



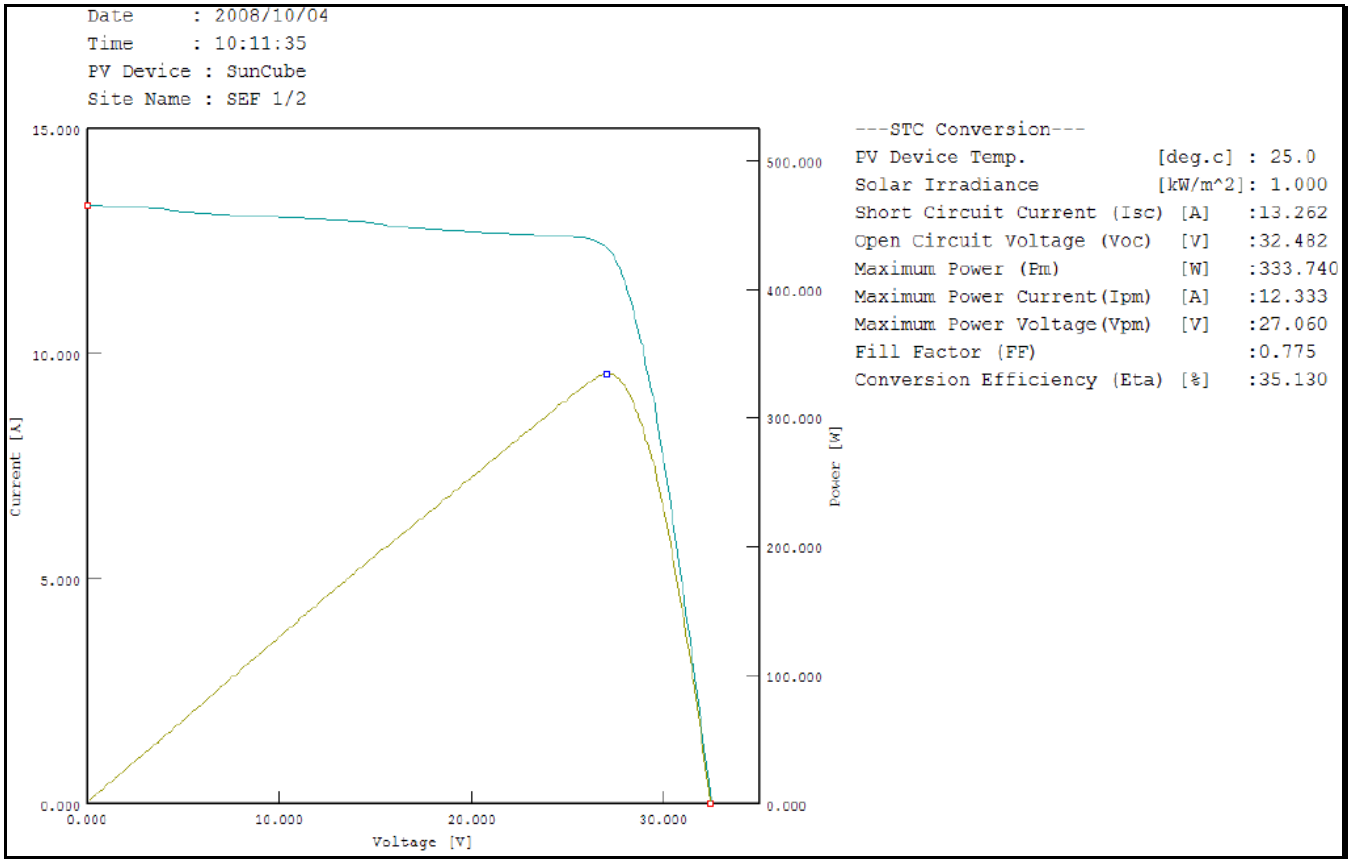
SunCube™ Specifications

03 September 2009



- Module Size H x W x D:	1,064 mm x 1,064 mm x 395 mm
- Weight:	~35kg
- Material of construction:	Aluminium, Stainless Steel, Brass, Acrylic & Acetyl. All material rated for external use.
- Maximum wind speed:	100 kph, Stow 140 kph, Storm Stow 180 kph
- Ambient air temperature operational range:	-20°C to +60°C
- Maximum power point (P_{pm}):	300 Wdc STC minimum rating
- Operating voltage (V_{Pm}):	27.1 Vdc STC
- Operating current (I_{Pm}):	12.3 Adc STC
- Open circuit voltage (V_{oc}):	32.5 Vdc STC
- Short circuit current (I_{sc}):	13.3 Adc STC
- Bypass Diode:	2 per cell, 18 per SunCube™
- Concentration factor:	1,370 Suns geometric
- Module efficiency:	35.1% STC, On Sun ~31%, Cell ~40%
- Temperature of hottest point of aluminum skin at STC:	~65 deg C
- Tracker operating power:	12 Vdc with inbuilt battery backup
- Tracker power consumption:	< 0.25 W Dc
- Tracker resolution open loop:	Within 0.1 deg
- Rotation in Azimuth:	360° unrestricted
- Rotation in Altitude:	360° unrestricted
- Overnight stow:	Facing 45 deg down to eliminate night soiling, frost and snow build-up
- Emcore cell warranty on power output:	20 years (within 80% of stated efficiency)
- Module life time:	20 years

- IV Curve and STC rating (Measured and calculated by Eko MP-160 Lab Quality IV Curve Tracer)



E&OE. Errors and Omissions Excepted

SunCube™ Warranty

(27th April 2009)

1. Limited Product Warranty – 5 Year Repair, Replacement or Refund

Green and Gold Energy Pty., Ltd. ("GGE") warrants that for 5 years from the date of delivery to GGE's customer ("Customer"), its SunCube™ shall be free from defects in materials and workmanship under normal application, installation, use and service conditions.

If the SunCube™ fails to conform to this warranty, then GGE will, at its option, either repair or replace the product, or refund the purchase price as paid by GGE's Customer ("Purchase Price").

The repair, replacement or refund shall be the sole and exclusive remedy provided under the Limited Product Warranty and shall not extend beyond the 5 year term set forth herein.

This Limited Product Warranty does not warrant a specific power output, which is covered under clause 2 ("Limited Power Warranty").

2. Limited Power Warranty

GGE warrants that every SunCube™ shipped to the Customer will exhibit at least 300 Wmp rating when measured under STC test conditions of 1,000 W / m² DNI solar input, cell temperature of 25 deg C and AM1.5 solar spectrum.

GGE additionally warrants that if, for 20 years from the date of delivery of the SunCube™ to the Customer, any SunCube™ exhibits a STC power output which has degraded to be less than 80% of 300 Wmp STC, provided that such loss in power is determined by GGE (at its sole and absolute discretion) to be due to defects in material or workmanship, GGE will replace such loss in power by either:

1. providing to the Customer additional SunCube/s™ to make up such loss in power
2. providing monetary compensation equivalent to the cost of additional SunCubes™ required to make up such loss in power
3. repairing or replacing the defective SunCube™

at the sole and exclusive option of GGE.

3. Exclusions and limitations

Warranty claims must be filed within the applicable Warranty period and may only be made by, or on the behalf of, the original Customer.

The Limited Warranties do not apply to any of the following:

1. SunCubes™, which in GGE's absolute judgment have been subjected to: misuse, abuse, neglect or accident; alteration, improper installation, application or removal (including but not limited to installation, application or removal by any party other than a GGE licensee; non-observance of GGE's installation procedures, users and / or maintenance instructions; repair or modifications by someone other than an approved service technician of GGE; power failure surges, lightning, flood, fire, accidental breakage or other events outside GGE's control.
2. Cosmetic defects stemming from normal wear and tear of the SunCubes™ materials.
3. SunCube™ lens damage as the result of improper cleaning, contact with any falling object or wind driven particle or wind driven object or chemical.
4. SunCubes™ installed in locations, which in GGE's absolute judgment may be subject to direct contact with salt water or salt water rich air.

The Limited Warranties do not cover any transportation costs for return of the SunCubes™, or for reshipment of any repaired or replaced SunCubes™, or cost associated with installation, removal or reinstallation of the SunCubes™.

Warranty claims will not apply if the type or serial number of the SunCube™ is altered, removed or made illegible.

4. Limitation of Warranty Scope

Subject to the limitations under applicable law, the limited warranties set forth herein are expressly in lieu of and exclude all other express or implied warranties, including but not limited to warranties of merchantability and of fitness for a particular purpose, use, or application and all other obligations or liabilities on the part of GGE, unless such other warranties, obligations or liabilities are expressly agreed to in writing, signed and approved by GGE

GGE shall have no responsibility or liability whatsoever for damage or injury to persons or property or for other loss or injury resulting from any cause whatsoever arising out of or related to the SunCube™, including without limitation, any defects in the SunCube™, or from installation.

Under no circumstances shall GGE be liable for incidental, consequential or special damages, howsoever caused. Loss of use, loss of profits, loss of production, loss of revenues are therefore specifically but without limitation excluded.

GGE's aggregate liability, if any, in damages or otherwise, shall not exceed the purchase price paid to GGE by the Customer, for the SunCube™ or service furnished, as the case may be which gave rise to the warranty claim.

5. Obtaining Warranty Performance

If you feel you have a justified claim covered by this Limited Warranty, immediately notify GGE. In addition, please enclose evidence of the date of delivery of the SunCube™.

The return of any SunCubes™ will not be accepted unless prior written authorization has been given by GGE.

E&OE. Errors and Omissions Excepted