

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: 100-2009020E

Certification Date: 04-JUN-10 Type: Tubular Expiration Date: 25-MAR-22
 Test Laboratory: Bodycote Report Number: 09-008-0430RV1 Report Date: 25-MAR-10
 Brand: HES Certified Model: HCM30-58/1800 Model Tested: 2009020A

Supplier: **Zhejiang Hurras Solar Energy Technology Co., Ltd.**
 Yuanxi Road, Solar Energy Zone
 Haining, Zhejiang 314416 China
 (+86) 0573 8788 7788

Description: Aluminum frame. Borosilicate cover. Aluminum absorber with Selective coating. Rock wool side insulation and Rock wool back insulation. Water was the fluid for performance tests. Gross Area: 4.098 m² (44.1 ft²). Aperture Area: 3.035 m² (32.7 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)	41.6	31.4	21.2	A (-9 °F)	39.4	29.8	20.1
B (5 °C)	39.4	29.3	19.1	B (9 °F)	37.4	27.7	18.1
C (20 °C)	36.0	25.8	15.7	C (36 °F)	34.1	24.4	14.9
D (50 °C)	29.4	19.4	9.4	D (90 °F)	27.9	18.4	8.9
E (80 °C)	22.2	12.2	3.5	E (144 °F)	21.0	11.5	3.3

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]

S I UNITS: $\eta = 0.371 - 1.33320 (P)/I - 0.00366 (P)^2/I$
 I P UNITS: $\eta = 0.371 - 0.23480 (P)/I - 0.00040 (P)^2/I$

Y INTERCEPT

0.373

SLOPE

-1.55 W/m².°C

-0.30 Btu/hr.ft².°F

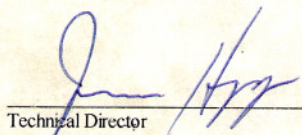
Incident Angle Modifier [(S)=1/cosθ - 1, 0°<θ<=60°]

Kα = 1 1.62 (S) -1.083 (S)²

Kα = 1 0.49 (S) Linear Fit (S)²

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 - 0.06(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

June 04, 2010



OG-100 SRCC COLLECTOR CERTIFICATION