



SUMMARY INFORMATION SHEET

FSEC # 93034C

MANUFACTURER

Company Aquatherm Industries, Inc.
Address 1940 Rutgers University Blvd. Lakewood, NJ 08701 USA

Collector Model
 Ecosun 16104-10

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.

DESCRIPTION

Gross Length	3.06	meters	10.04	feet
Gross Width	1.195	meters	3.92	feet
Gross Depth	.009	meters	.03	feet
Gross Area	3.657	square meters	39.36	square feet
Transparent Frontal Area	3.657	square meters	39.36	square feet
Volumetric Capacity	11	liters	2.9	gallons
Weight (empty)	8	kilograms	18	pounds
Test Pressure	241	kPa	35	Psig
Number of Cover Plate	0			

MATERIALS

Enclosure	None
Glazing	None
Absorber	Polypropylene with UV stabilization
Absorber Coating	None
Insulation	None

THERMAL PERFORMANCE

Test flow Rate 252 ml/s 3.99 gpm
Incident Angle Modifier $K_{\tau\alpha} = 1 - .03 \text{ Linear Fit}$

Efficiency Equation [NOTE: Based on gross area and (P)=Ti-Ta]	Y INTERCEPT	SLOPE
SI UNITS: $\eta = 0.873 - 17.54000 (P)/I - 109.01000 (P)^2/I$	0.866	-19.78 W/m².°C
I P UNITS: $\eta = 0.873 - 3.08970 (P)/I - 10.66780 (P)^2/I$	0.866	-3.50 Btu/hr.ft².°F

RATING

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/m² (1600 Btu/ft²) distributed over a 10 hour period. Output energy ratings for this collector based on the second-order efficiency curve are:

Collector Temperature	ENERGY OUTPUT			
Low 35 °C (95 °F)	11.664	kWh/day	39800	Btu/day
Intermediate 50 °C (122 °F)	4.191	kWh/day	14300	Btu/day
High 100 °C (212 °F)	0	kWh/day	0	Btu/day

