



Osram Lightify Teardown

This is a teardown of Osram's wireless WiFi lighting system.

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INTRODUCTION

Welcome to my 3rd teardown! today I will tear down an Osram Lightify.

TOOLS:

- [Metal Spudger](#) (1)
 - [T9 Torx Screwdriver](#) (1)
 - [Tweezers](#) (1)
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Step 1 — Osram Lightify Teardown



- This is the Osram Lightify. This is a broken unit that does not sync to the app properly. I got a free replacement due to that.
- [Ooh... Shiny!](#) you can see my iPhone 5s in it!
- No more chit-chat. Time to dig in!

Step 2



i A mysterious unlabeled button. [sadly, not red.](#)

- The info for the device, [Zigbee](#) certified. Zigbee tries to turn all the different wireless control apps and stuff into one app.
- i** It almost seems like someone taped over the device's unique ID to control it...

Step 3



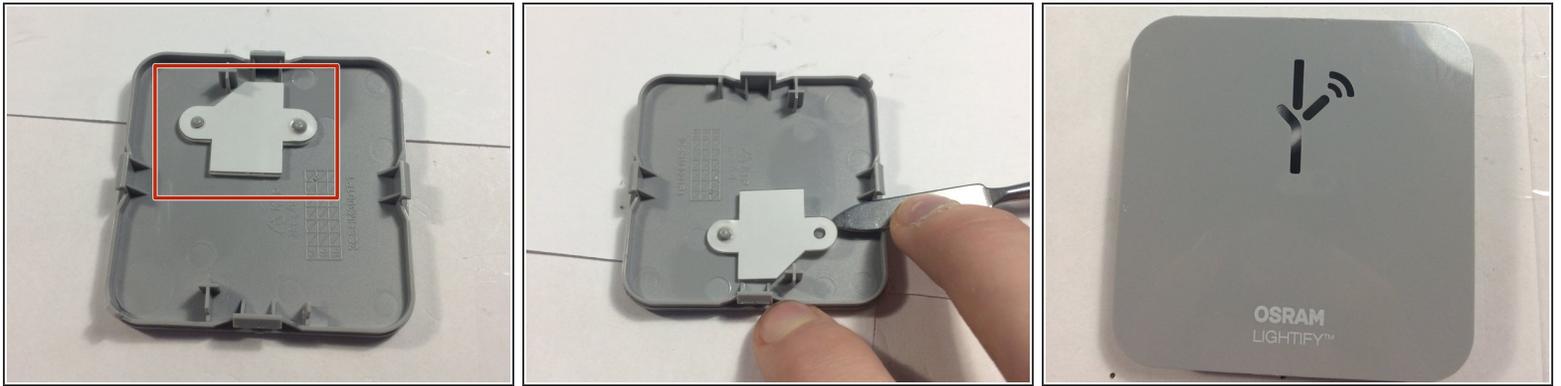
- Time to [RIP IT APART!!!!](#) open it up with my tools.
- ⓘ Failing to find [hidden screws](#), I beleive the only option may be to pry it open.

Step 4



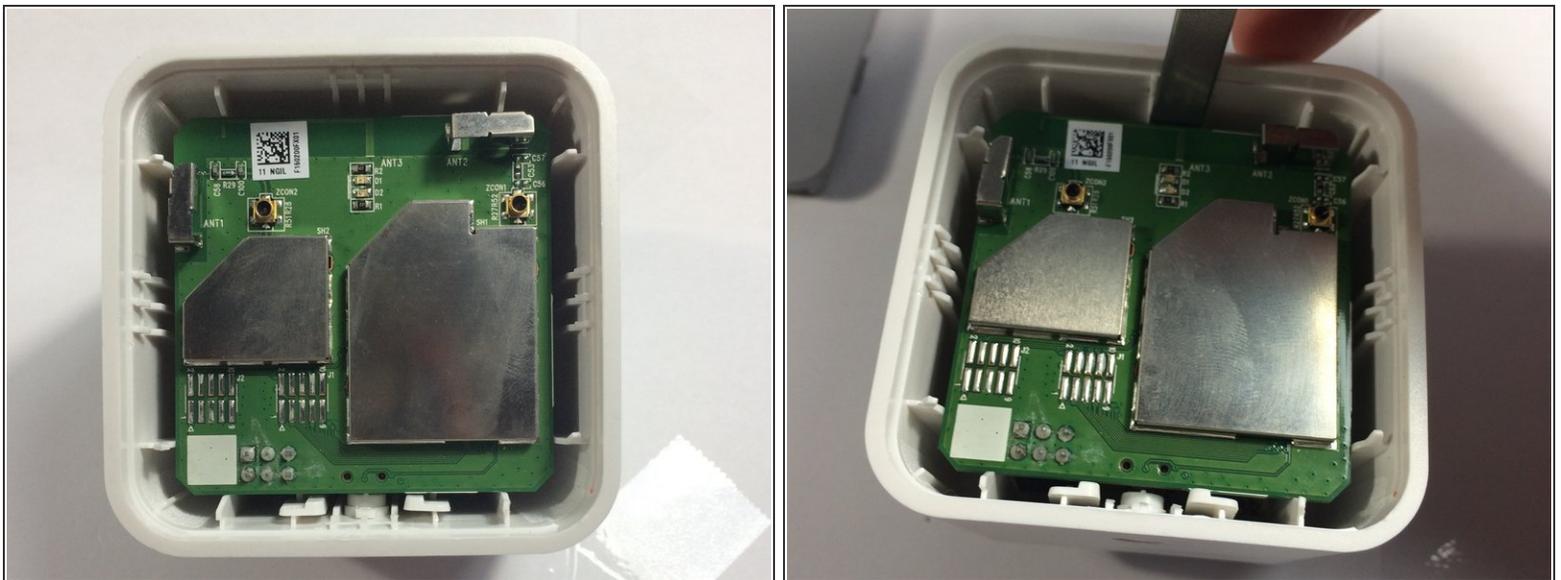
- Hmm... No give. maybe not that side.
- ⓘ When it goes back in, it gives a nice deafening POP.
- Finally. now we are getting somewhere.

Step 5



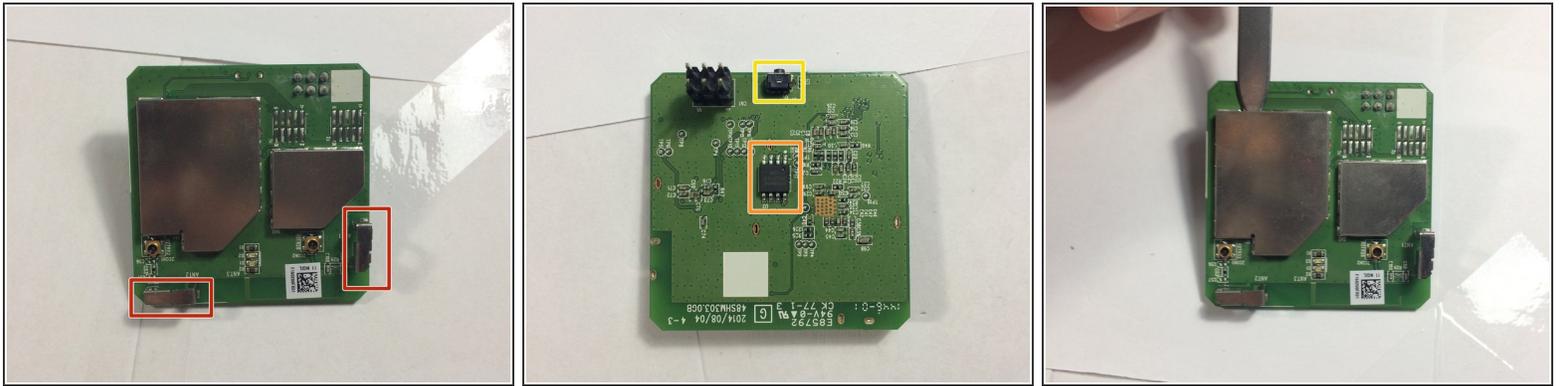
- The white thing seems to let light through, but not let you see through to the inside.
- ⓘ Seems to just pop right off. This is pretty easy so far!
- ⓘ You can now see right through it.

Step 6



- Its now open!
- With no option in sight, we keep on prying.

Step 7



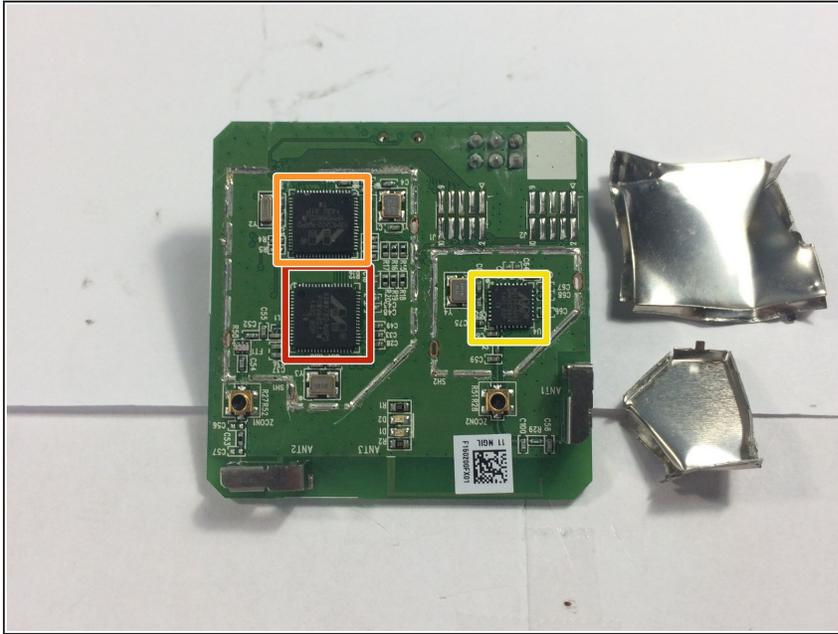
- Not much to see here...
 - These Appear to be antennas...
 - The only interesting thing so far: Some flash memory, at a whopping 32 *megabits* the [spiflash 25Q32FVSIQ](#) . [Wow](#).
- There has to be something under these plates...
 - ⓘ Prying was no help. these plates seem to be mounted with... [SOLDER](#)

Step 8



- ⓘ Commence desoldering.

Step 9

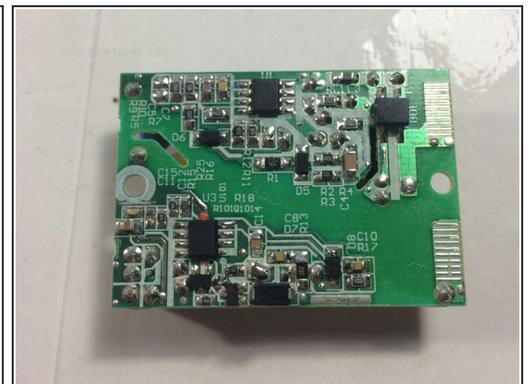


ⓘ After a good amount of prying and a small [nick on my thumb](#), We get back to work.

- Time for some chip identification!
 - This one appears to be WLAN SoC. its a [Marvell 88W8782](#).
 - The brains of it all, the Micro controller. A [Marvell 88MC200](#)
 - And on the smaller side, (what I think is) a Zigbee gateway. a [Marvell MZ100](#)

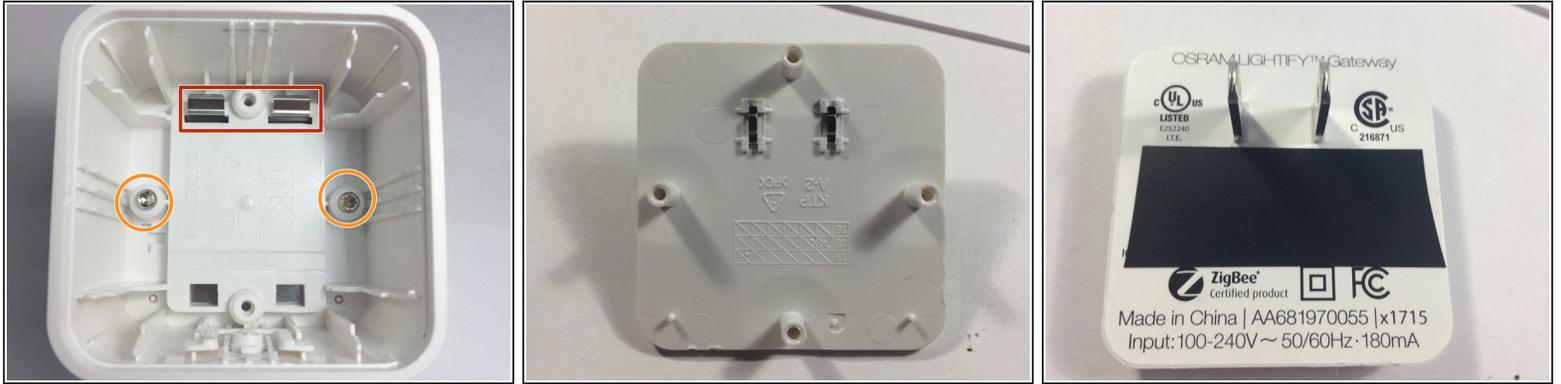
ⓘ Lets dig deeper!

Step 10



- Oh goodie! the first screws!
- there are 2 Torx T9 screws holding in what looks like the power supply.
- ⓘ yep, that's the power supply.

Step 11



- The prongs that plug into the wall, are not actually soldered to the board, but are just connected by contacting. [interesting...](#)
- There are 2 more Torx T9 screws holding in the cover. most likely after removal of the cover the prongs can also be removed.
 - ⓘ The 4 screws are all the same, so you can mix and match to your heart's desire!
 - ⓘ Nope, not individually removable.

Step 12



⚠ I actually highly advise against doing this.

Step 13



- On the back we have two long metal sheets.
- Removal is pretty straightforward.
- And on the front again, the button slides right out.

Step 14



- I'd give this a 9 out of 10.
- All screws and tabs.
- Easily repaired without much knowledge of repair.
- main board slides right out of the power connections.
- Tiny bit of adhesive on the logo holding it in place, so it will not securely fit in after removal. although it will still fit snugly and not come out without rough handling. This is an unlikely repair anyway.