

**SOLAR COLLECTOR
CERTIFICATION AND RATING**



SRCC OG-100

CERTIFIED SOLAR COLLECTOR

SUPPLIER: **Solimpeks Solar Energy Corp**
Hilal Sk. No:20, 42300 Karatay
Konya, Karatay 42300 Turkey

MODEL: Wunder CLSF 1808

COLLECTOR TYPE: Glazed Flat-Plate

CERTIFICATION#: 2010070A

Original Certification Date: 16-NOV-11

COLLECTOR THERMAL PERFORMANCE RATING

Kilowatt-hours Per Panel Per Day				Thousands of BTU Per Panel Per Day			
CATEGORY (Ti-Ta)	CLEAR DAY (6.3 kWh / m ² .day)	MILDLY CLOUDY (4.7 kWh / m ² .day)	CLOUDY DAY (3.1 kWh / m ² .day)	CATEGORY (Ti-Ta)	CLEAR DAY (2000 Btu / ft ² .day)	MILDLY CLOUDY (1500 Btu / ft ² .day)	CLOUDY DAY (1000 Btu / ft ² .day)
A (-5 °C)	7.5	5.7	3.9	A (-9 °F)	25.7	19.5	13.2
B (5 °C)	6.9	5.1	3.2	B (9 °F)	23.5	17.3	11.0
C (20 °C)	5.9	4.1	2.3	C (36 °F)	20.1	14.0	7.9
D (50 °C)	4.1	2.4	0.8	D (90 °F)	14.0	8.2	2.8
E (80 °C)	2.5	1.0	0.0	E (144 °F)	8.4	3.4	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

COLLECTOR SPECIFICATIONS

Gross Area: 1.790 m² 19.27 ft² Net Aperture Area: 1.62 m² 17.44 ft²

Dry Weight: 34.0 kg 75. lb Fluid Capacity: 2.4 liter 0.6 gal

Test Pressure: 1500. KPa 218. psig

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	119.00	0.48
50.00	0.79	400.2	1.6
80.00	1.27	804.50	3.23

Absorber Material: Tube - Copper / Plate - Copper Insulation Side: Fiber

Absorber Coating: Selective coating Insulation Back: Fiber

TECHNICAL INFORMATION

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

SI Units: $\eta = 0.688 - 3.26540 (P)/I - 0.00560 (P)^2/I$ 0.691 -3.630 W/m².°C

IP Units: $\eta = 0.688 - 0.57520 (P)/I - 0.00055 (P)^2/I$ 0.691 -0.639 Btu/hr.ft².°F

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

K_{τα} = 1 -0.137 (S) -0.005 (S)² Test Flow Rate: 19.0 ml/s.m² 0.0279 gpm/ft²

K_{τα} = 1 -0.15 (S) Linear Fit

REMARKS:

