

# **Solar Cub**

# Solar Swimming Pool Heating Collector Specifications

### **DESCRIPTION:**

The Solar Cub (PN: 09974) Collectors are manufactured in Chico, California. The collectors are a specially developed, highly stabilized polyolefin and are of parallel, circular channel design. It is unglazed, un-insulated, and designed for low temperature applications such as swimming pool heating, heat pumps, aquaculture, hydroponics, and pre-heating.

### **DIMENSIONS:**

### **COLLECTOR MODEL**

Solar Cub						
26-7/8'' (±1/8'')	24'' (±1/4'' – 0'')	240''(±1/8'')	40ft2	17.3lbs	4.5gal	54.9lbs
0.68m (±3.23mm)	0.61m (±6.4mm)	6.1m (±3.2mm)	3.7m2	7.85kg	17.0L	24.9kg
Header Width	Panel Body Width	Overall Length	Effective Area	Weight (w/o fluid)	Fluid Capacity	Weight (w/water)

RACK SPACE: Solar Cub

Width = [Number of panels X 26-7/8'' (0.61m)] + 2'' (0.05m)

Length = 240''(6.1m) + 6''(0.15m)

**FLOW:** Maximum recommended flow = 0.20 gpm per ft<sup>2</sup> panel area (488 L/hr per m<sup>2</sup>)

3.47 psi head loss (23.9 kPa)

Minimum recommended flow = 0.05 gpm per ft<sup>2</sup> panel area (122 L/hr per m<sup>2</sup>)

0.23 psi head loss (1.6 kPa)

Recommended flow =  $0.10 \text{ gpm per ft}^2 \text{ panel area} (244 \text{ L/hr per m}^2)$ 

0.87 psi head loss (6.0 kPa)

 PRESSURE:
 NORMAL OPERATING PRESSURE
 MAXIMUM INTERMITTENT PRESSURE

 <100°F (<37.8°C)</td>
 0 to 30.0 psi (0 – 207 kPa)
 40.0 psi (276 kPa)

 212°F (100°C)
 0 to 5.00 psi (0 – 34.5 kPa)
 5.00 psi (34.5 kPa)

 $70^{\circ}F$  (21°C) Measured burst pressure of panel body = Over 300 psi (2069 kPa)

**TEMPERATURE:** Normal operating temperature = 60°F to 100°F (16°C to 38°C)

Maximum continuous operating temperature = 212°F (100°C)

Maximum intermittent temperature (un-pressurized) = 250°F (121°C)

Melt temperature = 338°F (170°C)

MAX CONNECTED: Solar Cub

Two Panels Connected



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CHEMICAL RESISTANCE: Compatible with common collector fluids such as chlorinated or saline pool water.

CORROSION: Non-corrosive

**FREEZING:** The system should be drained before freezing conditions occur.

**WEATHERABILITY:** Weatherometer, accelerated outdoor exposure, and other extensive laboratory testing demonstrates

long-term weatherability of Solar Cub collectors (see warranty). Additionally, FAFCO's experience of 50+ years and over 2,000,000 collectors installed confirms that the proprietary stabilization and high

mechanical strength results in negligible issues over the warranty period.

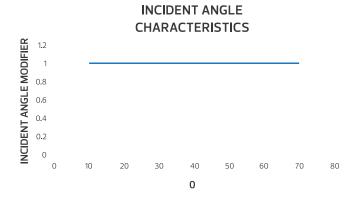
ABSORPTIVITY: 0.96

EMISSIVITY: 0.90

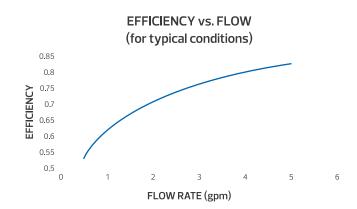
**TIME CONSTANT:** 138 seconds

TESTED OUTPUT: 1,800 Btu/ft²-day (5.7 kWh/m²-day) (Per SRCC OG100 Certification #10001954)

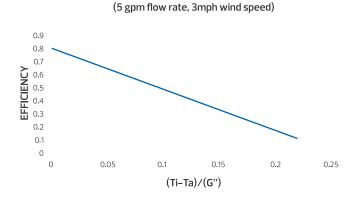
### PERFORMANCE GRAPHS:



PRESSURE VS. FLOW



# 14 12 (1) 10 8 8 6 4 2 0 7 8 9 10 12 FLOW RATE (gpm per panel)



**MEASURED EFFICIENCY** 

