40 Series

Konarka Power Plastic® 40 Series
Product Specifications

Konarka Power Plastic 40 Series panels are ideal for charging batteries for portable electronic devices. Connect in series for increased voltage, and remote power applications.

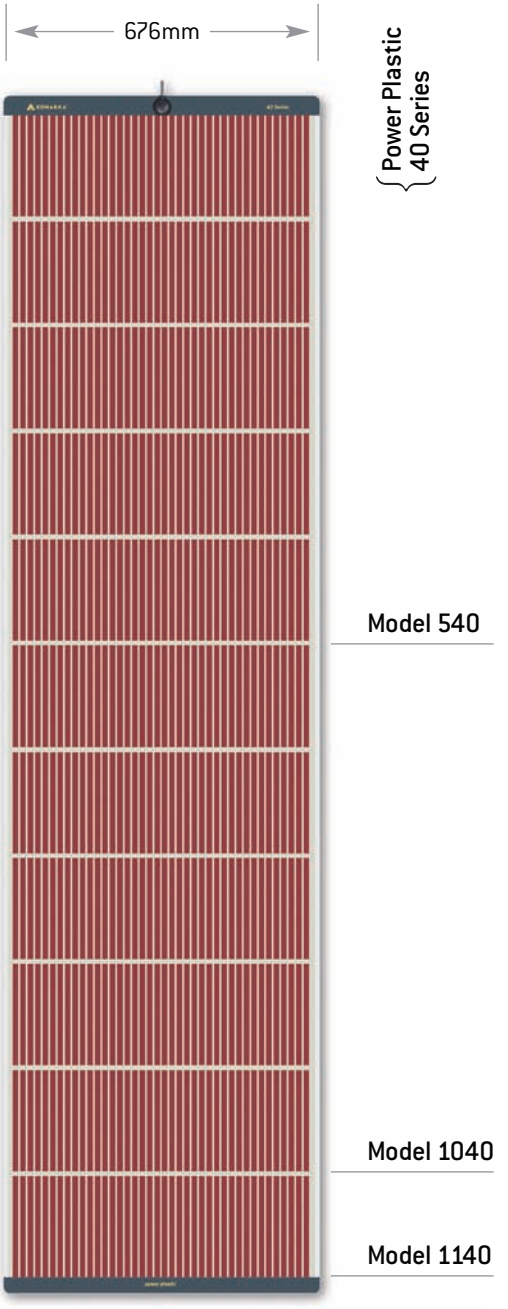
Material Characteristics

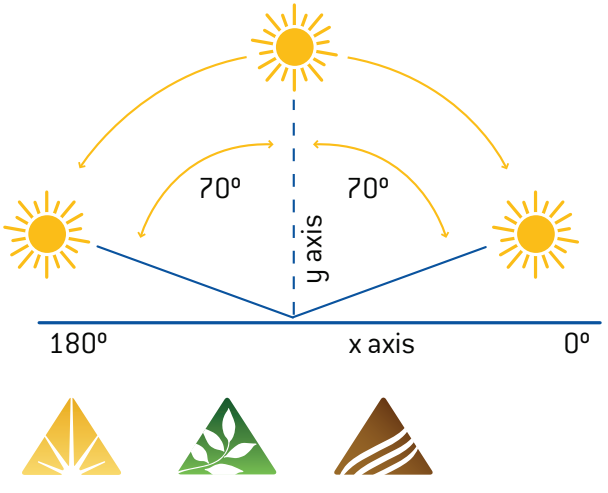
Power Plastic is a lightweight, thin-film photovoltaic material that is much more versatile in application than traditional solar panels. Konarka's unique technology is based on patented photo-reactive materials made from conductive polymers and organic nano-engineered materials. These materials can 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:** Refer to chart on reverse side.
- **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 integrated
- **Laminate encapsulation:** High light transmissive polymer
- **Power terminals:** *Option 1:* Barrel connector *Option 2:* Dual UL, TUV rated cables and connectors
- **Available with side grommets**





Konarka Power Plastic collects energy at up to 70° off-axis from nearly sunrise to sunset.

Can even be used on vertical surfaces.

Scalable Energy Independence

The Power Plastic 40 Series is available in 3 standard sizes, and can be built to any length for custom applications.

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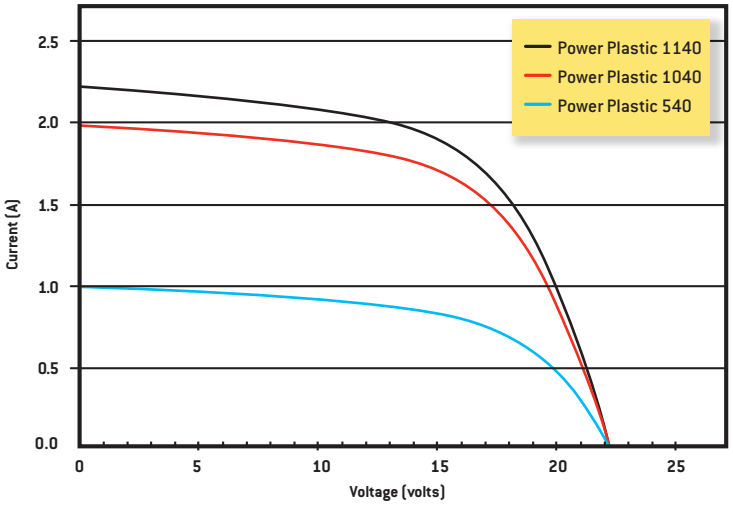
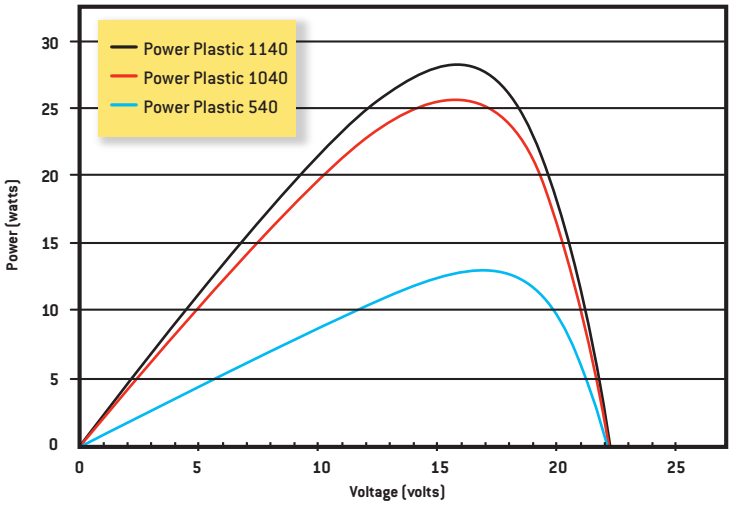
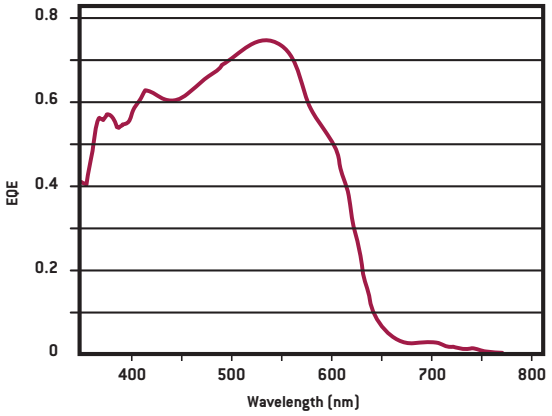
Power Plastic 40 Series: 1-Sun IV Curves



Power Plastic 40 Series: 1-Sun Power Curves



Power Plastic EQE



Outdoor Performance

Electrical Data		Units	1 Sun			1/2 Sun		
All 40 Series	Vmpp	V	15.9			16.4		
All 40 Series	Voc	V	22.3			21.5		
	Impp / Isc	A	Impp	Isc	Watts	Impp	Isc	Watts
	Power Plastic 540		0.79	0.99	12.8	0.39	0.48	6.4
	Power Plastic 1040		1.58	1.99	25.7	0.78	0.96	12.8
	Power Plastic 1140		1.74	2.19	28.2	0.86	1.06	14.1

Temperature Range

Operating Temperature	-20ºC to 65ºC (-4ºF to 149ºF)
Storage Temperature	-40ºC to 75ºC (-40ºF to 167ºF)

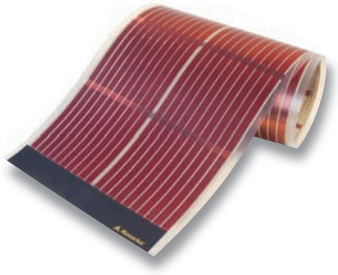
Temperature Coefficients

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

Panel Dimensions

	length (mm)	width (mm)	weight (grams)
Power Plastic 540	1,127	676	688
Power Plastic 1040	2,193	676	1,341
Power Plastic 1140	2,407	676	1,470

Konarka Power Plastic takes light in and delivers power out. When integrated into products, this direct current (DC) electrical energy can be used immediately, or stored in a battery for later use.



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R&D Facilities: Lowell, MA, USA; Linz, Austria; Nurnberg, Germany

Learn more at www.konarka.com
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