## OG-100 ICC-SRCC™ CERTIFIED SOLAR COLLECTOR # 2010019E

**SUPPLIER:**
Dimas SA
2nd KLM Argos-Nafplion
Argos, 21200 Greece
www.dimas-solar.gr

**BRAND:** Dimas SA
**MODELS:** ENERGY+ARGO 20
**COLLECTOR TYPE:** Glazed Flat Plate
**CERTIFICATION #:** 2010019E
**ORIGINAL CERTIFICATION:** October 19, 2011
**RENEWAL EXPIRATION DATE*:** November 01, 2021
**Certifications must be renewed annually*

Compliance with the following standard: **ICC-901/SRCC Standard 100-2015**

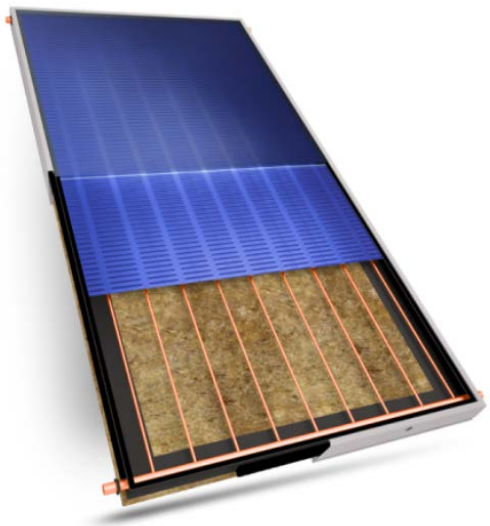
This solar collector listed below has been evaluated, rated and certified by the Solar Rating & Certification Corporation (ICC-SRCC™), an ISO/IEC 17065 accredited Certification Body, in accordance with the latest version of the ICC-SRCC *Rules for Solar Heating & Cooling Product Listing Reports*. This award of certification is subject to all terms and conditions of the ICC-SRCC OG-100 and the documents incorporated therein by reference. Thermal performance ratings calculated in accordance with standard OG-100 rating conditions are provided below. This document must be reproduced in its entirety.

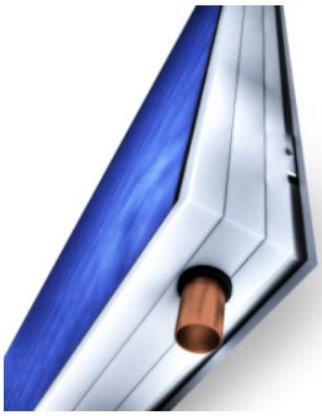
**OG-100 SOLAR THERMAL COLLECTOR STANDARD PERFORMANCE RATINGS**

| Kilowatt-hours (thermal) Per Collector[1] Per Day | | | | Thousands of Btu Per Collector[1] Per Day | | | |
|---|---|---|---|---|---|---|---|
| **Climate →** **Category ($T_i$-$T_a$)** | High Radiation (6.3 kWh/m²•day) | Medium Radiation (4.7 kWh/m²•day) | Low Radiation (3.1 kWh/m²•day) | **Climate →** **Category ($T_i$-$T_a$)** | High Radiation (2000 Btu/ft²•day) | Medium Radiation (1500 Btu/ft²•day) | Low Radiation (1000 Btu/ft²•day) |
| **A (-5°C)** | 9.58 | 7.26 | 4.95 | **A (-9°F)** | 32.70 | 24.78 | 16.89 |
| **B (5°C)** | 8.70 | 6.38 | 4.07 | **B (9°F)** | 29.70 | 21.78 | 13.90 |
| **C (20°C)** | 7.32 | 5.06 | 2.83 | **C (36°F)** | 24.96 | 17.28 | 9.64 |
| **D (60°C)** | 4.83 | 2.74 | 0.83 | **D (90°F)** | 16.47 | 9.33 | 2.84 |
| **E (80°C)** | 2.59 | 0.87 | 0.00 | **E (144°F)** | 8.83 | 2.98 | 0.00 |

1. See tested collector details below.

**COLLECTOR DESCRIPTION: Glazed Flat Plate Collector**





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SOLAR RATING & CERTIFICATION CORPORATION

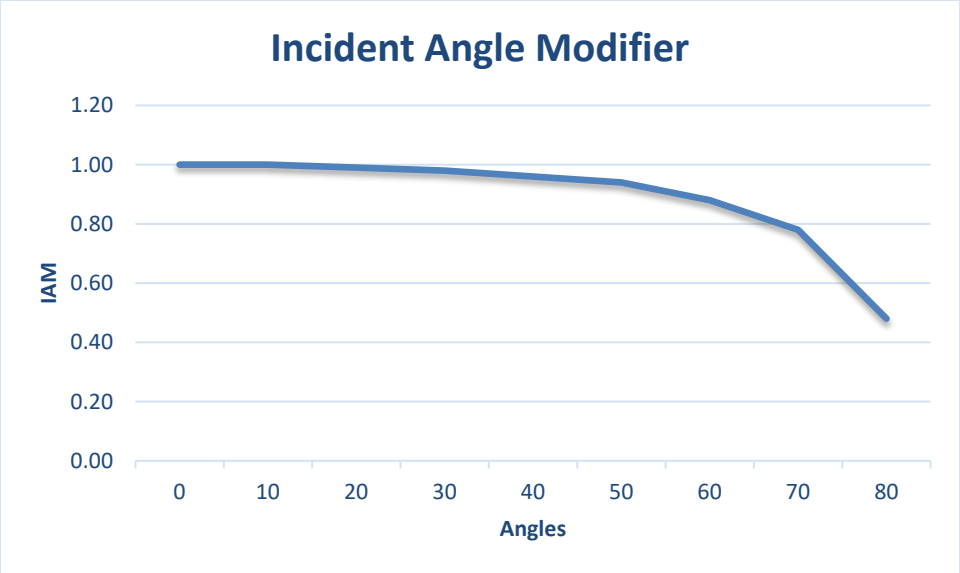
## TEST TECHNICAL RESULTS

**ISO Efficiency Equation: [Note: Based on gross area and (P)=$T_i$-$T_a$, and in accordance with ISO 9806-2013]**

| Second Order Thermal Efficiency Equation[1] | | Linearized Thermal Efficiency Equation[1] | | | |
|---|---|---|---|---|---|
| **SI UNITS** | ETA = 0.7650 – 3.9562(P/G) - 0.00844($P^2$/G) | **Y Intercept:** | 0.7647 | **Slope:** | 3.9647 |
| **IP UNITS** | ETA = 0.7650 - 0.6967(P/G) - 0.00083($P^2$/G) | **Y Intercept:** | 0.7647 | **Slope:** | 0.6982 |

**1: Thermal efficiency equations per ISO 9806-2013 provided in curve forms. The curve or second order fit efficiency equation should be considered to be a more representative representation of the collector performance test. The linearized efficiency equation is provided for use with incentive programs, regulations and software that require the "slope" and "intercept" terms to describe collector performance.**

| Longitudinal Incident Angle Modifier (IAM) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **θ** | 10° | 20° | 30° | 40° | 50° | 60° | 70° |
| **Κτά** | 1.00 | 0.99 | 0.98 | 0.96 | 0.94 | 0.88 | 0.78 |

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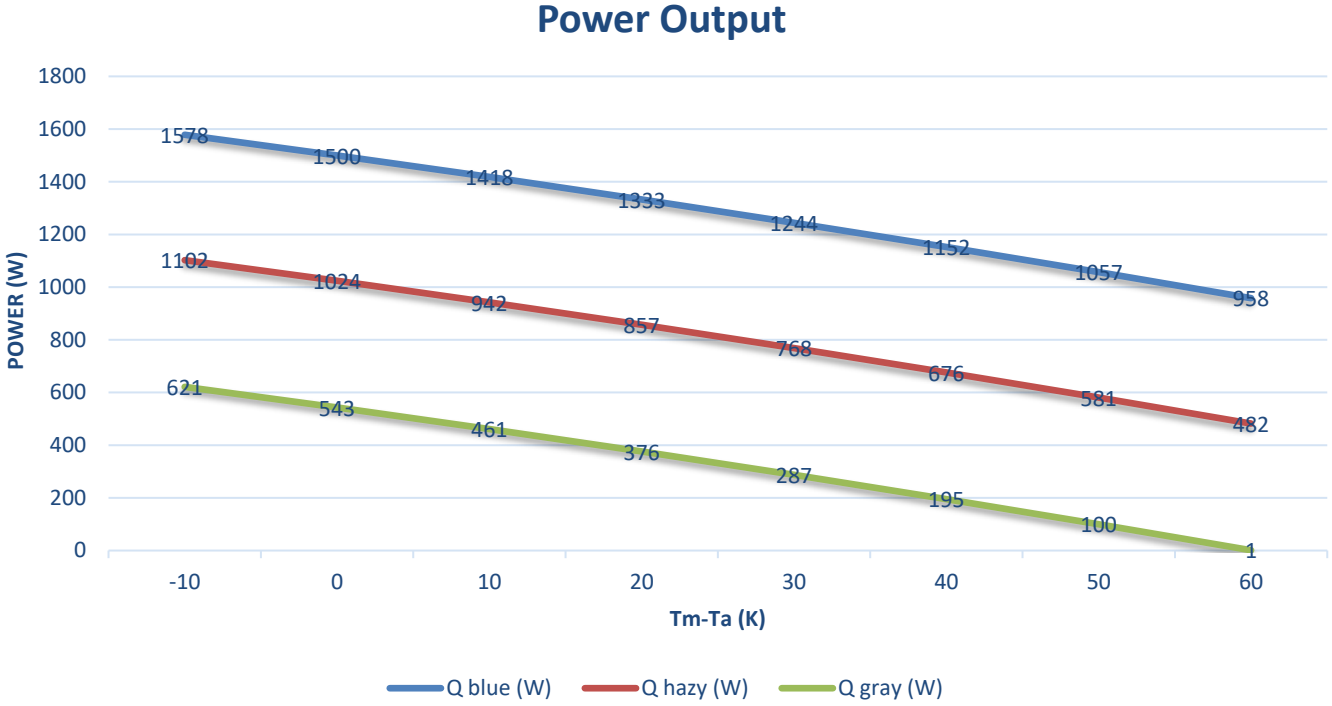
| COLLECTOR POWER OUTPUT (W) | | | |
|---|---|---|---|
| Note: Based on Standard Rating Conditions (SRC) and $T_m$-$T_a$ in accordance with ISO 9806-2017 | | | |
| **Tm-Ta (K)** | **Blue sky** | **Hazy sky** | **Grey sky** |
| **-10** | 1578 | 1102 | 621 |
| **0** | **1500** | 1024 | 543 |
| **10** | 1418 | 942 | 461 |
| **20** | 1333 | 857 | 376 |
| **30** | 1244 | 768 | 287 |
| **40** | 1152 | 676 | 195 |
| **50** | 1057 | 581 | 100 |
| **60** | 958 | 482 | 1 |
| **Q peak** | **1500 W** | | |

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| LABORATORY TEST INFORMATION | | | |
|---|---|---|---|
| **Test Lab:** | Institute of Thermodynamics and Thermal Engineering (ITW) | **Test Report No.** | 10COL910-3 |
| **Tested in Accordance With:** | EN ISO 12975-2:2006 & ICC 901/SRCC 100:2015 | **Test Report Issue Date:** | April 15th, 2020 |

| TESTED COLLECTOR SPECIFICATIONS | | | | | |
|---|---|---|---|---|---|
| **Gross Area:** | 2.02 m² | 21.743 ft² | **Gross Depth:** | 0.085 m | 0.278 ft |
| **Gross Length:** | 2.006 m | 6.58 ft | **Gross Width:** | 1.007 m | 3.303 ft |
| **Maximum Design Pressure*:** | 1600 KPa | 232 psi | **Design Flow Range*:** | 72 l/m²h | 3.2 gpm |
| **Standard Stagnation Temp** | 207 ˚C | 405 ˚F | **Dry Weight:** | 38 Kg. | 83.8 Lbs. |
| **HT Fluid Compatibility** | Water, Propylene Glycol Mix | | **Fluid Capacity:** | 4.5 Lt. | 1.19 Gal. |
| **Impact Safety Rating:** | 11- No testing required since tempered glass cover used | | | | |

**ICC-SRCC OG100 Certification Label:**

This product certified by the
**Solar Rating & Certification Corporation™**
www.Solar-Rating.org

ICC-SRCC Certification Number: 2010019E
High Solar Radiation Climate
Rating in Category C

7.32 kWh/day / 24.96 kBtu/day

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**REMARKS AND CONDITIONS OF CERTIFICATION:**

1. The collector listed in this ICC-SRCC OG-100 certification has been evaluated to the ICC 901/SRCC100-2015 standard and has been found to be in compliance.
2. OG-100 Standard Performance Ratings have been calculated for the tested components at the standardized conditions established by the OG-100 program. Actual results will vary based on the specific usage, installation and local environmental conditions.
3. Collectors listed in this ICC-SRCC OG-100 certification must display a label within the installation and operation manual(s) in accordance with the *ICC-SRCC Certification, Trademark and Certificate Policy*, which is available on the ICC-SRCC website.
4. The listed collector must be installed in accordance with the manufacturer's published installation instructions and applicable codes. OG-100 certifications do not include mounting hardware and appurtenances. Solar thermal collectors must be mounted in accordance with the requirements of the collector and mounting hardware manufacturers to comply with local codes for structural loading for wind, seismic, snow and other loads.
5. Solar thermal collectors and mounting hardware and appurtenances must comply with all local codes and requirements for fire resistance.
6. Solar thermal collectors must be used with the heat transfer fluids listed in this document.
7. Solar thermal collector manufactured by Dimas SA i, Greece under a quality control program subjected to periodic evaluation in accordance with the requirements of ICC-SRCC.

Shawn Martin
Vice President of Technical Services, ICC-SRCC