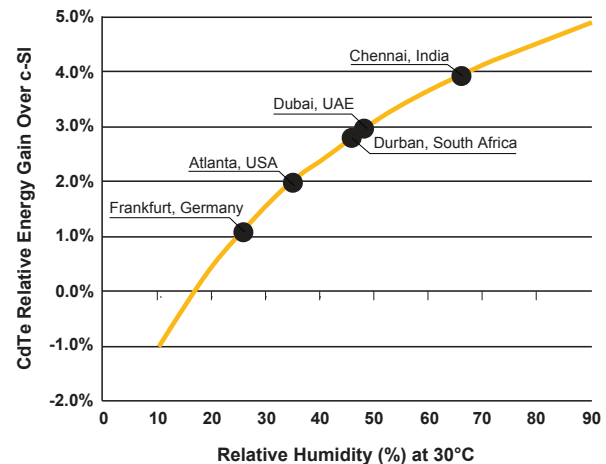
SUPERIOR TEMPERATURE COEFFICIENT



Advanced Performance and Reliability

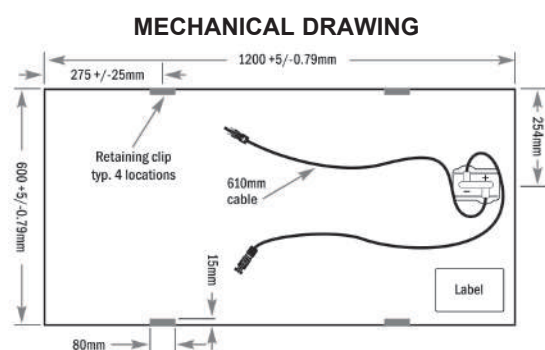
- Compatible with advanced 1500V plant architectures.
- Independently tested to pass accelerated life and stress tests beyond industry standards
- Highly predictable energy in all climates and applications
- Independently certified for reliable performance in high temperature, high humidity, extreme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

SUPERIOR 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 ² |
| Leadwire | 2.5 mm ² , 610 mm |
| Connectors | 488-1778 (female) / 488-1779 (male) (Multi-contact MC4) |
| 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, Type 10, Class B FireRating (Class A Spread of Flame)
- CSI Eligible (CA-USA), FSEC (FL-USA), MCS (UK), CEC Listed (Australia), SII (Israel), InMetro (Brazil)

Manufacturing Sources

- U.S., Malaysia, or Vietnam Sourced

Module Rating at Standard Test Conditions (STC) 1000 W/m², AM 1.5, 25°C

| Nominal Values | PVT117 | |
|-----------------------------|----------------------|-------------------|
| Nominal Power (-0/+5 W) | P _{MPP} (W) | 117.5 |
| Voltage at P _{MAX} | V _{MPP} (V) | 70.1 |
| Current at P _{MAX} | I _{MPP} (A) | 1.68 |
| Open Circuit Voltage | V _{OC} (V) | 88.1 |
| Short Circuit Current | I _{SC} (A) | 1.83 |
| Module Efficiency | % | 16.3 |
| Maximum System Voltage | V _{SYS} (V) | 1500 ¹ |
| Limiting Reversing Current | I _R (A) | 4.0 |
| Maximum Series Fuse | I _{CF} (A) | 4.0 |

Rating at Nominal Operating Cell Temperature of 45°C 800 W/m², 20°C Air Temperature, AM 1.5, 1 m/w Wind Speed

| | | |
|-----------------------------|----------------------|------|
| Nominal Power | P _{MPP} (W) | 89.0 |
| Voltage at P _{MAX} | V _{MPP} (V) | 65.9 |
| Current at P _{MAX} | I _{MPP} (A) | 1.35 |
| Open Circuit Voltage | V _{OC} (V) | 83.2 |
| Short Circuit Current | I _{SC} (A) | 1.5 |

Temperature Characteristics

| | | |
|---------------------------------|------------------------------------|------------|
| Module Operating Range | (°C) | -40 to +85 |
| Coefficient of P _{MPP} | T _K (P _{MPP}) | -0.28%/°C |
| Coefficient of V _{OC} | T _K (V _{OC}) | -0.28%/°C |
| Coefficient of I _{SC} | T _K (I _{SC}) | +0.04%/°C |

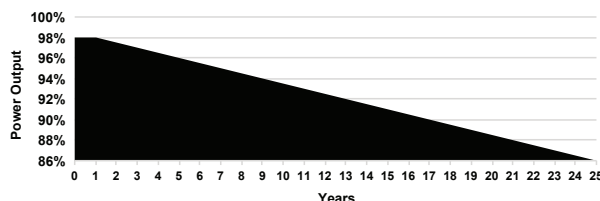
1. Application Class A for 1000V (class II), Application Class B for 1500V (class 0) with MC4; Application Class A for 1000V and 1500V (class II) with MC4-EVO 2

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

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