LANGY

User Manual

Hybrid Solar and AC Powered Roof Vent Fan

Combined with powerful solar panel, our high efficiency motor produces decent CFM in weak sun exposure even cloudy days

55W Solar Panel

25W Brushless Motor

Model: LG-SAF-55

LANGY SOLAR is a company specializing in the manufacturing and sales of solar energy products. If you have any inquiries, please feel free to contact us. We guarantee a response within **12 hours**, along with complimentary technical support and product return/exchange services.

After-sales Email: support@langyenergy.com

SOLAR ATTIC FAN

- Attics can reach up to 150°F, damaging roofs and increasing AC costs.
- Solar attic fan uses sunlight to power the fan, preventing heat/moisture buildup.

Key Advantages:

1. Extends roof and AC system lifespans.
2. Saves up to 50% on cooling costs.
3. Intelligent solar/grid power combination: Runs on solar power in the day time and automatically switches to grid power at nights for 24/7 ventilation.
4. Smart temperature control- automatically turns on fan at 77°F
5. Able to bypass the "smart temperature control"

REMOTE CONTROL

- ON — Turn on the fan.
- OFF — Turn off the fan.
- Increase speed from 1 to 6.
- Reduce speed from 6 to 1.
- Activate thermostat: Automatically operates at temperatures of 77°F + and stops below that.
- Disable thermostat
- Timer 1/2/4/8H
- Disable timer

Eco-friendly, efficient, and cost-saving – all in one!

MODEL AND PARAMETERS

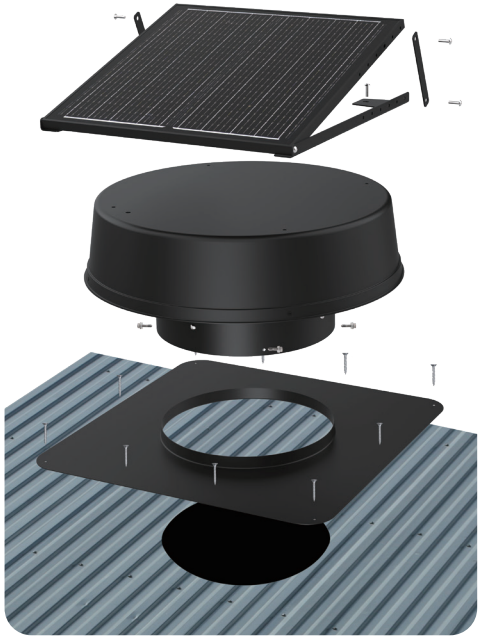
MODEL	LG-SAF-55
Solar Panel	18V/55W
Adapter	AC 100-240V , DC 15V
Fan Speeds	6 levels
Remote control	65 ft
Airflow	1200 CFM
Motor	15V/25W, 1380 rpm
Noise	45 dB
Thermo Controls	Preset 77°F (25°C)
Flashing size	22" x 22"

PACKAGE CONTENTS

Picture	Name	Qty	Picture	Name	Qty
	Solar attic fan	1		Flexible flashing	1
	Solar panel	1		Remote control	1
	Power adapter	1		Screws for securing solar panel	4
	Solar panel support	2		Screws for securing fan body and flashing	4
	Rafter/Battern straps	2		Screws for securing flashing	10

INSTALLATION GUIDE

Please read this installation guide carefully before installation and contact us if you have any questions. Depending on the roof type, you may follow installation steps for the best result. Please make sure the roof is dry and follow other safety measures.



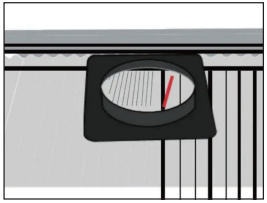
Tools you may need:

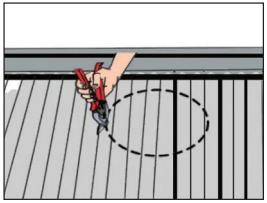
- Ladder
- Reciprocating saw (or jig saw)
- Power drill with a 1/2” – 1” drill bit
- 1” – 2” deck screw and screw bit
- Hammer & roofing nails (or self tapping galvanized screws)
- Caulk gun with waterproof roofing sealant
- Measuring tape
- Permanent marker (or chalk / crayon)
- Roofing knife (or box cutter)
- Flat pry bar

Before The Installation

- Set the solar panel facing south or southwest for maximum sunlight exposure. Avoid shaded areas.
- If installing 2 or more fans, space them at least 15 feet apart.
- If there is an existing turbine vent, remove it and install the solar fan at the same place. If you want to install the solar fan nearby, remove the turbine vent and block the hole on its roof. This will prevent undesired airflow.
- Ensure adequate intake ventilation at the eave or fascia to maintain balanced airflow. Recommend 1 sq.ft of intake ventilation for every 600 sq.ft attic space.

Installation on metal sheeting roofs or asphalt shingle roofs





STEP 1 : Cut The Opening

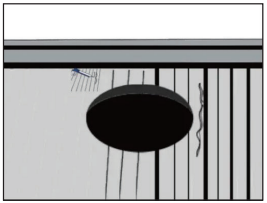
① From inside the attic, measure 18 - 24 inches down from the roof peak and mark the middle point of the two rafters, drill a screw through the metal sheeting (or plywood and shingle) to mark the location where we gonna install the fan.

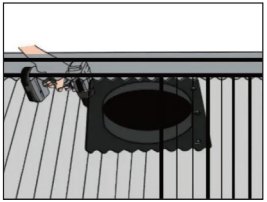
② On top of the roof, find the screw, place the flashing around it, and draw a circle on the roof along the flashing's duct.

③ cut along the circle to create the opening.

⚠ *WARNING:*

- *Avoid cutting rafters or framing materials. Only remove roof sheeting and shingles.*
- *Ensure no wires or waterlines are in the cutting area.*





STEP 2 : Install Flashing

Apply roof sealant on the back of the flashing

① For metal roof

a. Bend the left and the right edges of the flashing dow for a tight fit on the roof corrugations. Use the snips to cut off unnecessary parts.

b. Use the screws to fix the flashing on the roof.

c. Apply the sealant to the edges of the flashing and the screws for water proof.

② For shingle roof

a. Remove shingle nails 5 inches above and to the sides of the opening using the pry bar.

b. Lift the shingles above and to the sides of the opening, slide the flashing under them.

c. Install screws or nails on the flashing for tighter fixation on the roof.

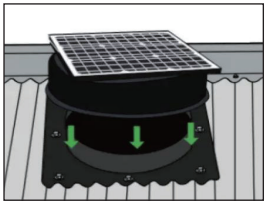
d. Apply the sealant to the edges of the flashing, the screws/nails, or shingles for water proof.

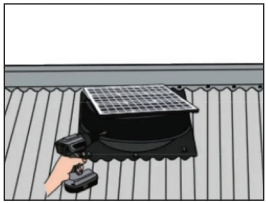
STEP 3: Mount Fan Body

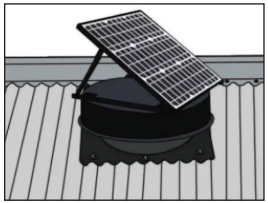
① Place the fan body on top of the flashing. Raise up the solar panel and rotate the fan body to find the best orientation for receiving sun exposure.

② Apply 4 screws in the pre-set holes on the fan body, securing it to the flashing. (No pre-set holes on the aluminum flashing. The screws will easily pierce through it)

③ Raise up the solar panel. At the best angle for the most sunlight exposure, use the two support bars to fix the angel. Most roofs already provide optimal angles; panels may remain in the default down position.







STEP4: Connect The Cables

The motor has two cable outlets. They are identical. Connect one to the solar panel cable and the other to the adapter. Plug in the adapter to an outlet.

Installation on tile roofs

STEP 1: Install Flashing

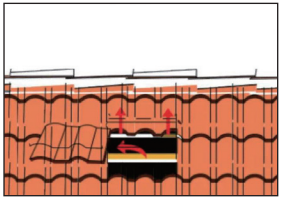
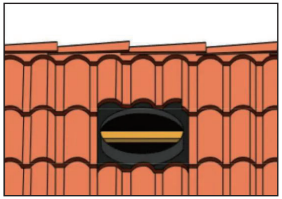
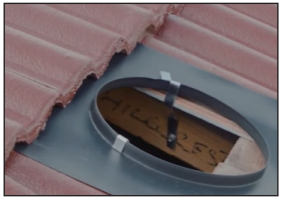
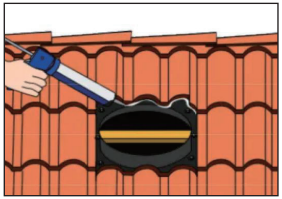
① Starting from the ridge capping, remove the third tile downward. If needed, adjust the tile above upward to enlarge the opening.

② Lift the tiles above the opening and slide the flashing into place. Press the tiles back down to mold the flashing to their shape.

③ Fix one end of the strap to the rafter and batten using screws. Wrap the other end over the circular ridge of the flashing. It will be secured once the fan shroud is screwed on the flashing.

④ To secure it tighter, you can install additional screws anywhere on the flashing.

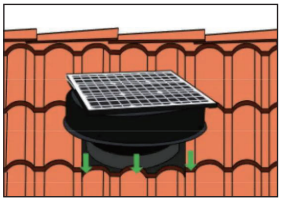
⑤ Run a bead of clear silicone along the top edge of the flashing where it meets the upper tiles.

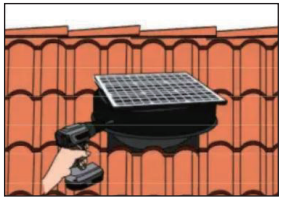
STEP 2: Mount Fan Body

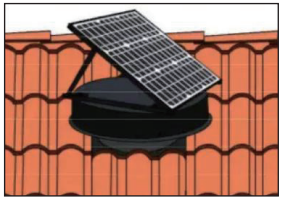
① Place the fan body on top of the flashing. Raise the panel and rotate the fan body to find the best position for sun exposure.

② Using a powered screwdriver, drive at least 4 small tech screws through the pre-drilled holes in the fan body into the flashing.



STEP 3: Adjust Solar Panel And Connect Cables





① Tilt the solar panel angle to maximize sun exposure.
- *Most roofs already provide optimal angles; panels may remain in the default down position.*
- *To raise the angle: Adjust the 2 support arms and tighten the screws.*

② Mold the flexible flashing to match your tiles. Bend the bottom section downward for water runoff.

③ Apply silicone sealant along the left and right sides of the flashing to complete the installation.

④ The motor has two cable outlets. They are identical. Connect one to the solar panel cable and the other to the adapter. Plug in the adapter to an outlet.

TROUBLESHOOTING GUIDE

① Remote Control Doesn't Work

Action: *Repair the remote.*

Steps: *Within 4 seconds after reconnecting power (solar panel or adapter), hold and press the 'OFF' button for 2 seconds.*

② Fan Not Running At All

a.Check Solar Panel:
- *Remove obstructions (dust, leaves, bird droppings). Clean gently with a soft cloth and mild soap.*
- *Trim any overhanging branches causing shade.*

b. Inspect Wiring:
- *Look for chewed or damaged wires (check for rodent damage).*
- *Ensure all connections are tight and free from corrosion.*

c. Remote Control Check:
- *Ensure you are turning the fan on with the remote.*
- *Bypass the thermostat using the remote.*

③ Loud Noises Or Vibration

a. Check for Debris: *Remove leaves, twigs, or insect nests from inside the fan housing.*

b. Check Mounting: *Tighten all roof brackets and fan housing screws.*