SOLAR COLLECTOR
CERTIFICATION AND RATING

INTERIM COLLECTOR
CERTIFICATION

CERTIFIED SOLAR COLLECTOR

SUPPLIER: **DIXIE SOLAR LLC**
607 Travis Street, Suite 7
Webster, Texas 77598

MODEL: Dixie Solar Vacuum Tube DS-50-14

COLLECTOR TYPE: Integral Collector Storage

CERTIFICATION#: 2000037Di

COLLECTOR THERMAL PERFORMANCE RATING

Kilowatt Hours 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)	24.84	20.03	15.18	A (-9 °F)	84.75	68.34	51.79
B (5 °C)	16.71	11.90	7.05	B (9 °F)	57.01	40.60	24.06
C (20 °C)	4.52	0.00	0.00	C (36 °F)	15.42	0.00	0.00
D (50 °C)	0.00	0.00	0.00	D (90 °F)	0.00	0.00	0.00
E (80 °C)	0.00	0.00	0.00	E (144 °F)	0.00	0.00	0.00

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

Interim Certification Date: 15-Jul-11

COLLECTOR SPECIFICATIONS

Gross Area:	4.790 m^2	51.559 ft^2	**Aperture Area:**	3.81 m^2	41.01 ft^2
Dry Weight:	177.0 kg	390 lb	**Fluid Capacity:**	182.0 liter	48.1 gal
Test Pressure:	1062 kPa	154 psi			

COLLECTOR MATERIALS

Frame: Painted Steel
Cover: Glass
Absorber: Glass
Absorber Coating: Selective
Insulation: Foam and vacuum

STORAGE VESSEL MATERIALS

Wall: 304 Stainless Steel
Insulation: Vacuum
Outer Jacket: Glass
Backup Energy Input: None

TECHNICAL INFORMATION

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

S I UNITS:	η= 0.30	-5.437 (P)/G	**$W/m^2.°C$**
I P UNITS:	η= 0.30	-0.959 (P)/G	**$Btu/hr.ft^2.°F$**

Incident Angle Modifier [0°<θ<=60°]
Kta = 1 – 0.1 [(1/cos θ)-1]

Impact Safety Rating: 0

Test Fluid: Water
Simulated Flow Rate: 20.1 ml/s-m^2 0.0297 gpm/ft^2
Tested per: SRCC TM-1

Remarks:
Caution: The efficiency equation and ratings for this collector are assumed to be very low. They will be revised when the final test is completed. This collector will perform better than the above ratings indicate so use caution when designing a system to avoid overheating. The ratings and efficiency equations above are for comparison purposes. Additional data and parameters will be required to adequately simulate the performance of this unit in detail.