

SunMate

Hot Air Solar Panel

by

ENVIRONMENTAL SOLAR SYSTEMS



The **SunMate Solar Panel by Environmental Solar Systems** is the ideal choice for homeowners who want environmentally friendly and low-cost alternative heat. Our solar panels allow you to enjoy **FREE** energy from the sun without any adverse effects on the environment! The SunMate pulls cool air from your home, channels it through the absorber plate where it's heated by energy from the sun, then circulates hot air back into your home. A built-in thermostat automatically turns on a blower when the absorber plate reaches 110° F and shuts off the blower at 90° F.

What sets the SunMate apart from other solar panels is the design. One-piece construction produces a streamlined appearance that doesn't detract from your home's appearance. Heavy-duty aluminum components result in quality construction that assures long life and no maintenance.

The SunMate by Environmental Solar System is efficient and affordable. A single panel heats up to 750 square feet. Double-sealed solar glass eliminates air infiltration and water leaks. Polyisocyanurate insulation results in extremely low heat loss and an energy fan operates for just pennies per day.

The SunMate is installed vertically and mounted on the south side or roof of your home or building. The design accommodates 2" x 4" or 2" x 6" construction. Parallel installation allows you to integrate multiple panels for big heating jobs.

"SunMate solar panels are a great way to save on your heating bill. I've had 2 panels on my house for 12 years now. On real cool mornings, my panel fans kick on around 7:30am and they remain on until roughly 4:00pm, heating the first floor of my house throughout the day, maintaining between 70° - 75°, even when the temperature is in the single digits. After they shut off it still maintains warmth for several hours into the evening."

— Daron St. Jean, MA

"My Name is Cecile Lescarbeau. I am 84 years old and raised 8 children. I installed solar panels to heat my domestic hot water 24 years ago. The solar system is still working like a charm. Matter of fact it works so well that I decided to install two SunMate solar panels for heat as well. I am very happy with my solar system and all the money it has saved me through the years. I love the idea that I am doing my part in saving the environment for my 15 grand children."

— Cecile Lescarbeau, MA

Features:

- High efficiency and reliability
- Easy to install: wide variety of simple installations
- Can be used for fresh air intake for tight houses
- Brushless 100 CFM, 12VDC - 8.5 watt fan
- Automatic thermostat automatically turns the fan on and off
- 10-Year Warranty on Solar Panel
- One Year Warranty on fan, thermostat and transformer

Tested by National Solar Test Facility

- Energy Output 5.56 kw/day - 19,000 BTU (Ti-Ta) 9°F
- **OG-100 SRCC Collector Certified**

Specifications

- Weight: net 86 pounds
- Dimensions: 4" x 35" x 77"

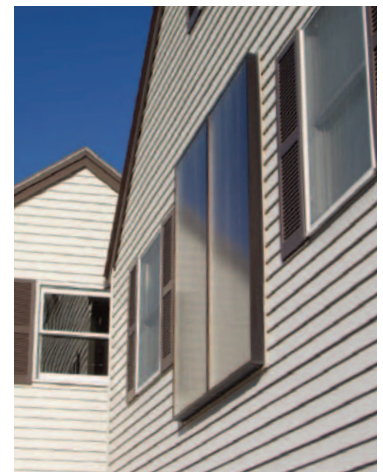
Electrical Specifications

- Step down transformer from 120 VAC, 60 Hz to 12 VDC, Direct 12 VDC, 8.5 watts

Tax Credits

- **Qualifies for 30% Federal and other State - Tax Credits**

The SunMate Solar Panel produces no emissions, no acid rain and no hazardous waste.



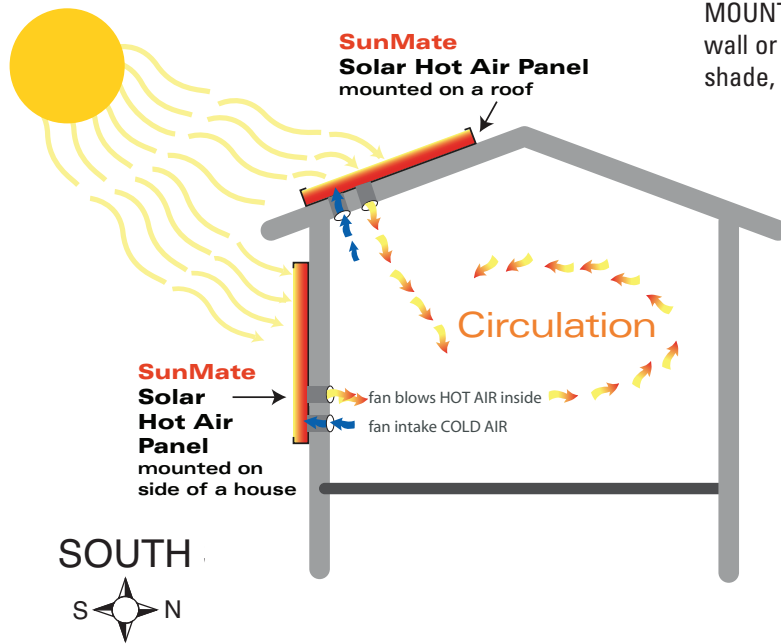
ENVIRONMENTAL SOLAR SYSTEMS, INC

www.environmentalsolarsystems.com 978.975.1190

U.S. Patent #5,596,981. Other Patents Pending. Made in USA

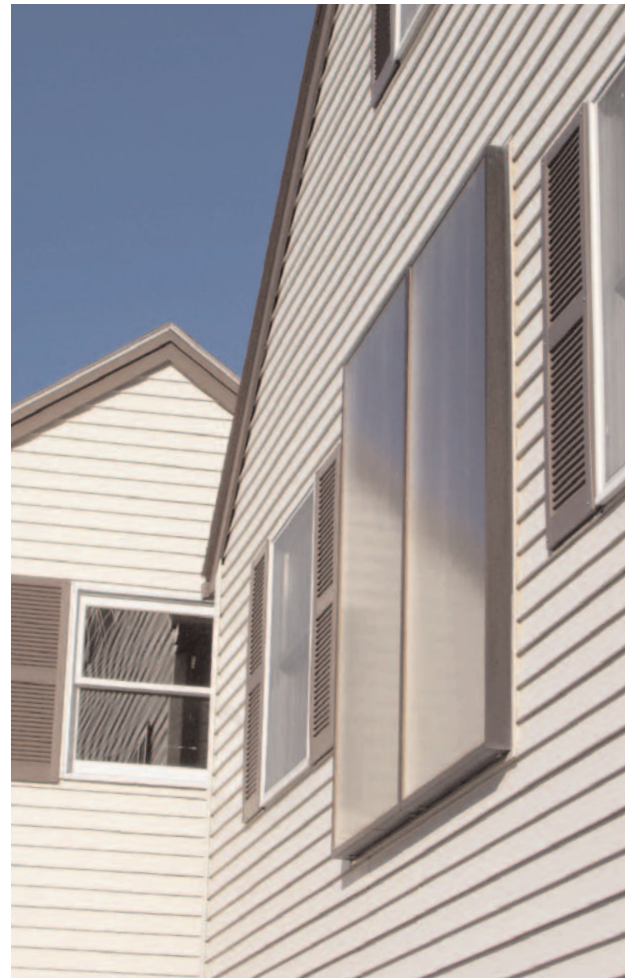
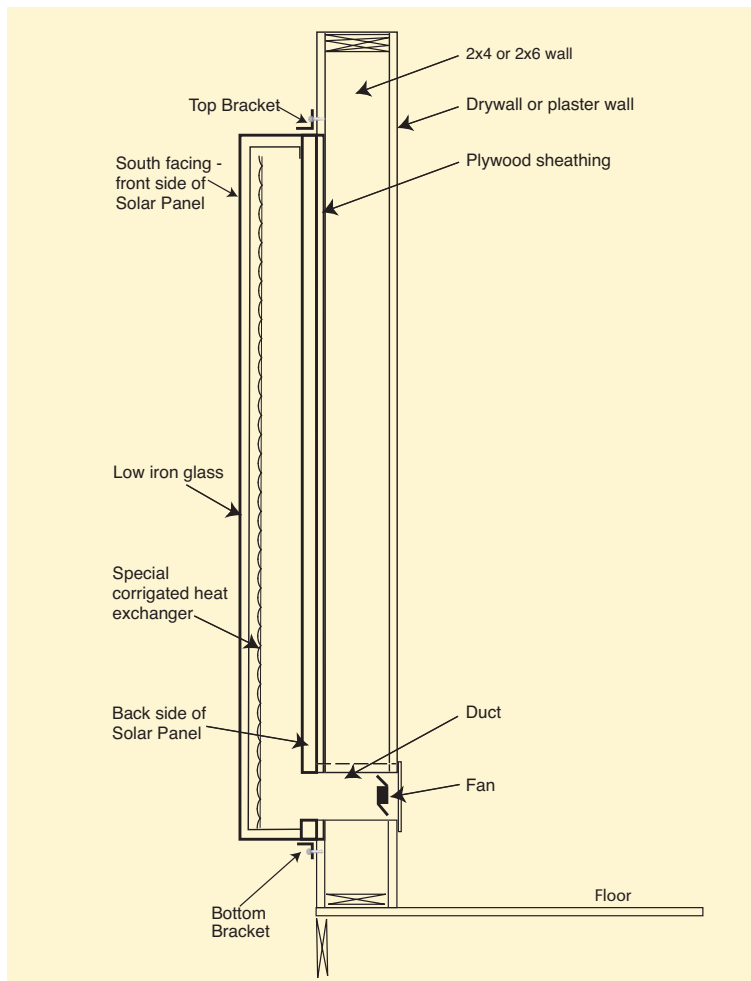
SunMate™ Hot Air Solar Panel

Easy home installation mounted on side or roof on a house



MOUNT THE SUNMATE SOLAR PANEL ON THE SOUTH SIDE wall or roof of a house or building. Make sure it is free from the shade, must have full sun exposure.

1. Cut two - 7 inch round holes through the wall/roof of the house.
2. Remove all siding/shingles from exterior of house only were solar panel is being mounted/installed.
3. Attach bottom and top brackets into exterior of house.
4. Attach solar panel to bottom and top bracket.
5. Attach thermostat wire in the fan duct. Slide fan duct through the wall into the rubber seal into back of solar panel. Slide in-take duct through the wall into the rubber seal into the back side of the solar panel.
6. Plug into the 120v receptacle and plug low voltage end into solar panel fan.



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Features:

- High efficiency and reliability
- Easy to install: wide variety of simple installations
- Best built solar panel in its class
- Can be used for fresh air intake for tight houses
- Automatic thermostat automatically turns the fan on and off
- 10-year warranty on Solar Panel
- 1-year warranty on thermostat, fan and transformer

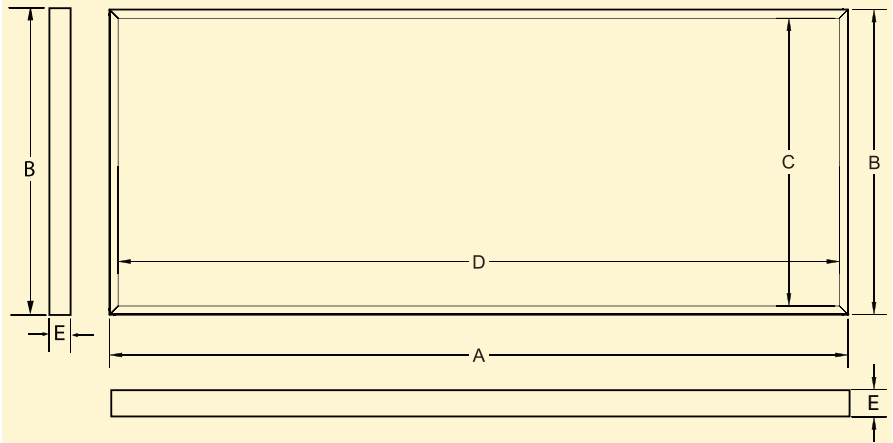
Specifications

- Weight: net 86 pounds
- Triple sealed low iron tempered solar glass
- Extruded aluminum one piece frame
- One piece aluminum corrugated absorber plate
- No Maintenance anodized exterior finish
- Energy Output 19,000 BTU/(Ti-Ta) 9° F
- Fan: Brushless 100CFM 12VDC - 8.5 watt
- Control: Digital thermostat
- Temp: 110° F
- Mounting on south side wall or roof
- Made in USA
- Dimensions: 4" x 35" x 77"

Electrical Specifications

- Step Down transformer from 120 VAC, 60 Hz to 12 VDC, Direct 12 VDC 8.5 watts

DIMENSIONAL DATA



F = Gross Frontal Area (ft²)
G = Transparent Frontal Area (ft²)

Mechanical Specifications

A	B	C	D	E	F	G
77"	35"	32.875	74.875	4"	18.7'	17.09

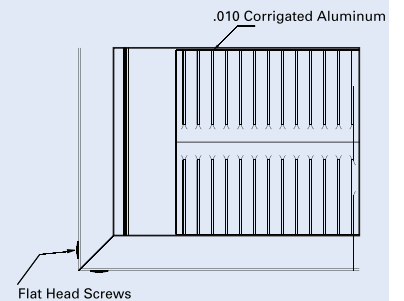
WEIGHT

86LB.

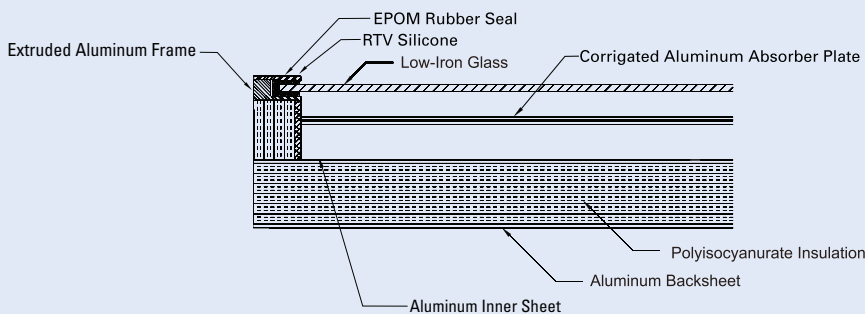
More Specifications

- Collector frame: type 6063-T6 extruded aluminum with architectural bronze anodize finish.
- Inner Sheet: type aluminum sheet 5052 (.024)
- Back Sheet: Type aluminum sheet 5052 (.040)
- Insulation: Polyisocyanurate foam board insulation, (1" in the bed/ back 1/2" in the sidewall)
- Absorber plate: 100% aluminum absorber plate, Corrugated for maximum heat absorption.
- Absorber Coating: Selective alpha .96 - Emissivity .90
- Gasket: A UV durable EPDM, U-channel gasket with molded corners which prohibits water penetration and assures long life. Outer and inner edge sealed with RTV Silicone.
- Fasteners: Screws are 18-8SS, 10-24x flat head screws
- Flow Rate: 100 to 150 CFM

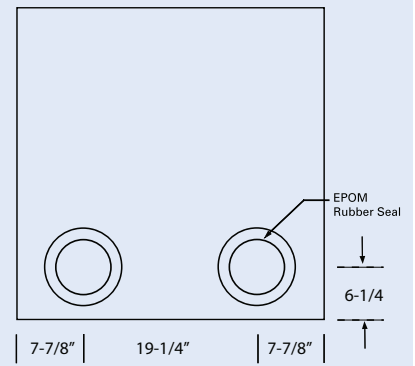
CORNER DETAIL



COLLECTOR CROSS SECTION



OUTLET AND INLET DUCT SEALS




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Certification Approval

 The logo for Solar Rating and Certification Corporation (SRCC) is circular. It features a stylized sun with rays in the center, surrounded by the text "SOLAR" at the top and "CERTIFICATION" at the bottom. The letters "SRCC" are prominently displayed across the middle of the circle.	<p>This product certified by the Solar Rating and Certification Corporation c/o FSEC, 1679 Clearlake Road Cocoa, FL 32922 (321) 638-1537 www.solar-rating.org SRCC Document OG-100</p>	<p>ENVIRONMENTAL SOLAR SYSTEMS, INC. 117 West Street Methuen, MA 01844</p> <p>Model No. : SM-14 Gross Area: 1.74m² (18.75 ft²) Serial Number:</p>	<p>Mildly Cloudy Day Rating in Category C</p> <p>10 MJ/day 10Mbtu/day</p>
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