

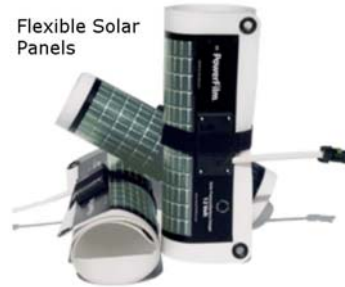
PowerFilm®

Ultra Flexible Solar Modules

The World's Most Rollable and Lightweight Solar Technology.

The World's Leading Thin Film Photovoltaics

The PowerFilm® photovoltaic modules are based upon amorphous silicon technology applied to a durable polymer substrate 2 mils (0.05mm) thick using a true roll-to-roll manufacturing process. Finished modules are encapsulated in a variety of materials appropriate for the application use environment.



PowerFilm® Advantages

ITFT's PowerFilm® thin film photovoltaic products offer solutions that are durable, thin, lightweight, and flexible for both small-scale and large-scale power generation.

- **Flexible** - Can curve around an object 3 inches(75mm) in diameter
- **Lightweight**
- **Thin** - Thin as paper. Low profile. Great aesthetics.
- **Durable** - Unlike other solar technologies, PowerFilm will not break when dropped.
- **High Manufacturability** - Low assembly cost. Low transportation cost.

Applications

The PowerFilm® photovoltaic modules have wide ranging applications in Consumer Electronics, Outdoor and Recreation, Remote and Military, and Building Integrated Photovoltaics (BIPV).

These modules can be used for solar-powered/recharged radios, CD players, cell phone chargers, PDA's, and portable computer games; lighting for in-store displays and flashlights; transportation and emergency lighting; air and space applications including high-altitude aircraft and satellites; and commercial building systems with photovoltaics integrated into roofing, walls, and windows.

Note: The PowerFilm® modules are products of ITFT

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Power Film Specification

	PowerFilm® R15-300	PowerFilm® R15-600	PowerFilm® R15-1200
Operating Voltage(V)	15.4	15.4	15.4
Operating Current(Amps)	0.3	0.6	1.2
Weight (kg)	0.29	0.46	0.88
Dimensions(mm)	292 x 531	292 x 972	305 x 1858
Rolled Dimensions(mm)	292 x 101.5Ø	292 x 108 Ø	305 x 114.3 Ø

Daily Run Times (in Hours)

Based on 5hours of full sun per day

	PowerFilm® R15-300	PowerFilm® R15-600	PowerFilm® R15-1200
12V Fish Finder(0.83Amps)	1.8	3.6	7.2
12V GPS(0.42Amps)	3.6	7.1	14.3
12V Bilge Pump(3Amps)	0.5	1	2
Outdoor Lighting(0.8Amps)	1.9	3.8	7.5
14"Color TV(3.33Amps)	0.5	0.9	1.8
Search Light(8.3Amps)	0.2	0.4	0.7
CB Radio(0.42Amps)	3.6	7.1	14.3
Cell Phone(0.5Amps)	3	6	12
Satellite Phone(0.5Amps)	3	6	12
AM/FM Radio(0.4Amps)	3.8	7.5	15
Laptop(2.5Amps)	0.6	1.2	2.4
PDA(0.5Amps)	3	6	12
AA: RA-3(1-4batt.)	10-26	10-26	10-26
AA: RA-4(2 or 4batt.)	-	-	1-3
AA: RA-5(1-6batt.)	-	1-3	1-3
AAA: RA-3(1-4batt.)	3-12	3-12	3-12
AAA: RA-4(2 or 4batt.)	-	-	1-3
AAA: RA-5(1-6batt.)	-	1-3	1-3
D: RA-3(1-4batt.)	-	-	-
D: RA-4(2 or 4batt.)	-	-	3-13
D: RA-5(1-6batt.)	-	3-13	3-13
Lithium: RA-3(1-4batt.)	-	-	-
Lithium: RA-4(2 or 4batt.)	-	-	-
Lithium: RA-5(1-6batt.)	-	2-4	2-4
<i>Battery Capacity: AA(600-1900mAh); AAA(200-700mAh); D(1600-8500mAh); Lithium(700-1400mAh)</i>			