

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.

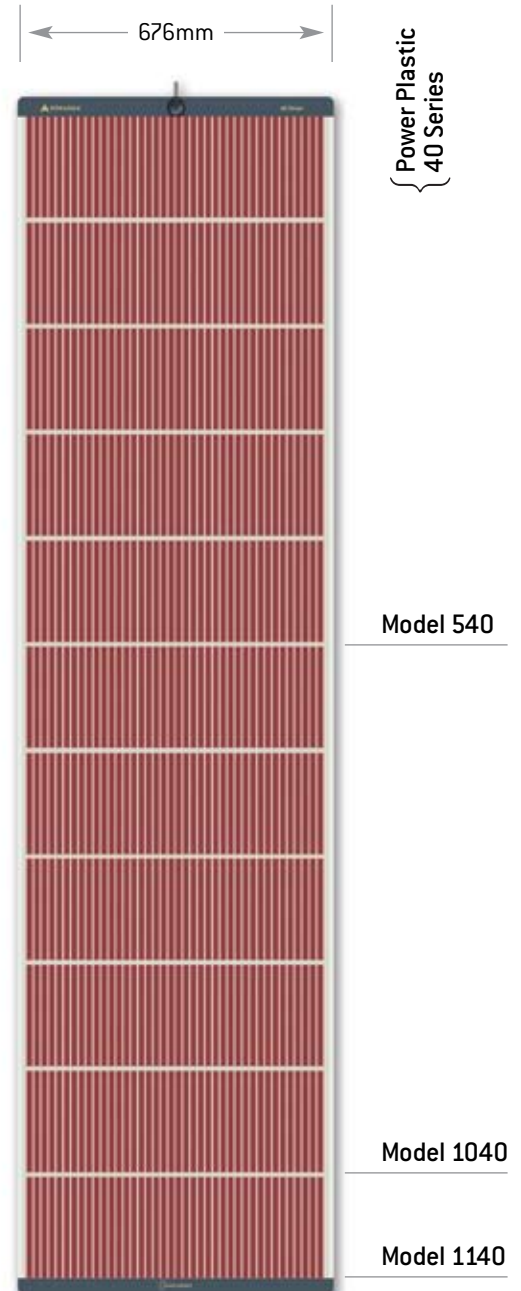
Material Characteristics

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.

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

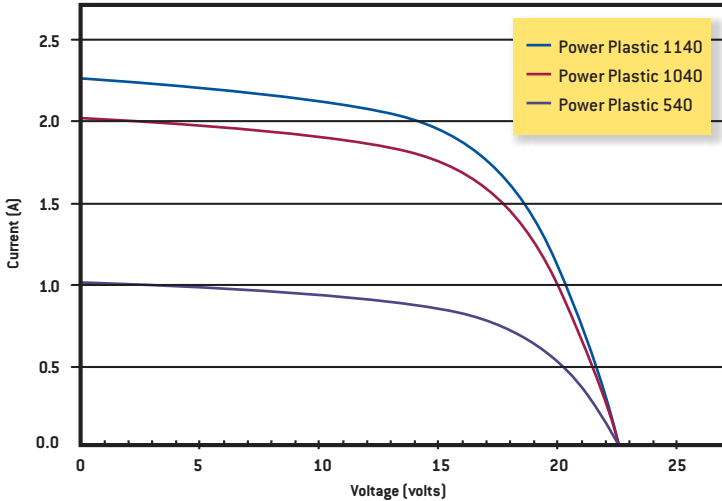


40 Series



Konarka Power Plastic® 40 Series

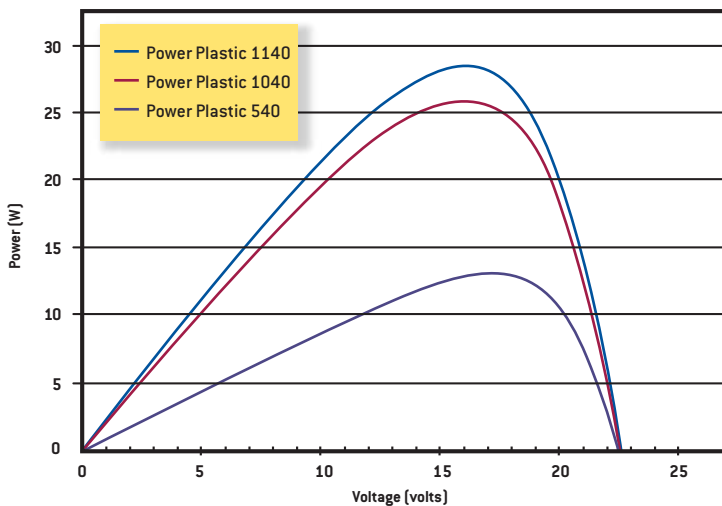
Power Plastic 40 Series: IV Curves



Outdoor Performance

Electrical Data		Units	1 Sun			1/2 Sun		
All 40 Series	V _{mpp}	V	15.8			15.2		
	V _{oc}	V	22.6			21.8		
	I _{mpp} / I _{sc}	A	I _{mpp}	I _{sc}	Watts	I _{mpp}	I _{sc}	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

Power Plastic 40 Series: Power Curves



Panel Dimensions

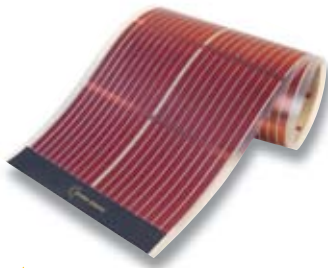
	length (mm)	width (mm)
Power Plastic 540	1,127	676
Power Plastic 1040	2,193	676
Power Plastic 1140	2,407	676

Temperature Range

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)



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.

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