CERTIFIED SOLAR COLLECTOR

SUPPLIER:
Changzhou HE Jia Solar Energy Co., Ltd.
No. 16 Changjiao Road
Dongqing Town
Changzhou, JIANGSU 213114 China
www.hjsolar.com

In Accordance with:

BRAND:	HEJIASUN
MODEL:	HFC-2-S
COLLECTOR TYPE:	Tubular
CERTIFICATION #:	10001869
Original Certification:	January 08, 2014
Expiration Date:	October 29, 2025

The solar collector listed below has been evaluated by the Solar Rating & Certification Corporation™ (SRCC™), an ANSI accredited and EPA recognized Certification Body, in accordance with SRCC OG-100, Operating Guidelines and Minimum Standards for Certifying Solar Collectors, and has been certified by the SRCC. This award of certification is subject to all terms and conditions of the Program Agreement and the documents incorporated therein by reference. This document must be reproduced in its entirety.

COLLECTOR THERMAL PERFORMANCE RATING

Kilowatt-hours (thermal) Per Panel Per Day				Thousands of Btu Per Panel Per Day			
Climate -> Category (Ti-Ta)	High Radiation (6.3 kWh/m².day)	Medium Radiation (4.7 kWh/m².day)	Low Radiation (3.1 kWh/m².day)	Climate -> Category (Ti-Ta)	High Radiation (2000 Btu/ft².day)	Medium Radiation (1500 Btu/ft².day)	Low Radiation (1000 Btu/ft².day)
A (-5 °C)	5.1	3.8	2.6	A (-9 °F)	17.3	13.1	8.9
B (5 °C)	4.8	3.6	2.4	B (9 °F)	16.5	12.3	8.1
C (20 °C)	4.4	3.2	2.0	C (36 °F)	15.1	10.9	6.7
D (50 °C)	3.5	2.3	1.1	D (90 °F)	11.9	7.8	3.6
E (80 °C)	2.3	1.2	0.3	E (144 °F)	7.9	4.1	0.9

A- Pool Heating (Warm Climate) **B**- Pool Heating (Cool Climate) **C**- Water Heating (Warm Climate)
D- Space & Water Heating (Cool Climate) **E**- Commercial Hot Water & Cooling

COLLECTOR SPECIFICATIONS					
Gross Area:	2.002 m²	21.55 ft²	**Dry Weight:**	59 kg	129 lb
Net Aperture Area:	1.567 m²	16.87 ft²	**Fluid Capacity:**	0.8 liter	0.2 gal
Absorber Area:	2.029 m²	21.84 ft²	**Test Pressure:**	900 kPa	131 psi

TECHNICAL INFORMATION						**Tested in accordance with:** ISO 9806
ISO Efficiency Equation [NOTE: Based on gross area and (P)=Ti-Ta]						
SI UNITS:	η= 0.436 - 1.04770(P/G) - 0.00880(P²/G)		**Y Intercept:**	0.437	**Slope:**	-1.436 W/m².°C
IP UNITS:	η= 0.436 - 0.18465(P/G) - 0.00086(P²/G)		**Y Intercept:**	0.437	**Slope:**	-0.253 Btu/hr.ft².°F

Transverse Incident Angle Modifier								**Longitudinal Incident Angle Modifier at 50°:**	0.94
θ	10	20	30	40	50	60	70	**Test Fluid:**	Water
Kτα	1.00	1.01	1.02	1.04	1.06	1.07		**Test Mass Flow Rate:**	0.0200 kg/(s m²)	14.75 lb/(hr ft²)

REMARKS:

Jim Huggins
Technical Director

www.solar-rating.org ♦ 400 High Point Drive, Suite 400 ♦ Cocoa, Florida 32926 ♦ (321) 213-6037 ♦ Fax (321) 821-0910

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In Accordance with:

BRAND: HEJIASUN
MODEL: HFC-2-S
COLLECTOR TYPE: Tubular
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ADDITIONAL INFORMATION (click here to return to the rating page)			
Test Lab:	Intertek Testing Services Shenzhen, Ltd, Guangzhou Branch	Test Date:	October 29, 2013
Test Report Number:	130123014GZU-001	Test Location:	outdoors

SOLAR COLLECTOR CONSTRUCTION DETAILS					
Header Enclosure:					
Gross Length:	1.982 m	**Gross Width:**	1.010 m	**Gross Depth:**	0.100 m
Tube Bank:					
Gross Length:	0.096 m	**Gross Width:**	1.010 m		

COLLECTOR MATERIALS					
Outer Cover:	Glass sheet	**Enclosure back:**	Aluminum	**Back Insulation:**	Vacuum,
Inner Cover:	Glass Tube	**Enclosure side:**	Aluminum	**Side Insulation:**	,
Absorber Description:	Glass Tubes			**Flow Pattern:**	Mixed
Riser Tube:	Copper			**Fin:**	Glass
Absorber Coating:	Selective			**Tube to fin connection**	Ultrasonic Weld

GLAZING	Outer Cover	Inner Cover
Material:	Glass sheet	Glass Tube
Surface Characteristics:	Smooth	Smooth
Thickness:	3.1 mm	1.6 mm
Transmissivity:	High (equal to or greater than 90%)	High (equal to or greater than 90%)
Gross Tube Length (uninstalled):	1.800 m	
Diameter:	0.058 m	0.047 m
Tube Glazing to Header Enclosure Seal:	Silicone bead	
Reflector Shape:	Compound parabolic	**Reflector Material:** Polished aluminum

ABSORBER

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Certification #: 10001869
Supplier: Changzhou HE Jia Solar Energy Co., Ltd.
Brand Name: HEJIASUN
Model Number: HFC-2-S

Header Material:	Copper	**Header OD:**	35.0 mm	**Header Wall:**	0.8 mm
Riser Tube Material:	Copper	**Riser Tube OD:**	58.3 mm	**Riser Tube Wall Thickness:**	1.6 mm
Fin Material:	Glass	**Fin Thickness:**	0.21 mm		
Flow Pattern:	Mixed	**Number of Flow Tubes / Heat Pipes:**	8	**Tube / Heat Pipe Spacing:**	120.0 mm
Number of absorber tubes:	1	**Flow Tube to Fin Bond:**	Ultrasonic Weld	**Length of Flow Path:**	
Length of Flow Path:		**Riser to Fin/Plate Bond:**	Ultrasonic Weld		

INSULATION:					
Location	**Type**	**Thickness**	**Location**	**Type**	**Thickness**
Back – Top Layer:	Vacuum	3.9 mm	**Sides – Inner Layer:**		
Back – Bottom Layer:			**Sides – Outer Layer:**		
Enclosure Fastening Methods:	Rivets		**Header Enclosure:**	Aluminum	

Power Output per Collector(W) [Ti-Ta, G = 1000 W/m²]				
0	**10**	**30**	**50**	**70**
873	850	794	724	640

PRESSURE DROP				
Flow	**ΔP**		**Flow**	**ΔP**
ml/s	**Pa**		**gpm**	**in H_20**
20	29		0.32	0.1
50	166		0.79	0.7
80	413		1.27	1.7

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