CERTIFIED SOLAR COLLECTOR

SUPPLIER:
Solimpeks Solar Energy Corp
FEVZI ÇAKMAK MAH. 10753 Sk No:3/3A
Karatay, KONYA 42050 Turkey
www.solimpeks.com

In Accordance with:
SRCC Standard 100-1995-10

BRAND:	Marvel
MODEL:	CLS 2510
COLLECTOR TYPE:	Glazed Flat Plate
CERTIFICATION #:	2010008A
Original Certification:	February 02, 2010
Expiration Date:	April 06, 2017

The solar collector listed below has been evaluated by the Solar Rating & Certification Corporation™ (SRCC™), an ISO/IEC 17065 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)	10.3	7.8	5.3	A (-9 °F)	35.1	26.5	18.1
B (5 °C)	9.3	6.8	4.3	B (9 °F)	31.6	23.1	14.6
C (20 °C)	7.7	5.3	2.9	C (36 °F)	26.4	18.1	9.8
D (50 °C)	4.8	2.6	0.6	D (90 °F)	16.4	9.0	2.2
E (80 °C)	2.2	0.5	0.0	E (144 °F)	7.5	1.7	0.0

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:	2.480 m²	26.70 ft²	**Dry Weight:**	49 kg	108 lb
Net Aperture Area:	2.271 m²	24.44 ft²	**Fluid Capacity:**	2.3 liter	0.6 gal
Absorber Area:	0.000 m²	0.00 ft²	**Test Pressure:**	1103 kPa	160 psi

TECHNICAL INFORMATION						
			Tested in accordance with: ASHRAE 93			
ISO Efficiency Equation [NOTE: Based on gross area and (P)=Ti-Ta]						
SI UNITS:	η= 0.688 - 3.69940(P/G) - 0.01049(P²/G)		**Y Intercept:**	0.697	**Slope:**	-4.573 W/m².°C
IP UNITS:	η= 0.688 - 0.65199(P/G) - 0.00103(P²/G)		**Y Intercept:**	0.697	**Slope:**	-0.806 Btu/hr.ft².°F

Incident Angle Modifier								Test Fluid:	Water	
θ	10	20	30	40	50	60	70	**Test Mass Flow Rate:**	0.0204 kg/(s m²)	15.01 lb/(hr ft²)
Kτα	1.00	1.00	0.99	0.97	0.93	0.81	0.41	**Impact Safety Rating:**		

REMARKS:

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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ADDITIONAL INFORMATION (click here to return to the rating page)			
Test Lab:	Florida Solar Energy Center	Test Date:	April 06, 2005
Test Report Number:	145	Test Location:	outdoors

SOLAR COLLECTOR CONSTRUCTION DETAILS					
Gross Length:	0.000 m	**Gross Width:**	0.000 m	**Gross Depth:**	0.000 mm

COLLECTOR MATERIALS					
Outer Cover:	Other	**Enclosure back:**	Aluminum	**Back Insulation:**	Fiber, None
Inner Cover:	None	**Enclosure side:**	Aluminum	**Side Insulation:**	Fiber, None
Absorber Description:		**Flow Pattern:**			
Riser Tube:	Copper	**Fin:**			
Absorber Coating:	Selective	**Tube to fin connection**			

GLAZING	Outer Cover	Inner Cover
Material:	Other	None
Surface Characteristics:		
Thickness:	0.0 mm	N/A
Transmissivity:		
Length:	0.000 m	
Width:	0.000 m	
Tube Glazing to Header Enclosure Seal:		

ABSORBER:				**Absorber Coating:**	Selective
Header Material:		**Header OD:**		**Header Wall:**	
Riser Tube Material:	Copper	**Riser Tube OD:**		**Riser Tube Wall Thickness:**	
Fin Material:		**Fin Thickness:**	0.00 mm		

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Flow Pattern:					
Number of Riser Tubes:	0	**Tube Spacing:**		**Number of times each riser crosses the absorber:**	0
Length of Flow Path:	0.00 m	**Riser to Fin/Plate Bond:**			

INSULATION:					
Location	**Type**	**Thickness**	**Location**	**Type**	**Thickness**
Back – Top Layer:	Fiber		**Sides – Inner Layer:**	Fiber	
Back – Bottom Layer:	None		**Sides – Outer Layer:**	None	
Enclosure Fastening Methods:					

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

PRESSURE DROP				
Flow	**ΔP**		**Flow**	**ΔP**
ml/s	**Pa**		**gpm**	**in H_20**
20			0.32	
50			0.79	
80			1.27	

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