



# SUMMARY INFORMATION SHEET

September 2011  
FSEC # 00534N

## MANUFACTURER

**Company** Ezinc Metal Sanayi ve Ticaret A.S.  
**Address** Organize Sanayi Bolgesi 23.Cad No: 31 Kayseri, TR-38070 Turkey

**Collector Model**  
Superline L USB

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

<b>Gross Length</b>	1.891 meters	6.2 feet
<b>Gross Width</b>	1.205 meters	3.95 feet
<b>Gross Depth</b>	.099 meters	.325 feet
<b>Gross Area</b>	2.279 square meters	24.53 square feet
<b>Transparent Frontal Area</b>	2.222 square meters	23.92 square feet
<b>Volumetric Capacity</b>	2.8 liters	.7 gallons
<b>Weight (empty)</b>	40 kilograms	88 pounds
<b>Test Pressure</b>	1350 kPa	195.8 Psig
<b>Number of Cover Plate</b>	1	

## MATERIALS

<b>Enclosure</b>	Aluminum
<b>Glazing</b>	Tempered Glass
<b>Absorber</b>	Copper with Copper
<b>Absorber Coating</b>	Selective
<b>Insulation</b>	Polyurethane, Fiber glass

## THERMAL PERFORMANCE

**Test flow Rate** 59 ml/s .94 gpm

**Incident Angle Modifier** [(S)=1/cosθ - 1, 0°<θ<=60°] Kτa = 1 -0.383 (S) 0.040 (S)<sup>2</sup>

Efficiency Equation [NOTE: Based on gross area and (P)=Ti-Ta]				Y INTERCEPT	SLOPE
<b>S I UNITS:</b>	$\eta = 0.737$	$-3.59960 (P)/I$	$-0.01006 (P)^2/I$	0.732	-4.20 W/m <sup>2</sup> .°C
<b>I P UNITS:</b>	$\eta = 0.737$	$-0.63410 (P)/I$	$-0.00100 (P)^2/I$	0.732	-0.70 Btu/hr.ft <sup>2</sup> .°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/m<sup>2</sup> (1600 Btu/ft<sup>2</sup>) 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)	7.86 kWh/day	26800 Btu/day		
Intermediate	50 °C (122 °F)	6.579 kWh/day	22400 Btu/day		
High	100 °C (212 °F)	2.8 kWh/day	9600 Btu/day		

