

**SOLAR COLLECTOR  
CERTIFICATION AND RATING**



**CERTIFIED SOLAR COLLECTOR**

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

MODEL: Wunder CLSF 2510

COLLECTOR TYPE: Glazed Flat-Plate

CERTIFICATION#: 2010070C

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 <sup>2</sup> .day)	MILDLY CLOUDY (4.7 kWh / m <sup>2</sup> .day)	CLOUDY DAY (3.1 kWh / m <sup>2</sup> .day)	CATEGORY (Ti-Ta)	CLEAR DAY (2000 Btu / ft <sup>2</sup> .day)	MILDLY CLOUDY (1500 Btu / ft <sup>2</sup> .day)	CLOUDY DAY (1000 Btu / ft <sup>2</sup> .day)
A (-5 °C)	10.4	7.9	5.3	A (-9 °F)	35.5	26.8	18.2
B (5 °C)	9.5	7.0	4.5	B (9 °F)	32.5	23.8	15.2
C (20 °C)	8.2	5.7	3.2	C (36 °F)	27.8	19.4	11.0
D (50 °C)	5.7	3.4	1.2	D (90 °F)	19.6	11.4	4.0
E (80 °C)	3.5	1.4	0.0	E (144 °F)	11.9	4.9	0.1

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: 2.421 m<sup>2</sup>      26.06 ft<sup>2</sup>      Net Aperture Area: 2.23 m<sup>2</sup> 24.01 ft<sup>2</sup>

Dry Weight: 46.0 kg      101. lb      Fluid Capacity: 3.2 liter 0.8 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 <sub>2</sub> O

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: η= 0.702      -3.26820 (P)/l      -0.00571 (P)<sup>2</sup>/l      0.705      -3.640 W/m<sup>2</sup>.°C

IP Units: η= 0.702      -0.57569 (P)/l      -0.00056 (P)<sup>2</sup>/l      0.705      -0.641 Btu/hr.ft<sup>2</sup>.°F

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

Kτα = 1      -0.137 (S)      -0.005 (S)<sup>2</sup>      Test Fluid: Water

Kτα = 1      -0.15 (S)      Linear Fit      Test Flow Rate: 14.0 ml /s.m<sup>2</sup> 0.0206 gpm/ft<sup>2</sup>

**REMARKS:**

