



**CERTIFIED SOLAR THERMAL COLLECTOR**

**SUPPLIER:**  
**Heliocol USA, Inc.**  
 950 Sunshine Lane  
 Altamonte Springs, FL 32714 USA  
 www.heliocol.com

**MODEL:** Heliocol 40  
**THERMAL COLLECTOR TYPE:** Unglazed Flat Plate  
**CERTIFICATION #:** 00013C  
**Original Certification:** February 01, 2009  
**Expiration Date:** February 01, 2029

This solar collector was evaluated by the Florida Solar Energy Center (FSEC) in accordance with prescribed methods and was found to meet the minimum standards established by FSEC. This evaluation was based on solar collector tests performed by an FSEC approved laboratory. The purpose of the tests is to verify initial performance conditions and quality of construction only. The resulting certification is not a guarantee of long term performance or durability. This collector has been rated for energy output on measured performance and an assumed standard day. Total solar energy available for the standard day is 5045 Watt-hour/m<sup>2</sup> (1600 Btu/ft<sup>2</sup>) distributed over a 10 hour period.

COLLECTOR THERMAL PERFORMANCE RATING (Collector Tested per ASHRAE 96)							
Kilowatt-hours (thermal) Per m <sup>2</sup> Per Day				Thousands of Btu Per ft <sup>2</sup> Per Day			
Category Inlet	Low 30°C	Intermediate 50°C	High 100°C	Category Inlet	Low 86°F	Intermediate 122°F	High 212°F
ENERGY OUTPUT	3.0	1.1	0.0	ENERGY OUTPUT	1.0	0.3	0.0

COLLECTOR SPECIFICATIONS					
<b>Gross Area:</b>	3.779 m <sup>2</sup>	40.68 ft <sup>2</sup>	<b>Dry Weight:</b>	9 kg	19 lb
<b>Net Aperture Area:</b>	3.779 m <sup>2</sup>	40.68 ft <sup>2</sup>	<b>Fluid Capacity:</b>	11.7 liter	3.1 gal
<b>Absorber Area:</b>	3.779 m <sup>2</sup>	40.68 ft <sup>2</sup>	<b>Test Pressure:</b>	1103 kPa	160 psi

TECHNICAL INFORMATION		Tested in accordance with: ASHRAE 96
Efficiency Equation [NOTE: Based on gross area and (P)=Ti-Ta]		
SI UNITS:	Wind speed (u) < 1.5 m/s, Temperature (Ti - Ta) in °C, Radiation (G) in W/m <sup>2</sup> $\eta = 0.837 - 18.440(P/G) - 50.690(P^2/G)$	
IP UNITS:	Wind speed (u) < 3 mph, Temperature (Ti - Ta) in °F, Radiation (G) in Btu/hr-ft <sup>2</sup> $\eta = 0.837 - 3.250(P/G) - 4.959(P^2/G)$	

<b>IAM Coefficient:</b>	1 - 0.11	
<b>Test Fluid:</b>		
<b>Test Mass Flow Rate:</b>	kg/(s m <sup>2</sup> )	lb/(hr ft <sup>2</sup> )

REMARKS:

*Joseph Walters*  
 Technical Director

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