

Konarka Power Plastic® Solar Panel

Product Specifications

Konarka's KT 1500 (12 Watt–16 Volt) panel, which measures 1104mm x 653mm (43.5" x 25.7") is designed for remote power applications requiring 12 volts of power.

Material Characteristics

Power Plastic is a lightweight, thin-film photovoltaic material that is much more versatile in application than traditional silicon-based solar cells. Konarka's unique technology is based on patented photo-reactive materials made from conducting polymers and organic nano-engineered materials. These materials can be printed or coated onto flexible plastic using an inexpensive, energy-efficient manufacturing process.

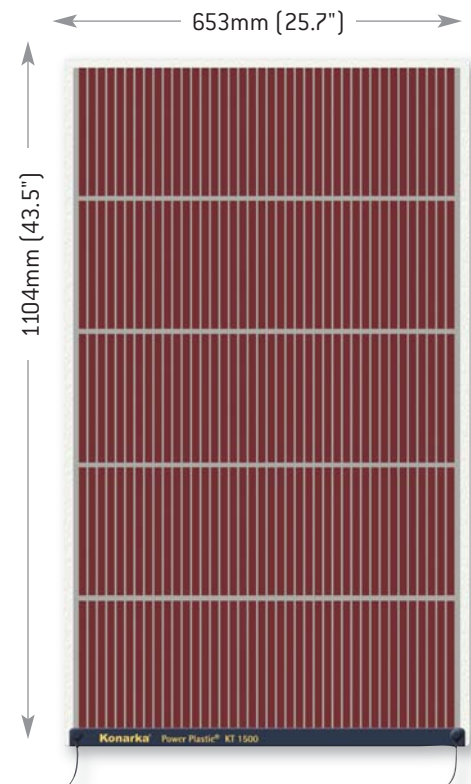
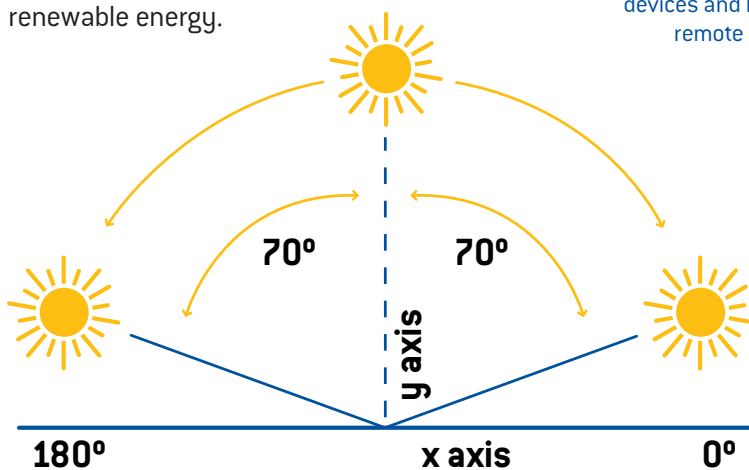
Power Plastic reacts with both indoor and outdoor light, and performs well on cloudy days, greatly expanding its potential applications. By integrating Power Plastic into everyday products, devices can produce their own low-cost source of renewable energy.

Construction Characteristics

- **Dimensions:**
Length: 1104mm (43.5"),
Width: 653mm (25.7"),
Depth: 0.5mm (.020")
- **Weight:** 657g (23oz)
- **Material thickness:**
0.5mm +/- 0.05mm
- **Operating temperature range:**
-20°C to 65°C (-4°F to 149°F)
- **Weatherproof materials**
- **By-pass/blocking diode optional**
- **User friendly design:**
easily mountable
- **Laminate encapsulation:**
high-light transmissive polymer
- **Output cables:** variety of solderable leads & connectors
- **Power terminals:**
 - *Option 1:* Direct bussing from PV module
 - *Option 2:* Konarka junction box with universal connection

Energy Independence

Power Plastic provides power for electronic devices and lighting in remote locations.



Konarka's Power Plastic collects energy at up to 70° off-axis from nearly sunrise to sunset. Can even be used on vertical surfaces.



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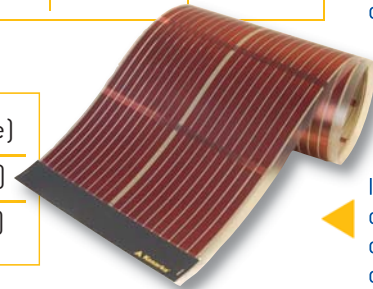
Outdoor Performance

Electrical Data	Units	1 Sun	1/2 Sun
(Pmax)	W	11.9	5.9
Impp	mA	733.6	361.7
Vmpp	V	15.9	16.4
Voc	V	22.3	21.5
Isc	mA	919.7	459.9

Indoor Performance (Fluorescent Light)

Electrical Data	Units	1,000 Lux	500 Lux
(Pmax)	mW	87.0	41.5
Impp	mA	7.3	3.6
Vmpp	V	12.0	11.4
Voc	V	16.0	15.5
Isc	mA	9.5	4.7

Konarka's PowerPlastic takes light in and delivers power out. When integrated into products, this direct current (DC) electrical energy can be used immediately, stored for later use, or converted to other forms of energy.



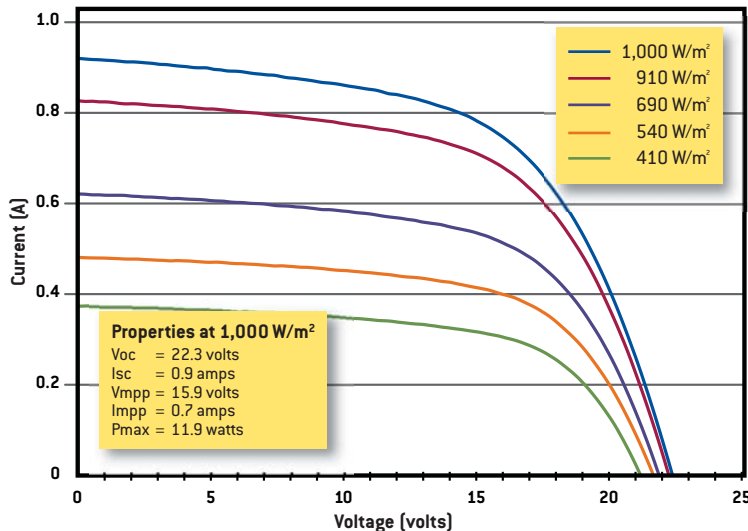
Temperature Range

Operating Temperature	-20°C to 65°C (-4°F to 149°F)
Storage Temperature	-40°C to 75°C (-40°F to 167°F)

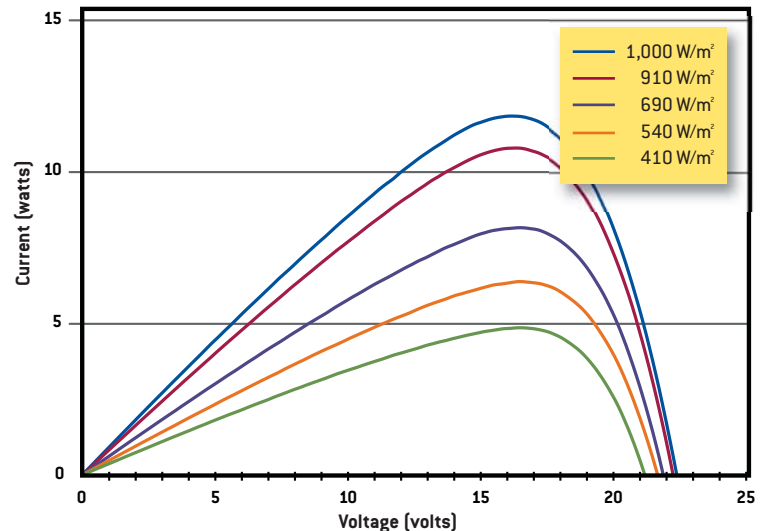
Temperature Coefficients

Pmax	+0.05% / °C (based on air temperature)
Vmpp	-0.27% / °C (based on air temperature)
Voc	-0.21% / °C (based on air temperature)

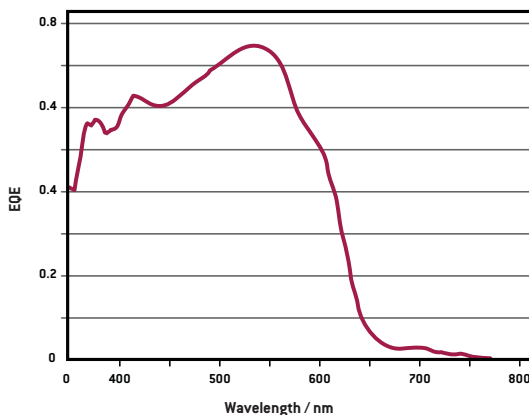
KT 12W – 16V Panel: IV Curves



KT 12W – 16V Panel: Power Curves



Power Plastic EQE



Power Plastic is available with a variety of connectors. [Shown here: KT 800 with weatherproof end caps.]

Headquarters: Lowell, MA, USA
Manufacturing: New Bedford, MA, USA
R&D Facilities: Lowell, MA, USA; Linz, Austria; Nurnberg, Germany

Learn more at www.konarka.com
 Or call +1-978-569-1400

