

Konarka Power Plastic® 20 Series Product Specifications

Konarka Power Plastic 20 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.

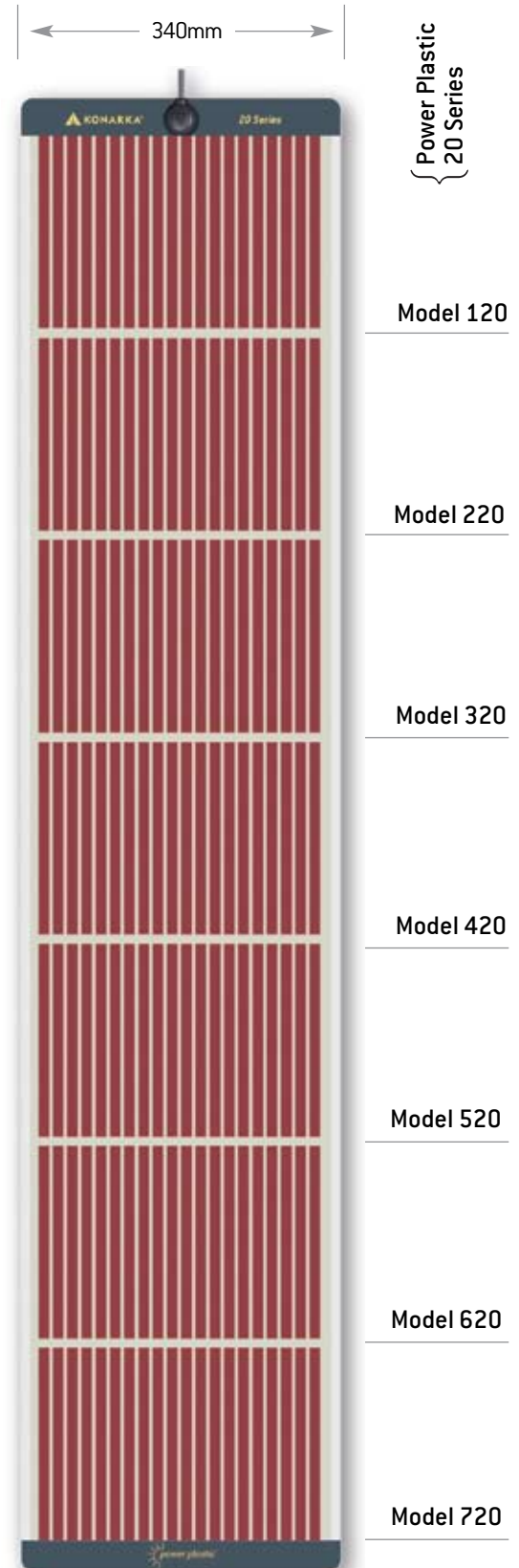
Power Plastic reacts with both indoor and outdoor light, greatly expanding its potential applications. By integrating Power Plastic into everyday products, devices can produce their own low-cost source of renewable energy.

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:**
Option 1: Solderable leads
Option 2: Konarka junction box with universal connection
- **Available with corner grommets**

Scalable Energy Independence

The Power Plastic 20 Series is available in 7 standard sizes, and can be built to any length for custom applications.

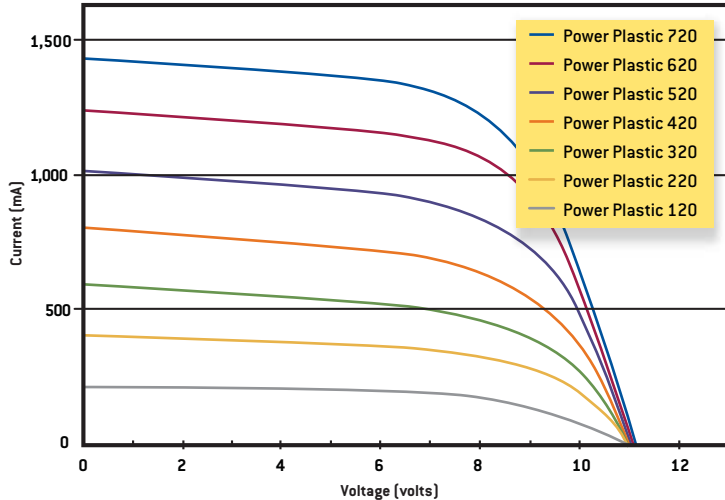


20 Series



Konarka Power Plastic® 20 Series

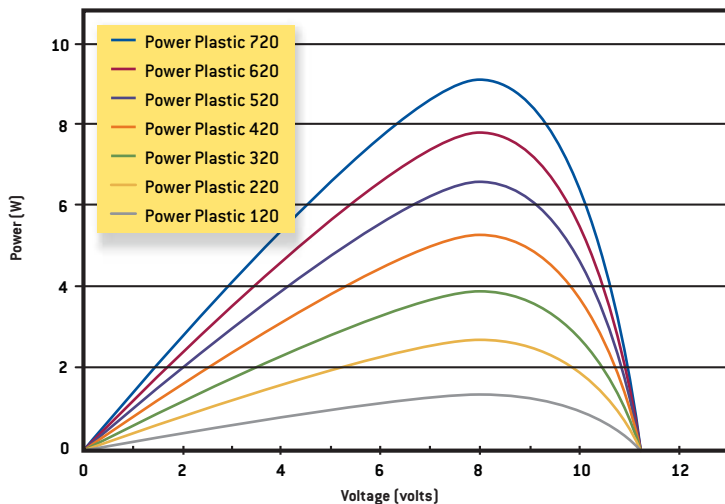
Power Plastic 20 Series: IV Curves



Outdoor Performance

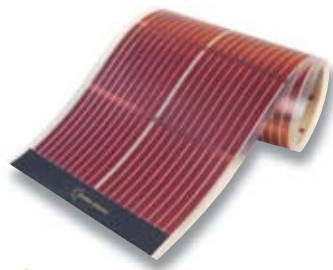
Electrical Data		Units	1 Sun			1/2 Sun		
All 20 Series	V _{mpp}	V	7.9			7.6		
	V _{oc}	V	11.3			10.9		
	I _{mpp} / I _{sc}	mA	I _{mpp}	I _{sc}	Watts	I _{mpp}	I _{sc}	Watts
	Power Plastic 120		164	202	1.3	82	101	0.6
	Power Plastic 220		329	404	2.6	164	202	1.3
	Power Plastic 320		493	605	3.9	246	303	1.9
	Power Plastic 420		657	807	5.2	329	404	2.5
	Power Plastic 520		821	1009	6.5	411	505	3.1
	Power Plastic 620		986	1211	7.8	493	605	3.8
	Power Plastic 720		1150	1413	9.1	575	706	4.4

Power Plastic 20 Series: Power Curves



Panel Dimensions

	length (mm)	width (mm)
Power Plastic 120	273	340
Power Plastic 220	487	340
Power Plastic 320	700	340
Power Plastic 420	913	340
Power Plastic 520	1127	340
Power Plastic 620	1340	340
Power Plastic 720	1553	340



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.

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
or call +1-978-569-1400