

## Konarka Power Plastic® 40 Series Product Specifications

Konarka Power Plastic 40 Series panels are well-suited for BIPV/BAPV and large power applications.

### Material Characteristics

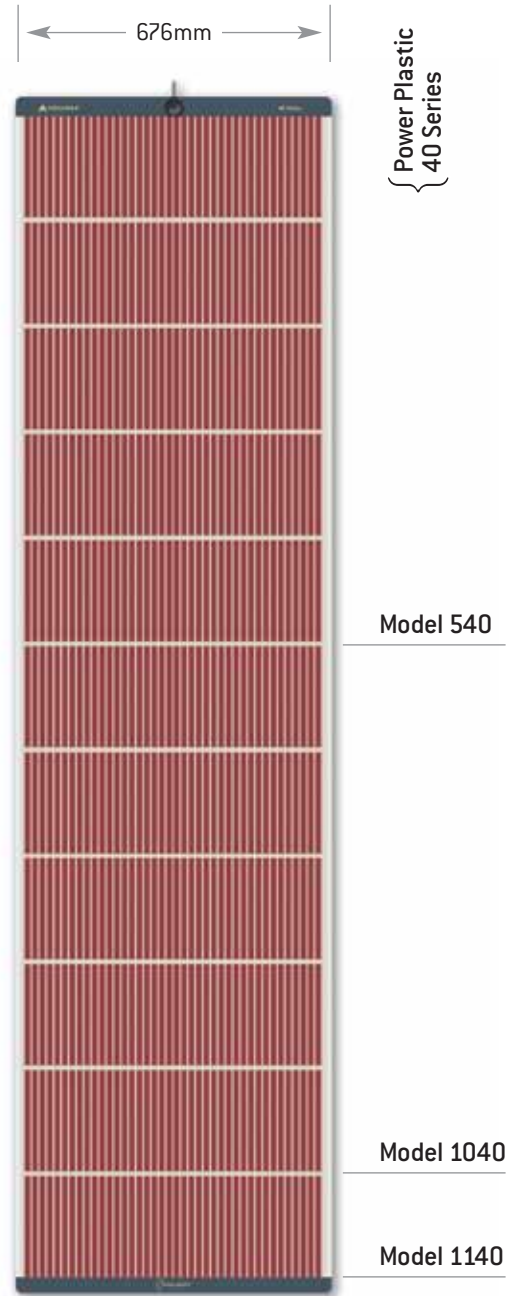
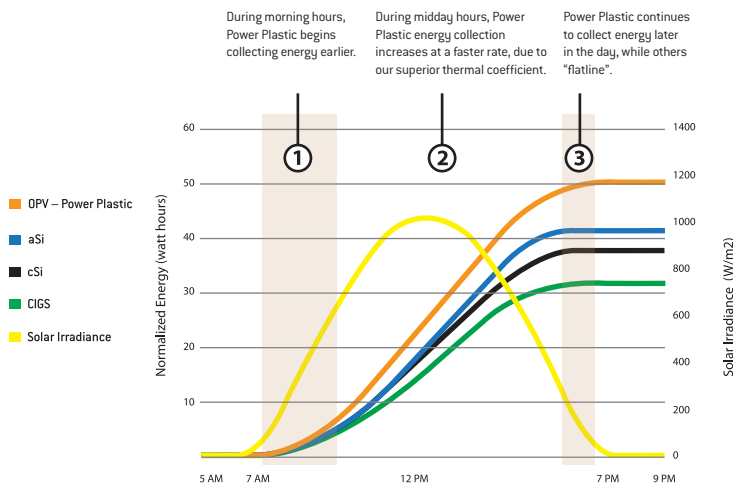
Power Plastic is a lightweight, thin-film, organic solar material, much more versatile than traditional solar panels. Konarka's unique technology is based on patented photo-reactive materials made from conductive polymers and organic nano-engineered materials.

Aesthetically beautiful, silent, and powerful, Power Plastic outperforms others in total energy collected over the course of a day. Our low-light sensitivity enables us to generate energy earlier — and longer — than our competitors, in full or partial sun. Thin, flexible and semi-transparent, Power Plastic conforms to a variety of shapes and contours offering design freedom like never before.

### Construction Characteristics

- **Operating temperature range:** -20°C to 65°C (-4°F to 149°F)
- **Weatherproof materials**
- **User friendly design:** Easily integrated
- **Laminate encapsulation:** High light transmissive polymer
- **Power terminals:**
  - Option 1:* Solderable leads
  - Option 2:* Konarka junction box with cables and standard solar connectors

### Total Energy Collected



### Scalable Energy Independence

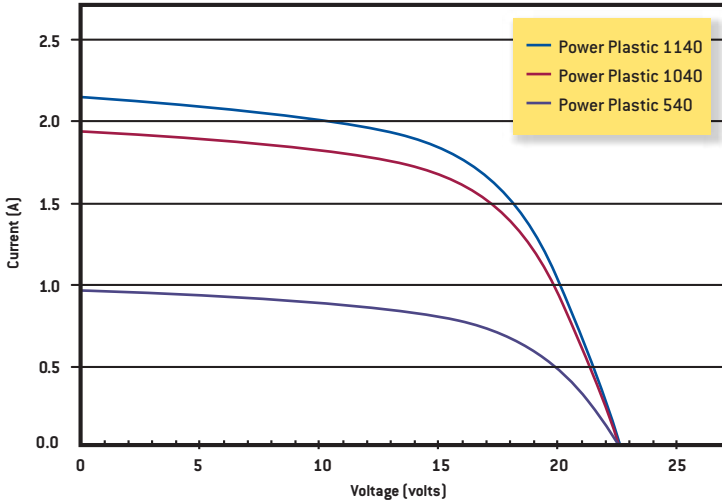
The Power Plastic 40 Series is available in 3 standard sizes, and can be built to any length for custom applications.

# 40 Series

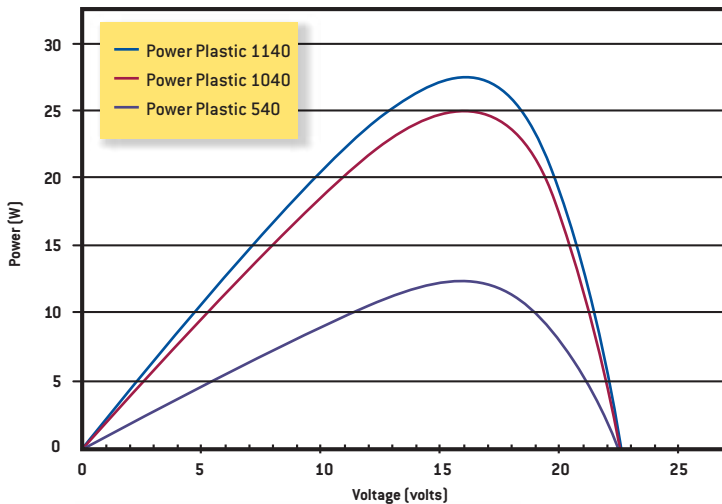


## Konarka Power Plastic® 40 Series

Power Plastic 40 Series: IV Curves



Power Plastic 40 Series: Power Curves



### Outdoor Performance

Electrical Data		Units	1 Sun			1/2 Sun		
All 40 Series	V <sub>mpp</sub>	V	15.8			15.2		
	V <sub>oc</sub>	V	22.6			21.8		
	I <sub>mpp</sub> / I <sub>sc</sub>	A	I <sub>mpp</sub>	I <sub>sc</sub>	Watts	I <sub>mpp</sub>	I <sub>sc</sub>	Watts
	Power Plastic 540		0.8	1.0	12.4	0.4	0.5	6.0
	Power Plastic 1040		1.6	1.9	24.7	0.8	1.0	12.0
	Power Plastic 1140		1.7	2.1	27.2	0.9	1.1	13.2

### Panel Dimensions

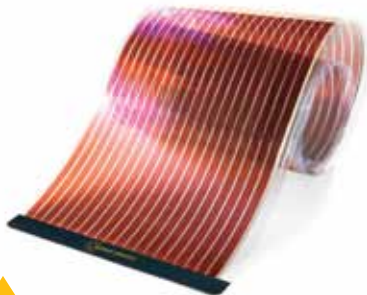
	length (mm)	width (mm)
Power Plastic 540	1,127	676
Power Plastic 1040	2,193	676
Power Plastic 1140	2,407	676

### Temperature Range

<b>Operating Temperature</b>	-20°C to 65°C [-4°F to 149°F]
<b>Storage Temperature</b>	-40°C to 75°C [-40°F to 167°F]

### Temperature Coefficients

<b>P<sub>max</sub></b>	+0.05%/°C (based on air temperature)
<b>V<sub>mpp</sub></b>	-0.27%/°C (based on air temperature)
<b>V<sub>oc</sub></b>	-0.21%/°C (based on air temperature)



### Semi-transparent 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 for later use.

The initial electrical characteristics are within +/- 10% of nameplate values under standard test conditions.

**Headquarters:** Lowell, MA, USA

**Manufacturing:** New Bedford, MA, USA

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

**Sales Offices:** Lowell, MA, USA; Nürnberg, Germany; Tokyo, Japan

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