

**SOLAR COLLECTOR
CERTIFICATION AND RATING**



SRCC OG-100

CERTIFIED SOLAR COLLECTOR

SUPPLIER: **SolarUs, Inc.**
965 West Main Street
Branford, CT 06405 USA

MODEL: SolarUS FP1

COLLECTOR TYPE: Glazed Flat-Plate

CERTIFICATION#: 2011068A

COLLECTOR THERMAL PERFORMANCE RATING

Kilowatt-hours Per Panel Per Day				Thousands of BTU Per Panel Per Day			
CATEGORY (Ti-Ta)	CLEAR DAY	MILDLY CLOUDY	CLOUDY DAY	CATEGORY (Ti-Ta)	CLEAR DAY	MILDLY CLOUDY	CLOUDY DAY
A (-5 °C)	8.7	6.6	4.5	A (-9 °F)	29.7	22.5	15.3
B (5 °C)	7.9	5.8	3.7	B (9 °F)	26.9	19.7	12.5
C (20 °C)	6.7	4.6	2.5	C (36 °F)	22.7	15.7	8.7
D (50 °C)	4.5	2.6	0.8	D (90 °F)	15.3	8.9	2.8
E (80 °C)	2.7	1.0	0.0	E (144 °F)	9.2	3.5	0.0

A- Pool Heating (Warm Climate) **B-** Pool Heating (Cool Climate) **C-** Water Heating (Warm Climate) **D-** Water Heating (Cool Climate) **E-** Air Conditioning

Original Certification Date: 26-MAY-11

COLLECTOR SPECIFICATIONS

Gross Area: 2.294 m² 24.69 ft²
Dry Weight: 37.5 kg 83. lb
Test Pressure: 1800. KPa 261. psig

Net Aperture Area: 2.01 m² 21.66 ft²
Fluid Capacity: 1.2 liter 0.3 gal

COLLECTOR MATERIALS

Frame: Aluminum
Cover (Outer): Tempered Glass
Cover (Inner):

Pressure Drop

Flow		ΔP	
ml/s	gpm	Pa	in H ₂ O
20.00	0.32	362.51	1.46
50.00	0.79	1082.5	4.4
80.00	1.27	2013.82	8.09

Absorber Material: Tube - Copper / Plate - Aluminum
Absorber Coating: Selective coating

Insulation Side: Fiber
Insulation Back: fiber

TECHNICAL INFORMATION

Efficiency Equation [NOTE: Based on gross area and (P)=Ti-Ta]

SI Units: η = 0.642 - 3.23590 (P)/l - 0.00372 (P)²/l
IP Units: η = 0.642 - 0.57000 (P)/l - 0.00036 (P)²/l

Y INTERCEPT 0.644
SLOPE -3.536 W/m².°C
-0.623 Btu/hr.ft².°F

Incident Angle Modifier [(S)=1/cosθ - 1, 0° < θ <= 60°]

Kτα = 1 -0.323 (S) 0.061 (S)²
Kτα = 1 -0.21 (S) Linear Fit

Test Fluid: Water, Ethylene Glycol (33.3%)
Test Flow Rate: 17.0 ml /s.m² 0.0250 gpm/ft²

REMARKS:

June, 2011

Certification must be renewed annually, For current status contact:

SOLAR RATING & CERTIFICATION CORPORATION

c/o FSEC ♦ 1679 Clearlake Road ♦ Cocoa, FL 32922 ♦ (321) 638-1537 ♦ Fax (321) 638-1010