evergreensolar
Think Beyond.

NEW

ES-A SERIES
photovoltaic panels

200, 205 & 210 W
Best power tolerance available

A range of high quality String Ribbon™ solar panels offering exceptional performance, cost effective installation and industry-leading environmental credentials made with our revolutionary wafer technology.

- **No power below nameplate**
  Never pay for power you're not getting
- **Get up to 5W more than nameplate***
  For enhanced field performance
- **Industry's lowest voltage per watt rating**
  Delivers the most cost-effective installs
- ***New* extended length cables**
  Eliminates home-run wiring
- ***New* MC® Type 4 clickable connectors**
  Makes connections between panels quickly and reliably
- **Most extensive range of mounting options**
  Allows installs virtually anywhere and anyhow
- **Smallest carbon footprint of any manufacturer**
  For the greenest of the green
- **100% cardboard-free packaging**
  Minimizes job site waste and disposal costs
- **5 year workmanship and 25 year power warranty****

*Maximum power up to 4.99 W above nameplate rating
For full details see the ***Evergreen Solar Limited Warranty* available on request or online.
This product is designed to meet UL 1703, UL 4703, UL Fire Safety Class C, IEC 61215 Ed.2 and IEC 61730 Class A standards.

Electrical Characteristics

Standard Test Conditions (STC)[1]

	ES-A-200 -fa2*	ES-A-205 -fa2*	ES-A-210 -fa2*	
P_{mp}[2]	200	205	210	W
$P_{tolerance}$	-0/+4.99	-0/+4.99	-0/+4.99	W
$P_{mp, max}$	204.99	209.99	214.99	W
$P_{mp, min}$	200.00	205.00	210.00	W
η_{min}	12.7	13.1	13.4	%
V_{mp}	18.1	18.4	18.7	V
I_{mp}	11.05	11.15	11.23	A
V_{oc}	22.5	22.8	23.1	V
I_{sc}	12.00	12.10	12.20	A

Nominal Operating Cell Temperature Conditions (NOCT)[3]

T_{NOCT}	44.8	44.8	44.8	°C
P_{max}	146.4	150.1	153.7	W
V_{mp}	16.7	16.8	17.0	V
I_{mp}	8.76	8.93	9.04	A
V_{oc}	20.5	20.7	21.0	V
I_{sc}	9.60	9.68	9.76	A

[1] 1000 W/m², 25°C cell temperature, AM 1.5 spectrum;
[2] Maximum power point or rated power
[3] 800 W/m², 20°C ambient temperature, 1 m/s wind speed, AM 1.5 spectrum
[*] f-framed, a-low voltage, 2-matt blue (textured) cells

Low Irradiance

The typical relative reduction of module efficiency at an irradiance of 200W/m² both at 25°C cell temperature and spectrum AM 1.5 is 0%.

Temperature Coefficients

αP_{mp}	-0.45	%/ °C
αV_{mp}	-0.43	%/ °C
αI_{mp}	-0.02	%/ °C
αV_{oc}	-0.32	%/ °C
αI_{sc}	-0.003	%/ °C

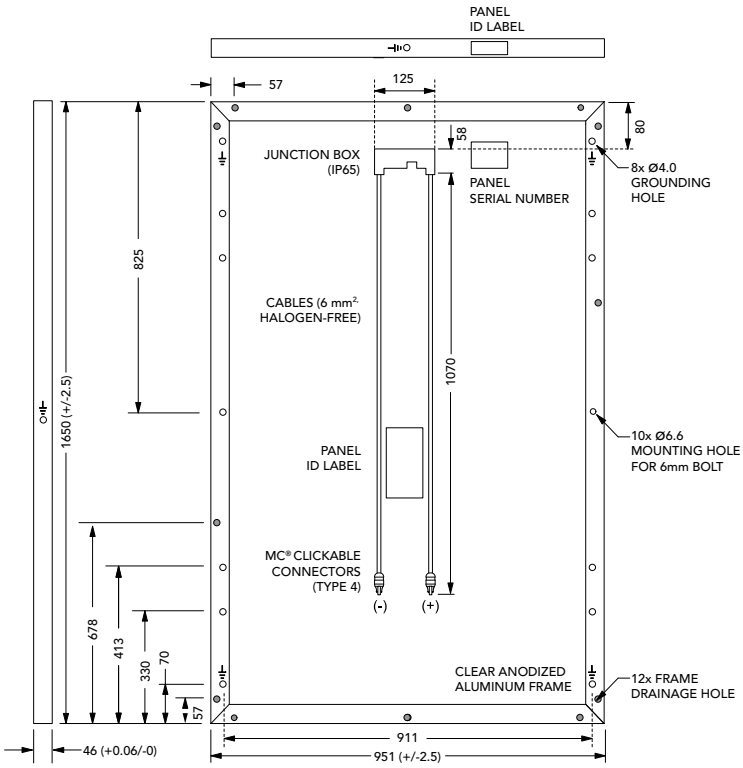
System Design

Maximum Reverse Current[4]	20	A
Maximum System Voltage (TÜV)	1000	V

[4] Also known as Series Fuse Rating.

ELECTRICAL EQUIPMENT
CHECK WITH YOUR INSTALLER

Mechanical Specifications



All dimensions in millimeters; panel weight 18.6 kg

Product constructed with 114 poly-crystalline silicon solar cells, anti-reflective tempered solar glass, EVA encapsulant, polymer back-skin and a double-walled anodized aluminum frame. Product packaging tested to International Safe Transit Association (ISTA) Standard 2B. All specifications in this product information sheet conform to EN50380. See the **Evergreen Solar Safety, Installation and Operation Manual** and **Mounting Design Guide** for further information on approved installation and use of this product.

Due to continuous innovation, research and product improvement, the specifications in this product information sheet are subject to change without notice. No rights can be derived from this product information sheet and Evergreen Solar assumes no liability whatsoever connected to or resulting from the use of any information contained herein.

Partner:

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