

## Konarka Power Plastic® 10 Series Product Specifications

Konarka Power Plastic 10 Series panels are ideal for charging batteries for portable electronic devices. Connect in series for increased voltage, and remote power applications.

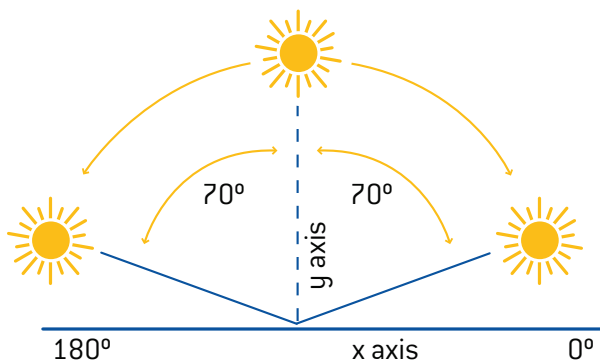
### Material Characteristics

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.

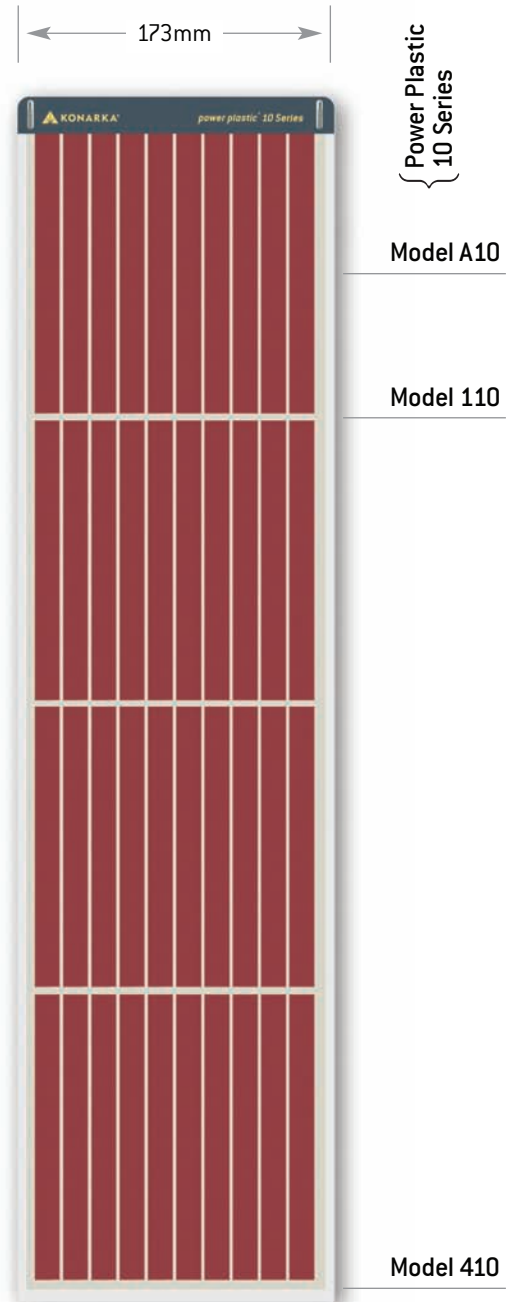
Power Plastic reacts with both indoor and outdoor light, and performs well on cloudy days, greatly expanding its potential applications. By integrating Power Plastic into everyday products, devices can produce their own low-cost source of renewable energy.

### 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:**  
Solderable leads



◀ 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 10 Series is available in 3 standard sizes, and can be built to any length for custom applications.



# 10 Series



## Konarka Power Plastic® 10 Series

### Outdoor Performance

Electrical Data		Units	1 Sun			1/2 Sun		
All 10 Series	V <sub>mpp</sub>	V	4.0			4.1		
	V <sub>oc</sub>	V	5.6			5.4		
	Impp / I <sub>sc</sub>	mA	Impp	I <sub>sc</sub>	mW	Impp	I <sub>sc</sub>	mW
	Power Plastic A10		58	72	233	28	35	116
	Power Plastic 110		115	144	466	57	70	233
	Power Plastic 410		461	578	1,866	227	280	931

### Indoor Performance (Flourescent Light)

Electrical Data		Units	1,000 Lux			500 Lux		
All 10 Series	V <sub>mpp</sub>	V	3.0			2.9		
	V <sub>oc</sub>	V	4.0			3.9		
	Impp / I <sub>sc</sub>	μA	Impp	I <sub>sc</sub>	mW	Impp	I <sub>sc</sub>	mW
	Power Plastic A10		387	475	1.2	194	221	0.6
	Power Plastic 110		779	950	2.3	389	475	1.1
	Power Plastic 410		3,116	3,800	9.4	1,557	1,900	4.5

### 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]

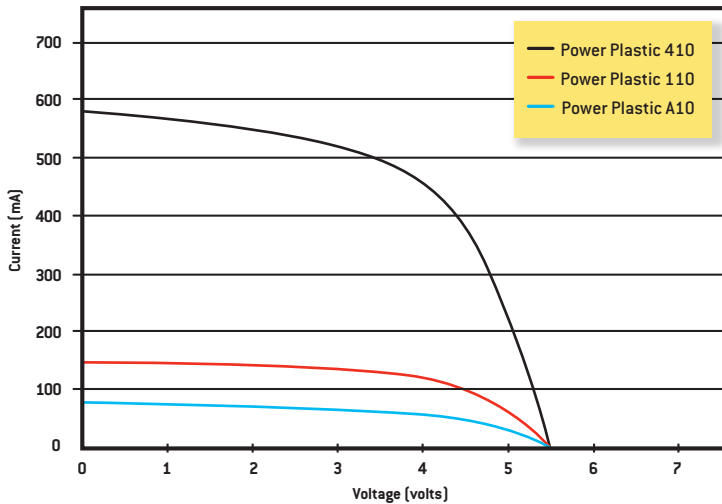
### Temperature Coefficients

<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)

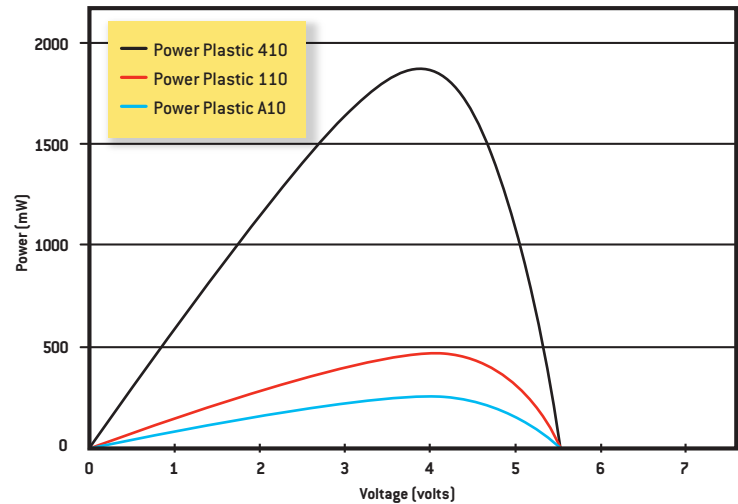
### Panel Dimensions

	length (mm)	width (mm)	weight (grams)
Power Plastic A10	113	173	8
Power Plastic 110	186	173	15
Power Plastic 410	645	173	58

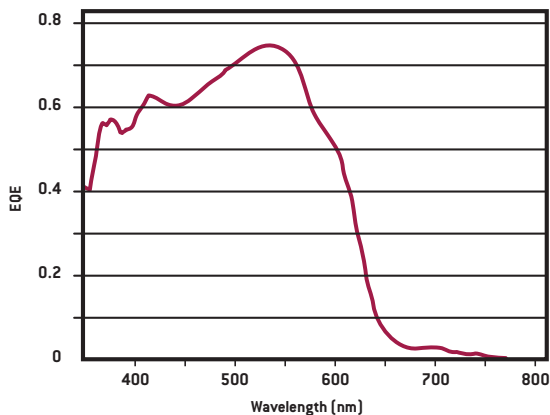
### Power Plastic 10 Series: 1-Sun IV Curves



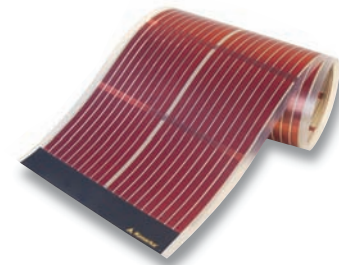
### Power Plastic 10 Series: 1-Sun Power Curves



### Power Plastic EQE



**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.



**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

