



**CERTIFIED SOLAR COLLECTOR**

**SUPPLIER:**  
**Dimplex North America Ltd.**  
 1367 Industrial Road  
 Cambridge, ONTARIO N1R 7G8 Canada  
 www.dimplex.com

**BRAND:** Dimplex  
**MODEL:** DSCA-2M  
**COLLECTOR TYPE:** Glazed Flat Plate  
**CERTIFICATION #:** 2009051A  
**Original Certification:** October 26, 2011  
**Expiration Date:** March 24, 2022

The solar collector listed below has been evaluated by the Solar Rating & Certification Corporation™ (SRCC™) 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.

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/m <sup>2</sup> .day)	Medium Radiation (4.7 kWh/m <sup>2</sup> .day)	Low Radiation (3.1 kWh/m <sup>2</sup> .day)	Climate -> Category (Ti-Ta)	High Radiation (2000 Btu/ft <sup>2</sup> .day)	Medium Radiation (1500 Btu/ft <sup>2</sup> .day)	Low Radiation (1000 Btu/ft <sup>2</sup> .day)
A (-5 °C)	8.0	6.1	4.1	A (-9 °F)	27.4	20.7	14.0
B (5 °C)	7.3	5.3	3.3	B (9 °F)	24.8	18.1	11.4
C (20 °C)	6.1	4.2	2.2	C (36 °F)	20.8	14.2	7.7
D (50 °C)	3.8	2.1	0.5	D (90 °F)	13.0	7.0	1.7
E (80 °C)	1.7	0.4	0.0	E (144 °F)	5.9	1.2	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					
<b>Gross Area:</b>	2.022 m <sup>2</sup>	21.76 ft <sup>2</sup>	<b>Dry Weight:</b>	38 kg	84 lb
<b>Net Aperture Area:</b>	1.857 m <sup>2</sup>	19.98 ft <sup>2</sup>	<b>Fluid Capacity:</b>	1.8 liter	0.5 gal
<b>Absorber Area:</b>	1.855 m <sup>2</sup>	19.97 ft <sup>2</sup>	<b>Test Pressure:</b>	896 kPa	130 psi

TECHNICAL INFORMATION			Tested in accordance with:		
<b>ISO Efficiency Equation</b> [NOTE: Based on gross area and (P)=Ti-Ta]					
<b>SI UNITS:</b>	$\eta = 0.681 - 3.43690(P/G) - 0.01398(P^2/G)$	<b>Y Intercept:</b>	0.688	<b>Slope:</b>	-4.273 W/m <sup>2</sup> .°C
<b>IP UNITS:</b>	$\eta = 0.681 - 0.60573(P/G) - 0.00137(P^2/G)$	<b>Y Intercept:</b>	0.688	<b>Slope:</b>	-0.753 Btu/hr.ft <sup>2</sup> .°F

Incident Angle Modifier								Test Fluid:	
$\theta$	10	20	30	40	50	60	70	Water	
<b>K<math>\tau\alpha</math></b>	1.00	0.98	0.96	0.92	0.84	0.67	0.21	<b>Test Mass Flow Rate:</b>	0.0200 kg/(s m <sup>2</sup> )    14.75 lb/(hr ft <sup>2</sup> )
<b>Impact Safety Rating:</b>									

REMARKS:

*Jim Higgins*

Technical Director





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ADDITIONAL INFORMATION ( <a href="#">click here to return to the rating page</a> )			
Test Lab:	Exova Canada, Inc.	Test Report Date:	March 24, 2010
Test Report Number:	08-008-6951	Test conducted:	

SOLAR COLLECTOR CONSTRUCTION DETAILS					
Gross Length:	2.002 m	Gross Width:	1.010 m	Gross Depth:	0.0 mm

COLLECTOR MATERIALS					
Outer Cover:	Glass sheet	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:	Glass sheet	None
Surface Characteristics:		
Thickness:	4.0 mm	N/A
Transmissivity:		
Length:	1.948 m	
Width:	0.958 m	
Tube Glazing to Header Enclosure Seal:	Silicone bead	

<b>ABSORBER:</b>		<b>Absorber Coating:</b>		Selective	
<b>Header Material:</b>		<b>Header OD:</b>		<b>Header Wall:</b>	
<b>Riser Tube Material:</b>	Copper	<b>Riser Tube OD:</b>		<b>Riser Tube Wall Thickness:</b>	
<b>Fin Material:</b>		<b>Fin Thickness:</b>	0.10 mm		





<b>Flow Pattern:</b>					
<b>Number of Riser Tubes:</b>	9	<b>Tube Spacing:</b>		<b>Number of times each riser crosses the absorber:</b>	9
<b>Length of Flow Path:</b>	1.90 m	<b>Riser to Fin/Plate Bond:</b>			

<b>INSULATION:</b>					
<b>Location</b>	<b>Type</b>	<b>Thickness</b>	<b>Location</b>	<b>Type</b>	<b>Thickness</b>
<b>Back – Top Layer:</b>	Fiber		<b>Sides – Inner Layer:</b>	Fiber	
<b>Back – Bottom Layer:</b>	None		<b>Sides – Outer Layer:</b>	None	
<b>Enclosure Fastening Methods:</b>	Mechanical Forming				

<b>Power Output per Collector(W)</b> [ Ti-Ta, G = 1000 W/m <sup>2</sup> ]				
0	10	30	50	70

<b>PRESSURE DROP</b>				
<b>Flow</b>	<b>ΔP</b>		<b>Flow</b>	<b>ΔP</b>
<b>ml/s</b>	<b>Pa</b>		<b>gpm</b>	<b>in H<sub>2</sub>O</b>
20			0.32	
50			0.79	
80			1.27	

