

## 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.

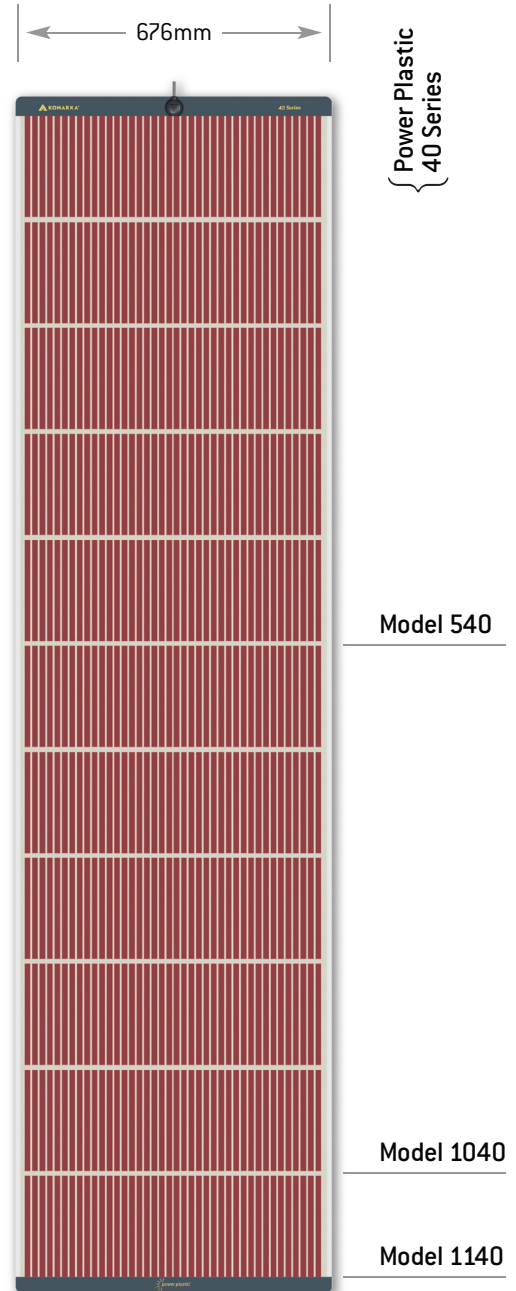
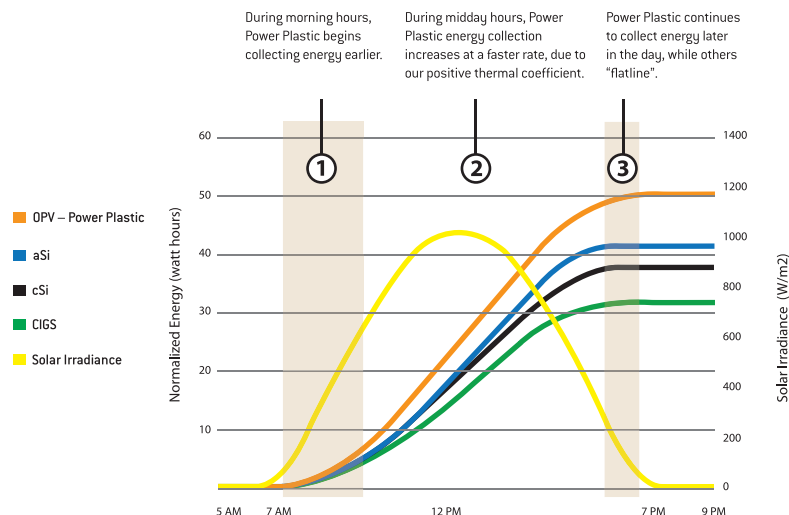
Aesthetically beautiful, silent, and powerful, Power Plastic outperforms others in total energy collected over the course of a day. Our low-light sensitivity enables us to generate energy earlier—and longer—than our competitors, in full or partial sun. Thin and flexible,

Power Plastic conforms to a variety of shapes and contours. And a range of color and transparency options provide design freedom like never before.

### Construction Characteristics

- **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:* Solderable leads  
*Option 2:* Konarka junction box with universal connection
- **Available with corner grommets**

### Total Energy Collected



### Scalable Energy Independence

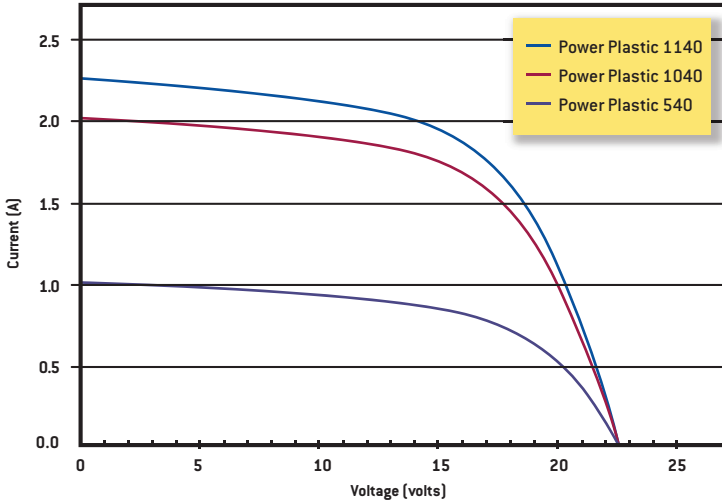
The Power Plastic 40 Series is available in 3 standard sizes, and can be built to any length for custom applications.

# 40 Series

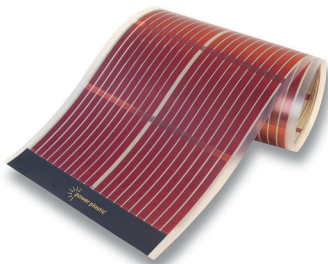
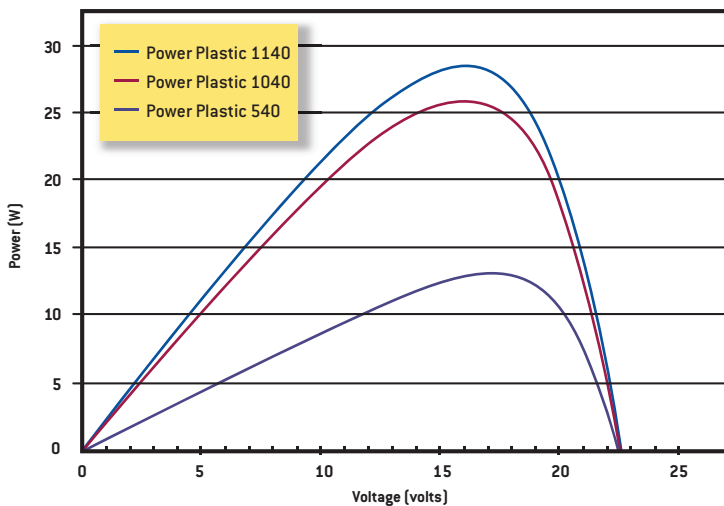


## Konarka Power Plastic® 40 Series

Power Plastic 40 Series: IV Curves



Power Plastic 40 Series: Power Curves



### 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.



### 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	13.0	0.4	0.5	6.3
	Power Plastic 1040		1.6	2.0	26.0	0.8	1.0	12.5
	Power Plastic 1140		1.8	2.2	28.6	0.9	1.1	13.8

### 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)

**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](http://www.konarka.com)  
or call +1-978-569-1400