

Konarka Power Plastic® 20 Series Product Specifications

Konarka Power Plastic 20 Series panels are ideal for charging batteries for portable electronic devices. Connect two or more panels in series for increased voltage.

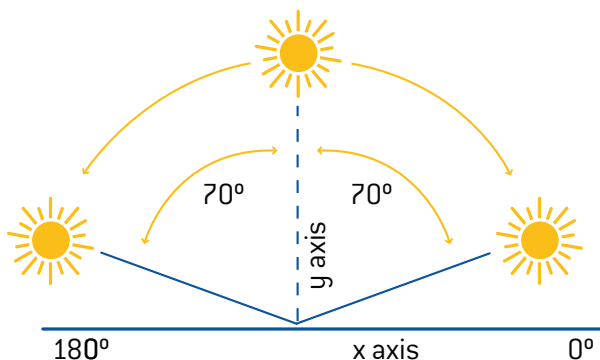
Material Characteristics

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.

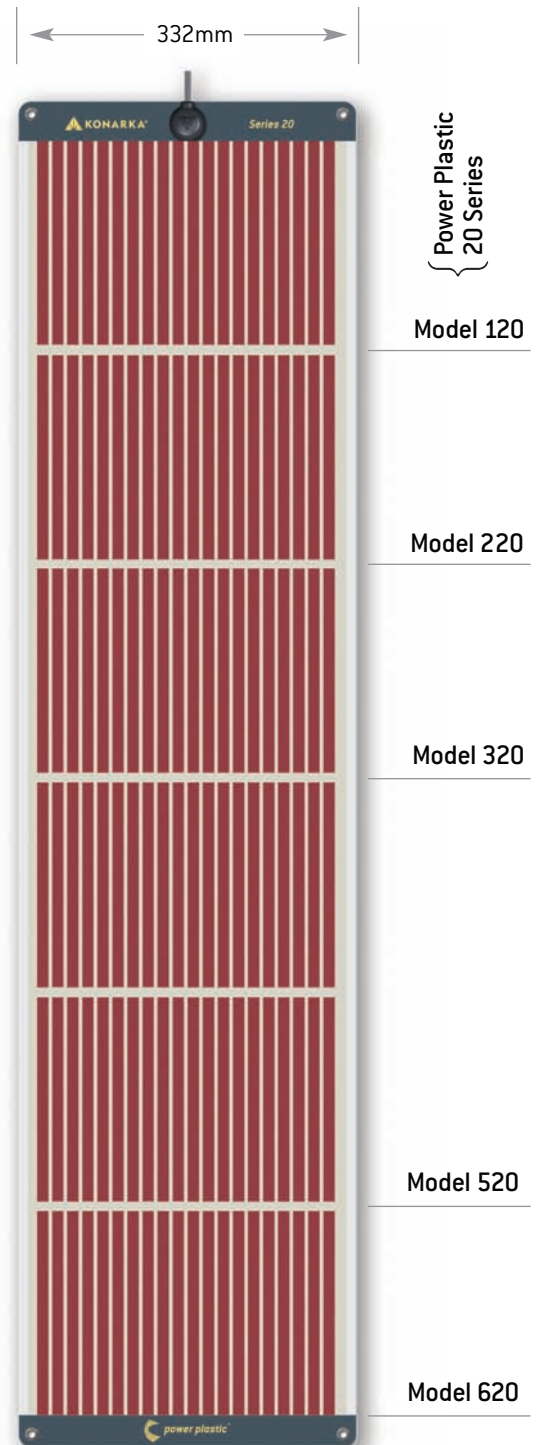
Power Plastic reacts with both indoor and outdoor light, and performs well on cloudy days, greatly expanding its potential applications. By integrating Power Plastic into everyday products, devices can produce their own low-cost source of renewable energy.

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 mountable
- **Laminate encapsulation:**
High-light transmissive polymer
- **Power terminals:**
Option 1: Solderable leads
Option 2: Junction box with barrel connector



▶ 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 20 Series is available in 5 Standard sizes, and can be built to any length for custom applications.



Konarka Power Plastic® 20 Series

Outdoor Performance

Electrical Data		Units	1 Sun			1/2 Sun		
All 20 Series	V _{mpp}	V	8.0			8.2		
	V _{oc}	V	11.1			10.8		
	I _{mpp} / I _{sc}	mA	I _{mpp}	I _{sc}	Watts	I _{mpp}	I _{sc}	Watts
	Power Plastic 120		159	199	1.3	78	99	0.6
	Power Plastic 220		317	397	2.5	156	199	1.3
	Power Plastic 320		475	596	3.8	234	298	1.9
	Power Plastic 520		792	993	6.3	391	497	3.2
	Power Plastic 620		951	1192	7.6	469	596	3.8

Indoor Performance (Fluorescent Light)

Electrical Data		Units	1,000 Lux			500 Lux		
All 20 Series	V _{mpp}	V	6.0			5.8		
	V _{oc}	V	8.0			7.8		
	I _{mpp} / I _{sc}	mA	I _{mpp}	I _{sc}	mWatts	I _{mpp}	I _{sc}	mWatts
	Power Plastic 120		1.1	1.3	6.4	0.5	0.7	3.1
	Power Plastic 220		2.1	2.6	12.8	1.1	1.3	6.2
	Power Plastic 320		3.2	3.9	19.2	1.6	2.0	9.3
	Power Plastic 520		5.3	6.5	32.1	2.7	3.3	15.5
	Power Plastic 620		6.4	7.8	38.5	3.2	3.9	18.6

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)

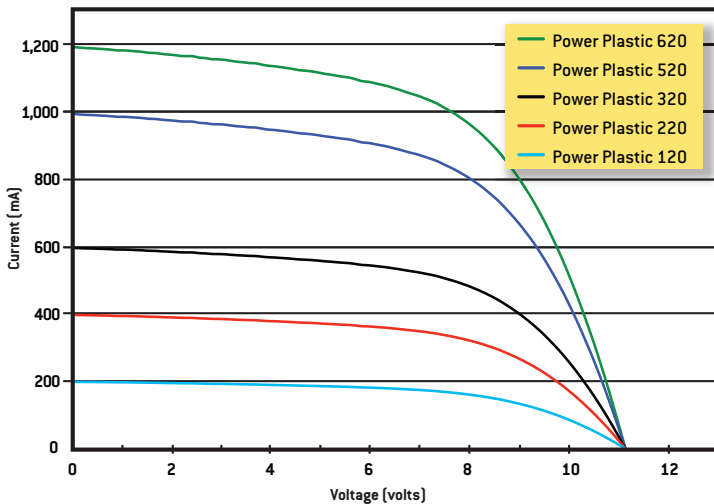
Temperature Coefficients

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)

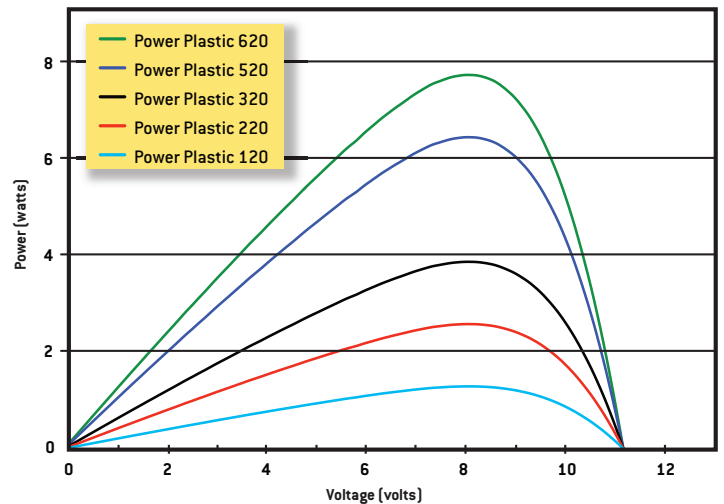
Panel Dimensions

	length (mm)	width (mm)	weight (grams)
Power Plastic 120	273	332	88
Power Plastic 220	487	332	156
Power Plastic 320	700	332	225
Power Plastic 520	1127	332	362
Power Plastic 620	1340	332	429

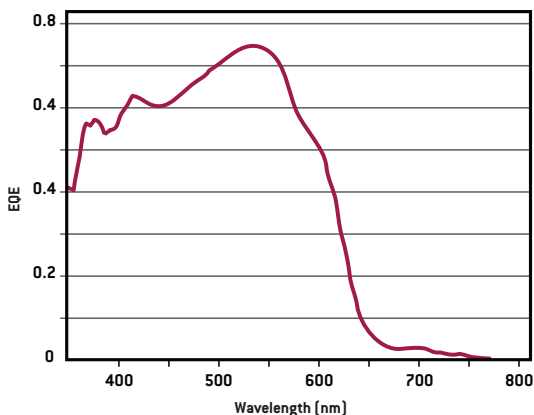
Power Plastic 20 Series: 1-Sun IV Curves



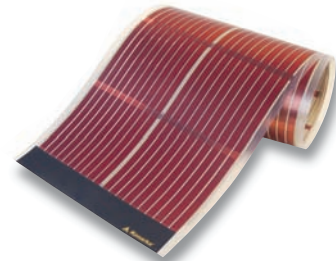
Power Plastic 20 Series: 1-Sun Power Curves



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
 or call +1-978-569-1400

