


SOLAR COLLECTOR CERTIFICATION AND RATING  SRCC OG-100	CERTIFIED SOLAR COLLECTOR SUPPLIER: Solar Skies Mfg, LLC 106 Donovan Drive Alexandria, MN 56308 USA MODEL: NSC-40 COLLECTOR TYPE: North Star Glazed Flat-Plate CERTIFICATION#: 2007040F
--	---

COLLECTOR THERMAL PERFORMANCE RATING

Megajoules Per Panel Per Day				Thousands of BTU Per Panel Per Day			
CATEGORY (Ti-Ta)	CLEAR DAY	MILDLY CLOUDY	CLOUDY DAY	CATEGORY (Ti-Ta)	CLEAR DAY	MILDLY CLOUDY	CLOUDY DAY
A (-5 °C)	58.1	43.8	29.7	A (-9 °F)	55.0	41.6	28.2
B (5 °C)	52.8	38.6	24.5	B (9 °F)	50.0	36.6	23.2
C (20 °C)	44.2	30.3	16.5	C (36 °F)	41.9	28.7	15.7
D (50 °C)	26.5	14.1	3.1	D (90 °F)	25.2	13.3	2.9
E (80 °C)	10.3	1.5	0.0	E (144 °F)	9.8	1.4	0.0

A- Pool Heating (Warm Climate) B- Pool Heating (Cool Climate) C- Water Heating (Warm Climate) D- Water Heating (Cool Climate) E- Air Conditioning

Original Certification Date: 04-OCT-07

COLLECTOR SPECIFICATIONS

Gross Area:	3.916 m ²	42.15 ft ²	Net Aperature Area: 3.58 m ² 38.53 ft ²
Dry Weight:	72.1 kg	159. lb	Fluid Capacity: 6.1 liter 1.6 gal
Test Pressure:	1103. KPa	160. psg	

COLLECTOR MATERIALS

Frame:	Anodized Aluminum
Cover (Outer):	Low Iron Tempered Glass
Cover (Inner):	None

Pressure Drop

Flow		ΔP	
m/s	gpm	Pa	in H ₂ O

Absorber Material:	Tube - Copper / Plate - Copper Fin
Absorber Coating:	Selective Coating

Insulation Side:	Polyisocyanurate
Insulation Back:	Polyisocyanurate

TECHNICAL INFORMATION

Efficiency Equation [NOTE: Based on gross area and (P)=Ti-Taj]				Y INTERCEPT	SLOPE
S I UNITS:	$\eta = 0.691$	$-3.39600 (P)/I$	$-0.01968 (P)^2/I$	0.706	-4.910 W/m²·°C
I P UNITS:	$\eta = 0.691$	$-0.59821 (P)/I$	$-0.00193 (P)^2/I$	0.706	-0.865 Btu/hr.ft²·°F
Incident Angle Modifier [(S)=1/cosθ - 1, 0°<θ<=60°]			Model Tested:	100-2002-001A	
Kα = 1	-0.194 (S)	-0.006 (S) ²	Test Fluid:	Water	
Kα = 1	-0.20 (S)	Linear Fit	Test Flow Rate:	9.9 ml/s.m ² 0.0146 gpm/ft ²	

REMARKS:

September, 2010
Certification must be renewed annually, For current status contact:
SOLAR RATING & CERTIFICATION CORPORATION
c/o FSEC ♦ 1679 Clearlake Road ♦ Cocoa, FL 32922 ♦ (321) 638-1537 ♦ Fax (321) 638-1010

[Return to Search](#)