



SOLAR RATING & CERTIFICATION CORPORATION

AWARD OF COLLECTOR CERTIFICATION

The solar collector listed below has been evaluated by the Solar Rating and Certification Corporation (SRCC) in accordance with SRCC Document OG-100, *Operating Guidelines and Minimum Standards for Certifying Solar Collectors*, and has been certified by the SRCC as specified in SRCC Standard 100-94, *Test Methods and Minimum Standards for Certifying Solar Collectors*. Certification and thermal performance ratings are based on the successful durability and performance testing of a sample unit where said tests have been conducted by an independent laboratory accredited by the SRCC.

Collector Certification Number: **100-2010066B**

Certification Date: 03-JUN-11 Type: Tubular Expiration Date: 10-MAR-23

Test Laboratory: Pacific Energy Testing Report Number: 10-2010-001 Report Date: 10-MAR-11

Brand: SUNCHASER Certified Model: FSC016B Model Tested: 2010066A

Supplier: **First Solar Products, Inc.**
18102 Chesterfield Airport Road, Unit O
Chesterfield.MO 63005 USA
(314) 406-8651

Description: Aluminum frame. Glass cover. Aluminum absorber with Selective coating. Fiber, vacuum side insulation and fiber, vacuum back insulation. Water was the fluid for performance tests. Gross Area: 2.393 m² (25.8 ft²). Aperture Area: 1.52 m² (16.4 ft²).

TUBULAR COLLECTOR THERMAL PERFORMANCE RATING

Megajoules 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)	21.6	16.3	11.1	A (-9 °F)	20.5	15.5	10.5
B (5 °C)	20.5	15.2	9.9	B (9 °F)	19.4	14.4	9.4
C (20 °C)	18.7	13.4	8.2	C (36 °F)	17.7	12.7	7.7
D (50 °C)	15.3	10.1	4.9	D (90 °F)	14.5	9.6	4.7
E (80 °C)	11.7	6.5	2.0	E (144 °F)	11.1	6.2	1.9

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

Efficiency Equation [NOTE: Based on gross area and (P)=Ti-Ta]	Y INTERCEPT	SLOPE
S I UNITS: $\eta = 0.332 - 1.20030 (P)/I - 0.00272 (P)^2/I$	0.333	-1.38 W/m².°C
I P UNITS: $\eta = 0.332 - 0.21140 (P)/I - 0.00030 (P)^2/I$	0.333	-0.20 Btu/hr.ft².°F

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

Kα = 1	1.77 (S)	-1.358 (S) ²	Kα = 1	0.38 (S)	Linear Fit (S) ²
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REMARKS: Collector tested with long axis of tubes oriented north-south. IAM perpendicular to the tubes is listed above. IAM parallel to the tubes = 1.0 + 0.1(S)

This award of certification is subject to all terms and conditions of the program Agreement and the documents incorporated therein by reference. It must be renewed annually. Any change in collector design, materials, specifications, parts, or construction must be reported to SRCC for evaluation of continued certification.



Technical Director August 25, 2011

