

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.

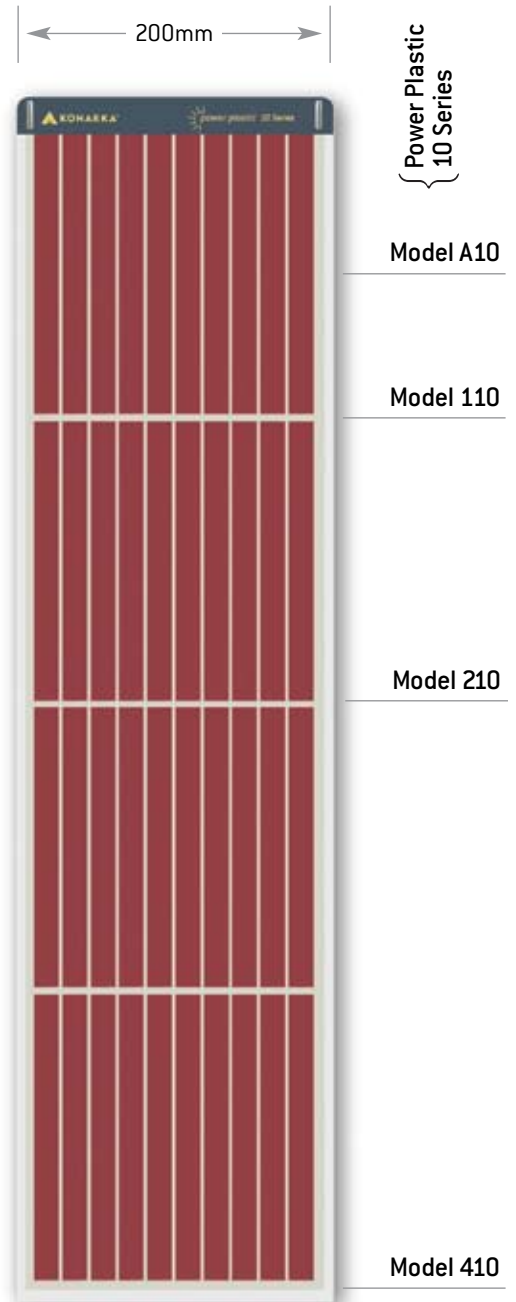
Material Characteristics

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, 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

- **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



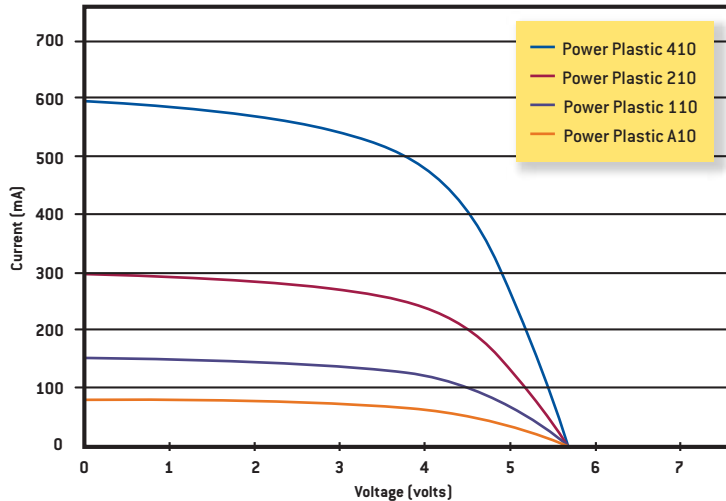
Scalable Energy Independence

The Power Plastic 10 Series is available in 4 standard sizes, and can be built to any length for custom applications.

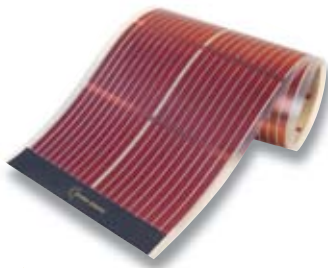
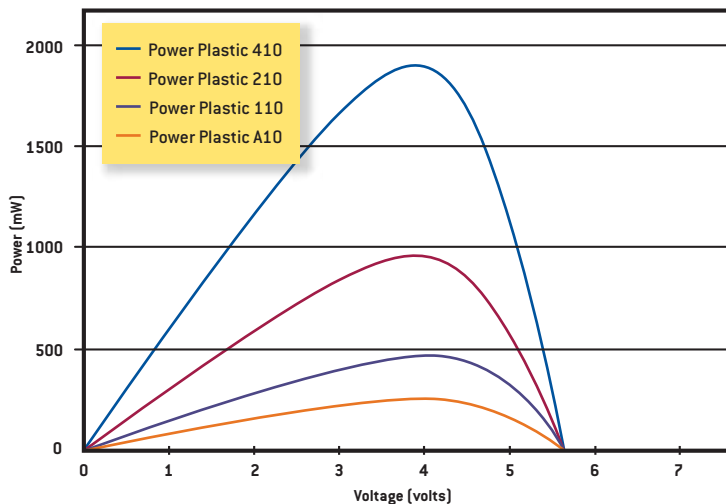


Konarka Power Plastic® 10 Series

Power Plastic 10 Series: IV Curves



Power Plastic 10 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 10 Series	V _{mpp}	V	4.0			3.8		
	V _{oc}	V	5.7			5.4		
I _{mpp} / I _{sc}		mA	I _{mpp}	I _{sc}	mW	I _{mpp}	I _{sc}	mW
Power Plastic A10			65	80	256	32	40	123
Power Plastic 110			121	148	477	60	74	230
Power Plastic 210			242	297	954	121	148	459
Power Plastic 410			483	593	1,908	242	297	919

Panel Dimensions

	length (mm)	width (mm)
Power Plastic A10	129	200
Power Plastic 110	198	200
Power Plastic 210	358	200
Power Plastic 410	645	200

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

P_{max}	+0.05% / °C (based on air temperature)
V_{mpp}	-0.27% / °C (based on air temperature)
V_{oc}	-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
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