

[Menu](#)

### Does this project spark your interest?

Become a member to follow this project and don't miss any updates

[Become a member](#)


# Firefly Jar

Solar rechargeable mason jar lid for  
pretty flickering lights



[Michael Mogenson](#)

[Follow project](#)

Give a 

DescriptionDetailsComponents (9)Discussion (0)

View Gallery

293086



TEAM



Michael Mogenson

Request to join this project



KiCad Source Repository



ONGOING PROJECT

**SOLAR****MASON JAR****LED**

---

**THIS PROJECT IS SUBMITTED FOR**

- Hackaday.com Tip Line

---

This project was created on 12/29/2015 and last updated 9 days ago.

---

**DESCRIPTION**

These were gifts I made for friends and family. I'm calling it the Firefly Jar since it looks like a jar of invisible flickering fireflies at night.

This project is a replacement lid for a mason jar. The PCB is 2.5 in diameter with a 55 mm round solar cell on top. This centers perfectly with a standard mason jar and lid collar. The solar cell recharges two 1.2V Ni-MH AAA batteries during the day. At night a P channel MOSFET switches on two candle flicker yellow LED's through a 2.1V LDO voltage regulator. The MOSFET only engages the LED's when the voltage on the solar cell is low and the batteries are above their 0.85V empty state. The LDO voltage regulator is an easy way to ensure a constant LED brightness throughout the life of the batteries.

This would make a good DIY kit since the part count is minimal and all components are through hole.

## DETAILS

See a gif of the Firefly Jar [here](#).

See a video of the Firefly Jar in action [here](#).

---

## COMPONENTS

1 × 5V 400mA solar cell

Adafruit PRODUCT ID: 700

1 × blocking diode

1N5817DICT-ND

1 × P channel MOSFET

TP0604N3-G-ND

1 × DPDT switch

401-2001-ND

2 × candle flicker LED

BL-L513UYC-B-S3

2 × 1.2V 1000mAh AAA Ni-MH battery

1 × 2x AAA battery holder

36-1077-ND

1 × 1M resistor

CF14JT1M00CT-ND

1 × 2.1V LDO voltage regulator

MCP1700-2102E-TO

---

## ENJOY THIS PROJECT?

Share



DISCUSSIONS

*Log In or become a member to leave your comment*

Log In/Sign up to comment

⬆ Going up?

- About Us
- Contact Hackaday.io
- Give Feedback
- Terms of Use
- Privacy Policy
- Hackaday API

© 2016 Hackaday