



SOLAR RATING  
& CERTIFICATION  
CORPORATION

## OG-100 ICC-SRCC™ CERTIFIED SOLAR AIR HEATING COLLECTOR #10001798

<b>SUPPLIER:</b> Aéronergie, Inc. 2000 André-C Hamel Drummondville, Québec J2C8B1 Canada aeronergie.com	<b>BRAND:</b> Aéronergie <b>MODEL:</b> Luba GL <b>COLLECTOR TYPE:</b> Air Transpired <b>CERTIFICATION NUMBER:</b> 10001798 <b>ORIGINAL CERTIFICATION DATE:</b> Mar. 17, 2013 <b>RENEWAL EXPIRATION DATE:</b> Mar. 31, 2019 <i>Certifications are subject to annual renewal</i>
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The solar collector listed below has been evaluated by the Solar Rating & Certification Corporation™ (ICC-SRCC™), an ISO 17065 accredited Certification Body, in accordance with ICC-SRCC OG-100, Operating Guidelines and Minimum Standards for Certifying Solar Collectors, and has been certified by ICC-SRCC. This award of certification is subject to all terms and conditions of the OG-100 Program Agreement and the documents incorporated therein by reference. This document must be reproduced in its entirety.

### OG-100 COLLECTOR EFFICIENCY RATINGS<sup>1</sup> (η) – Black Absorber Color<sup>2</sup>

Wind Speed <sup>3</sup> ►	Low Wind (1.1 m/s, 2.46 mph)	Medium Wind (2.0 m/s, 4.5 mph)	High Wind (3.0 m/s, 6.7 mph)
Air Flow Rate			
1.2 scmm/m <sup>2</sup> (4 scfm/ft <sup>2</sup> )	0.6	0.57	0.54
2.4 scmm/m <sup>2</sup> (8 scfm/ft <sup>2</sup> )	0.72	0.70	0.67
3.7 scmm/m <sup>2</sup> (12 scfm/ft <sup>2</sup> )	0.78	0.75	0.72

- 1: Thermal efficiency (η) is based on aperture area and includes back losses.
- 2: Efficiency ratings are based on test data for the specific collector described in the "Collector Test Sample Details" section below. Performance values for collectors that use an absorber painted a different color than the one tested can be estimated by multiplying the efficiency values above by the ratio of the absorptivity of the new paint color and the absorptivity of the tested collector (0.93 in this case). This assumes that the new color paint has a similar emissivity to the tested collector (0.88 in this case), the absorbers in each stage are the same color. Absorptivity should be measured per ASTM C1549.
- 3: Efficiency data adjusted to 2.0, 3.0 m/s speeds by means of linear interpolation. No data below 1.0 m/s was collected, therefore interpolation was not possible. Original data available in Testing Summary below.

### CERTIFIED COLLECTOR SPECIFICATIONS

Collectors must match the design of the sample tested for certification. In order to be considered certified, installed collectors must match the following specifications.

<b>Collector Type</b>	1-Stage, Transpired, Open-Loop Solar Air Heating Collector	
<b>Flowrate Range</b>	0 – 3.7 scmm/m <sup>2</sup> (0 – 12 scfm/ft <sup>2</sup> )	
<b>Panel Width</b>	2.74 m (9 ft)	
<b>Panel Length</b>	0.914 m (3 ft)	
<b>Type</b>	<input type="checkbox"/> Unglazed <input checked="" type="checkbox"/> Glazed	
<b>Absorber Type</b>	Back: Perforated corrugated black plate Inside: Black felt	
<b>Cover</b>	Polymer Lexan	



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# TESTING SUMMARY

## LUBA GL COLLECTOR

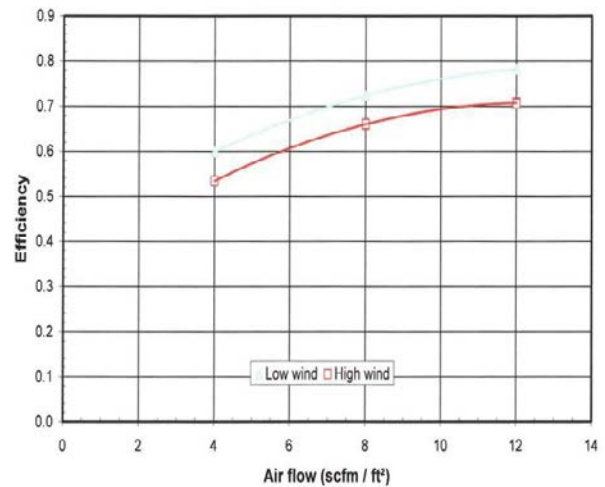
### ICC-SRCC™ OG-100 CERTIFICATION #10001798

<b>Test Lab</b>	Exova	Laboratory testing of a collector sample is required for OG-100 certification to confirm that the collector passes qualification tests and to obtain performance results. The following sections provide information on the collector tested for the purposes of OG-100 certification.
<b>Test Report Number</b>	11-06-S0014	
<b>Test Report Date</b>	November 23, 2011	
<b>Test Standard</b>	CSA F378-2-11	

COLLECTOR TEST SAMPLE DETAILS	
<b>Absorber Coating</b>	Paint: Black
<b>Absorber</b>	0.93*
<b>Absorber Material</b>	Steel Corrugated, Inside felt
<b>Porosity</b>	1.1%
<b>Gross Area</b>	2.637 m <sup>2</sup> ( 28.38 ft <sup>2</sup> )
<b>Aperture Area (Net)</b>	2.362 m <sup>2</sup> (25.42 ft <sup>2</sup> )
<b>Gross Sample Dimensions (LXWXH)</b>	2.44 m x 1.84 m x 18.5 cm 8 ft x 6 ft x 7.28 in

\* Average data measured by test lab at the time of collector testing per CSA F378

THERMAL EFFICIENCY TESTING DETAILS	
<b>Testing Location</b>	Indoors, Conditioned Space (25° C)
<b>Tilt</b>	70 degrees (vertical)
<b>Average Irradiance</b>	900 W/m <sup>2</sup>



THERMAL EFFICIENCY DATA SUMMARY (K at 900 W/m <sup>2</sup> average insolation)							
Wind Speed		1.1 m/s (2.4 mph)		3.2 m/s (7.2 mph)		3.4 m/s (7.6 mph)	
		η	Δ T	η	Δ T	η	Δ T
<b>Air Flow</b>							
1.2 scmm/m <sup>2</sup> (4 scfm/ft <sup>2</sup> )		0.60	22.0	-	-	0.53	19.2
2.4 scmm/m <sup>2</sup> (8 scfm/ft <sup>2</sup> )		0.72	13.3	-	-	0.63	12.1
3.7 scmm/m <sup>2</sup> (12 scfm/ft <sup>2</sup> )		0.78	9.5	0.72	8.9	0.71	8.7

**REMARKS:**

- Performance is unreliable if the collector is used at a pressure drop of less than 25 Pa.
- Wind impact on efficiency should not be extrapolated to large-scale systems because the ratio of wind-blown edge loss to gain across the surface area is diminished for large vs. small collectors (arrays).
- All lengths of this collector are certified.
- Each collector installation must be marked with an indelible label or mark in a location visible on the exterior of the collector. Marking must provide the model name and number and the SRCC OG-100 certification number, in accordance with the requirements of the *ICC-SRCC Trademark, Certification Mark and Certificate Policy*.

*Shawn Martin*

Technical Director, ICC-SRCC

