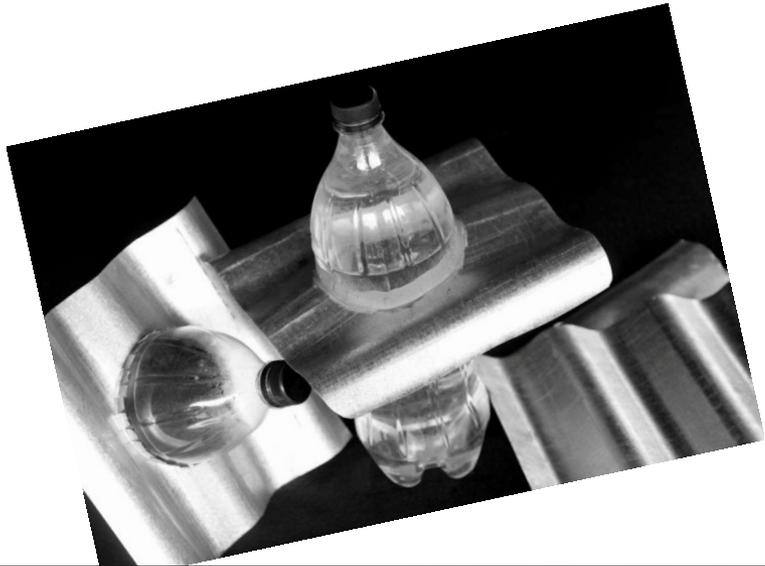


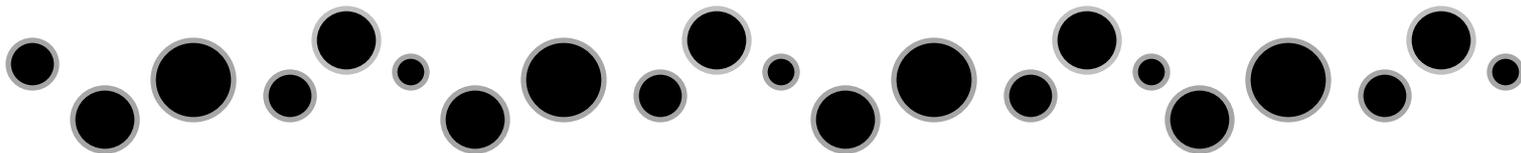


# How to build a Solar Bottle Bulb

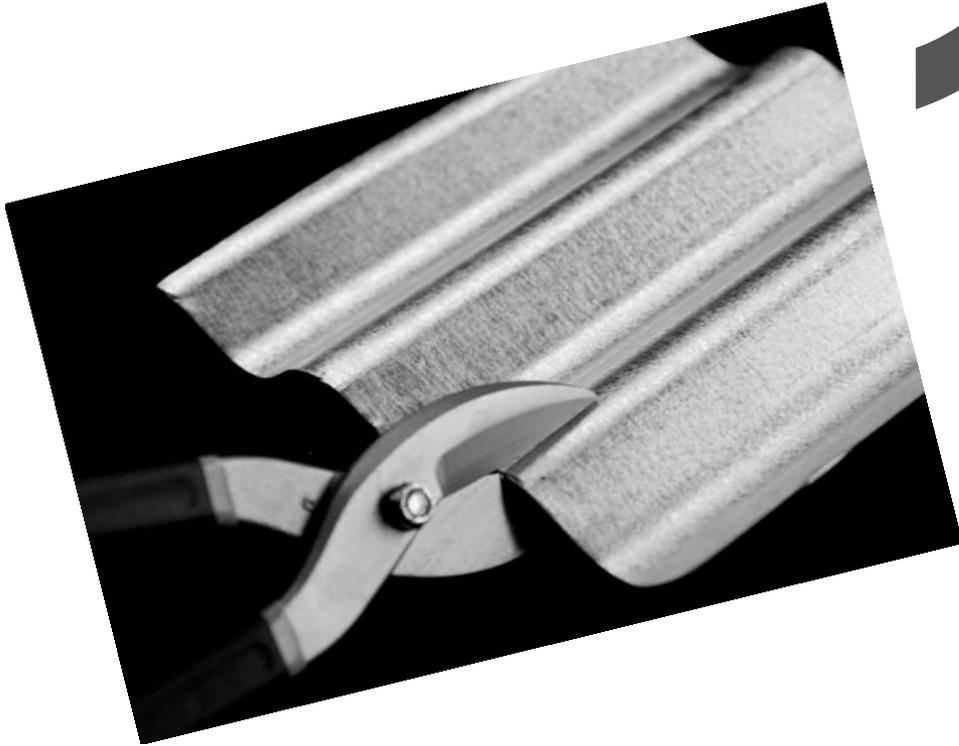


# Materials

- PET soda bottle
- Galvanized Iron (GI) sheet
- Epoxy/Rubber sealant
- Bleach
- Filtered Water



# How to ASSEMBLE the Solar Bottle Bulb

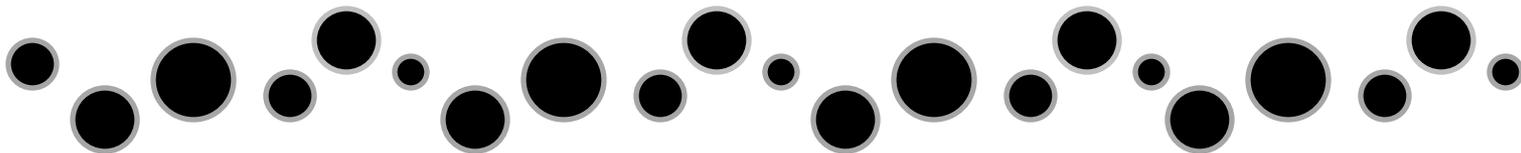


# 1

Cut  
approximately  
9 x 10 inches  
of GI sheet

(corrugated or flat,  
depending on the roof  
where Solar Bottle Bulb  
will be installed)

*Recommended GI sheet: 0.06 gauge 24*

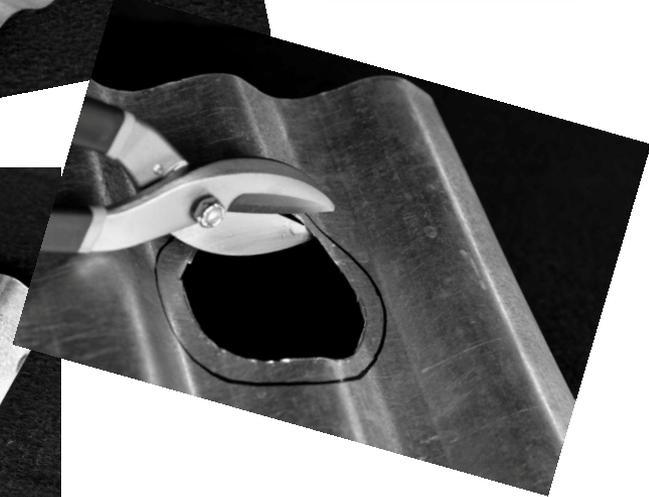
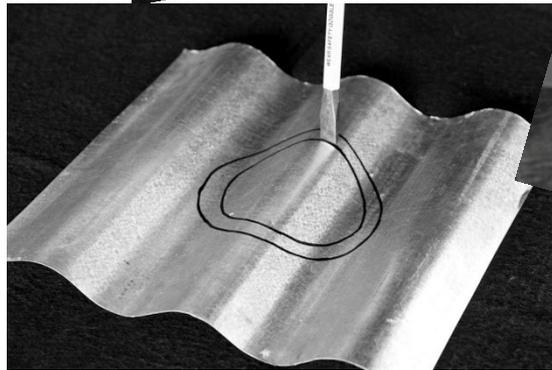


# How to ASSEMBLE the Solar Bottle Bulb

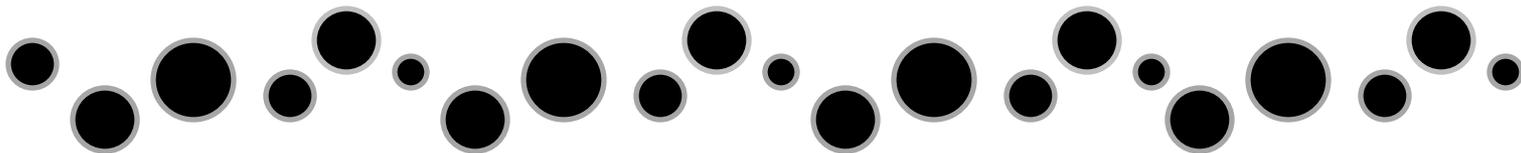
At the center of the GI sheet, draw 2 circles

*(outer: similar to the circumference of the soda bottle; inner: 1 cm smaller).*

Cut the inner, smaller circle.



# 2

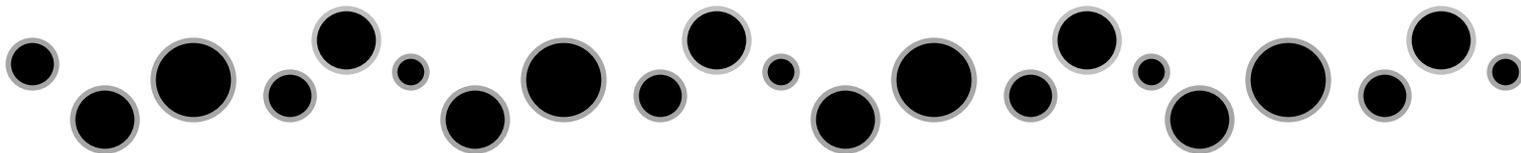


# How to ASSEMBLE the Solar Bottle Bulb



Cut the 1 cm  
difference radially,  
making strips and  
bend upwards,  
perpendicular  
to the GI  
sheet.

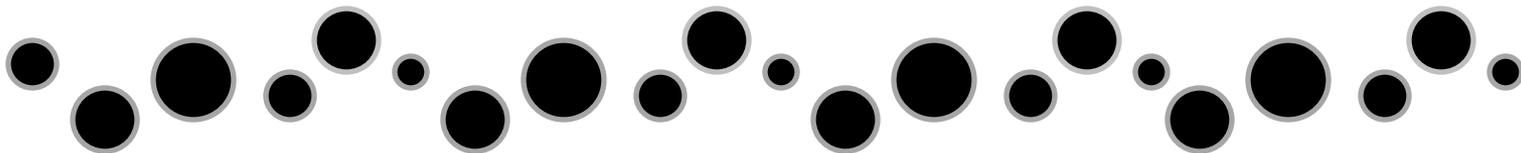
# 3



# How to ASSEMBLE the Solar Bottle Bulb

# 4

Using sandpaper, scratch the surface around the upper third portion of the PET bottle where the GI sheet will be placed, to allow the epoxy or rubber sealant to stick better.



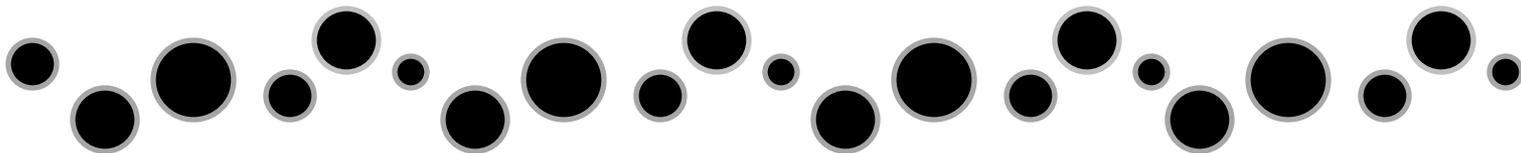
# How to ASSEMBLE the Solar Bottle Bulb

# 5

Insert the bottle into the GI sheet until the upper third.

Apply rubber sealant on the strips above and around the area below.

Wait to dry.



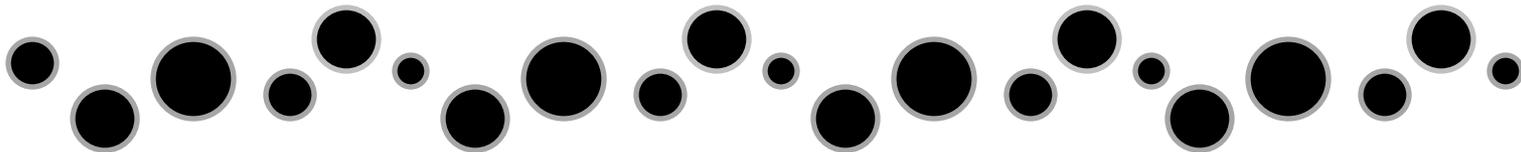
# How to ASSEMBLE the Solar Bottle Bulb



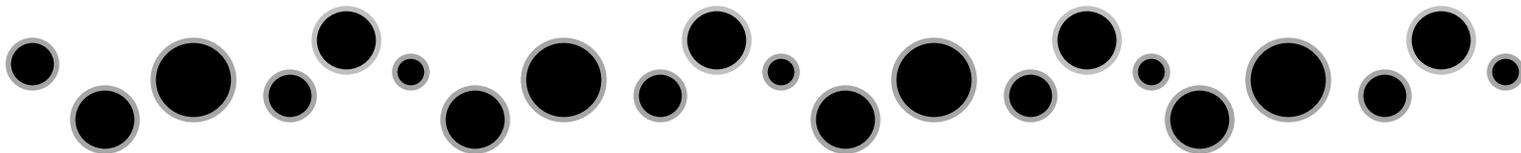
# 6

Fill the PET bottle with filtered water and ~10 mL (2 capfuls) of bleach.

Cover with its original cap.



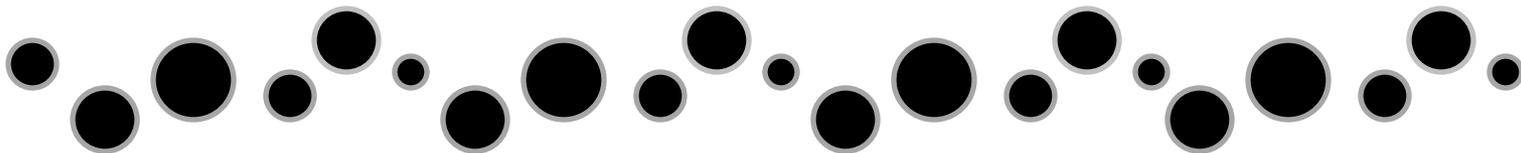
The solar bottle bulb is now ready for installation!



# How to INSTALL the Solar Bottle Bulb

1

Cut a hole on the roof, similar to the bottle circumference.

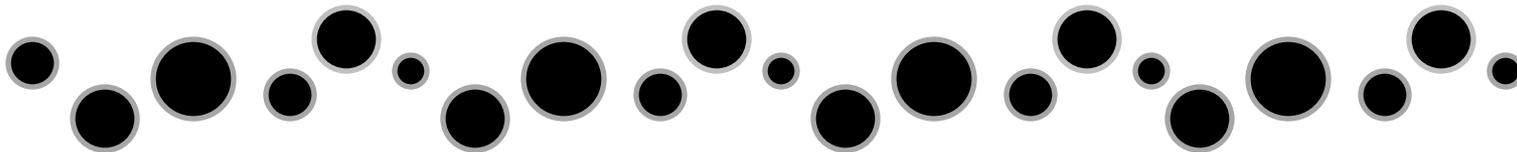


# How to INSTALL the Solar Bottle Bulb



Apply rubber sealant  
around the hole.

2



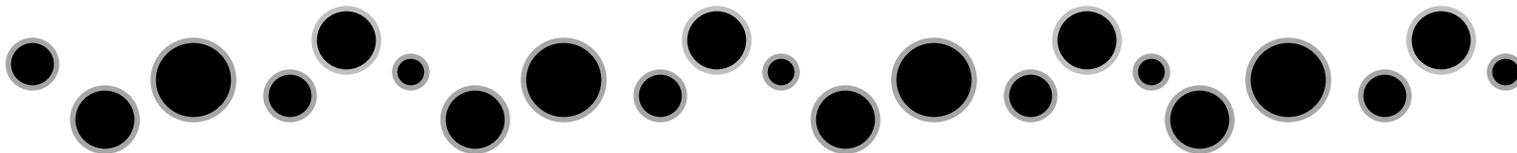
# How to INSTALL the Solar Bottle Bulb



Place the solar bottle bulb into the hole.

Make sure it is firmly in place.

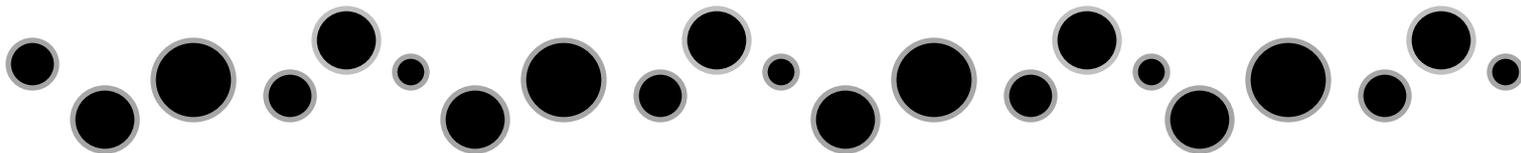
3



# How to INSTALL the Solar Bottle Bulb

# 4

Drill 3-4 holes on each side of the solar bottle bulb and put in the rivets.



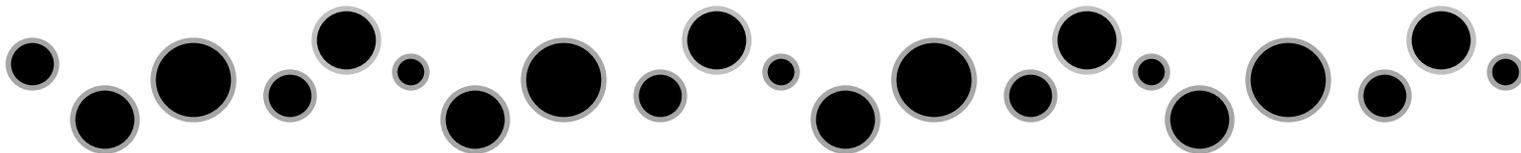
# How to INSTALL the Solar Bottle Bulb

Apply rubber sealant on all sides of the GI sheet of the solar bottle bulb to avoid leakage.

# 5



Make sure to cover the rivets.

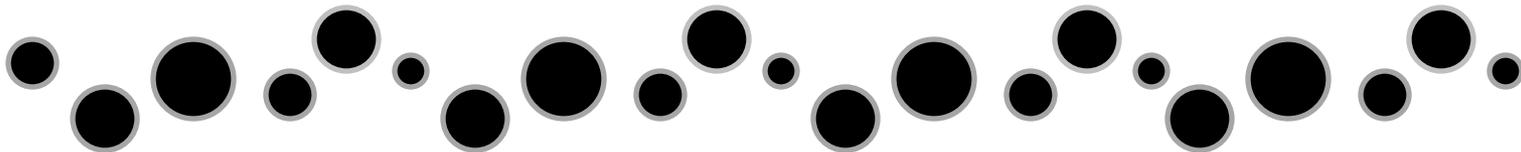


# How to INSTALL the Solar Bottle Bulb



# 6

Place a protective plastic tube on the bottle cap and apply rubber sealant.



# The Solar Bottle Bulb has been installed to provide ~55 watts of light

