

**SOLAR COLLECTOR
CERTIFICATION AND RATING**


SRCC OG-100

CERTIFIED SOLAR COLLECTOR

SUPPLIER: **ACR Solar International**
5840 Gibbons Dr.
Suite G
Carmichael, CA 95608 USA

MODEL: Skyline 10-01
COLLECTOR TYPE: Glazed Flat-Plate
CERTIFICATION #: 100-2001-002B

COLLECTOR THERMAL PERFORMANCE RATING

Megajoules Per Panel Per Day				Thousands of Btu Per Panel Per Day			
CATEGORY (Ti-Ta)	CLEAR DAY 23 MJ/m ² ·d	MILDLY CLOUDY 17 MJ/m ² ·d	CLOUDY DAY 11 MJ/m ² ·d	CATEGORY (Ti-Ta)	CLEAR DAY 2000 Btu/ft ² ·d	MILDLY CLOUDY 1500 Btu/ft ² ·d	CLOUDY DAY 1000 Btu/ft ² ·d
A (-5°C)	12	9	6	A (-9°F)	11	9	6
B (5°C)	11	8	5	B (9°F)	10	7	5
C (20°C)	9	6	3	C (36°F)	8	6	3
D (50°C)	5	3	1	D (90°F)	5	3	1
E (80°C)	3	1		E (144°F)	3	1	

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: September 22, 2006

COLLECTOR SPECIFICATIONS

Gross Area: 0.933 m² 10.04 ft²
Dry Weight: 8.62 kg 19 lb
Test Pressure: 1103 kPa 160 psig

Net Aperture Area: 0.847 m² 9.12 ft²
Fluid Capacity: 0.6 l 0.2 gal

COLLECTOR MATERIALS

Frame: Aluminum
Cover (Outer): Lexan Polycarbonate
Cover (Inner): None
Absorber Material: Tube - Copper / Plate - Copper Fin
Absorber Coating: Selective Coating
Insulation (Side): Polyisocyanurate
Insulation (Back): Polyisocyanurate

PRESSURE DROP

Flow		Δ P	
ml/s	gpm	Pa	in H ₂ O

TECHNICAL INFORMATION

Efficiency Equation [NOTE: Based on gross area and (P) = Ti-Ta]

	Y Intercept	Slope	
SI Units: η = 0.603 -3.8665 (P)/I +0.0015 (P) ² /I	0.602	-3.764	W/m ² ·°C
IP Units: η = 0.603 -0.6814 (P)/I 0.0000 (P) ² /I	0.602	-0.663	Btu/hr·ft ² ·°F

Incident Angle Modifier [(S) = 1/cos θ - 1, 0° ≤ θ ≤ 60°]

K_{arr} = 1.0 -0.1944 (S) -0.0186 (S)²
K_{arr} = 1.0 -0.21 (S) (Linear Fit)

Model Tested: Skyline 20-01

Test Fluid: Water

Test Flow Rate: 32 ml/s 0.50 gpm

REMARKS:

February, 2008

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

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CERTIFIED SOLAR COLLECTOR

SUPPLIER: **ACR Solar International**
5840 Gibbons Dr.
Suite G
Carmichael, CA 95608 USA

MODEL: Skyline 20-01
COLLECTOR TYPE: Glazed Flat-Plate
CERTIFICATION #: 100-2001-002A

COLLECTOR THERMAL PERFORMANCE RATING

Megajoules Per Panel Per Day				Thousands of Btu Per Panel Per Day			
CATEGORY (Ti-Ta)	CLEAR DAY 23 MJ/m ² ·d	MILDLY CLOUDY 17 MJ/m ² ·d	CLOUDY DAY 11 MJ/m ² ·d	CATEGORY (Ti-Ta)	CLEAR DAY 2000 Btu/ft ² ·d	MILDLY CLOUDY 1500 Btu/ft ² ·d	CLOUDY DAY 1000 Btu/ft ² ·d
A (-5°C)	24	18	13	A (-9°F)	23	17	12
B (5°C)	21	16	10	B (9°F)	20	15	9
C (20°C)	18	12	6	C (36°F)	17	11	6
D (50°C)	11	6	1	D (90°F)	10	6	1
E (80°C)	6	2		E (144°F)	6	2	

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: March 14, 2002

COLLECTOR SPECIFICATIONS

Gross Area: 1.865 m² 20.08 ft²
Dry Weight: 17.2 kg 38 lb
Test Pressure: 1103 kPa 160 psig

Net Aperture Area: 1.720 m² 18.51 ft²
Fluid Capacity: 1.8 l 0.5 gal

COLLECTOR MATERIALS

Frame: Aluminum
Cover (Outer): Lexan Polycarbonate
Cover (Inner): None
Absorber Material: Tube - Copper / Plate - Copper Fin
Absorber Coating: Selective Coating
Insulation (Side): Polyisocyanurate
Insulation (Back): Polyisocyanurate

PRESSURE DROP

Flow		Δ P	
ml/s	gpm	Pa	in H ₂ O
20	0.32	1291	5.18
40	0.63	4663	18.72
60	0.95	9795	39.32

TECHNICAL INFORMATION

Efficiency Equation [NOTE: Based on gross area and (P) = Ti-Ta]

	Y Intercept	Slope	
SI Units: η = 0.605 -3.8370 (P)/I +0.0017 (P) ² /I	0.604	-3.73	W/m ² ·°C
IP Units: η = 0.605 -0.6762 (P)/I 0.0000 (P) ² /I	0.604	-0.657	Btu/hr·ft ² ·°F

Incident Angle Modifier [(S) = 1/cos θ - 1, 0° ≤ θ ≤ 60°]

K_{arr} = 1.0 -0.1944 (S) -0.0186 (S)²
K_{arr} = 1.0 -0.21 (S) (Linear Fit)

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