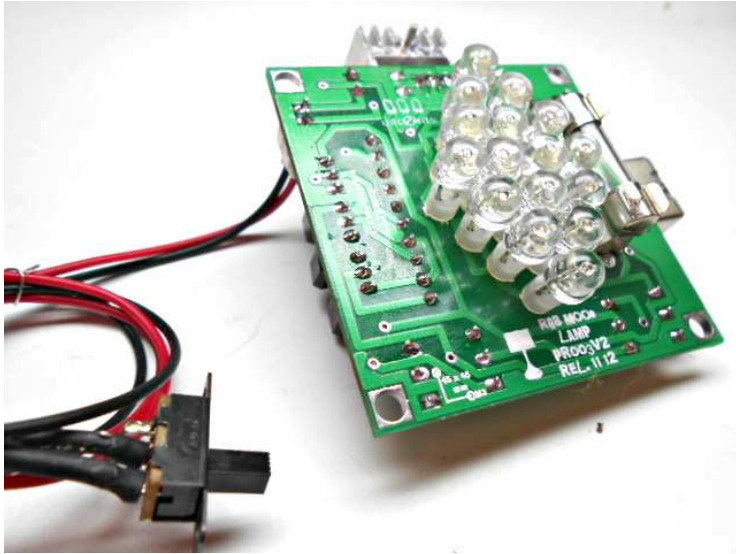


# Rgb Mood Lamp V2 Datasheet



## Technical Features

**Layers :** 2

**PCB Thickness :** 1.6mm

**Dimensions :** 50 mm x 50 mm ( 2 inch x 2 inch )

**Operating Voltage :** 5 Vdc via usb cable or

7.2 to 30 Vdc via external power supply or 9v bat.

**Operating current :** 200 ma max

**Rel.date:** 12/12/12

## Functionality

A very cool rgb mood lamp kit!

Lay back and watch the fade off/fade on effect between the 3 basic colours!

(R)ed,(G)reen,(B)lue

The kit is based on 2n7000 mosfets arranged on a ring oscillator connection.

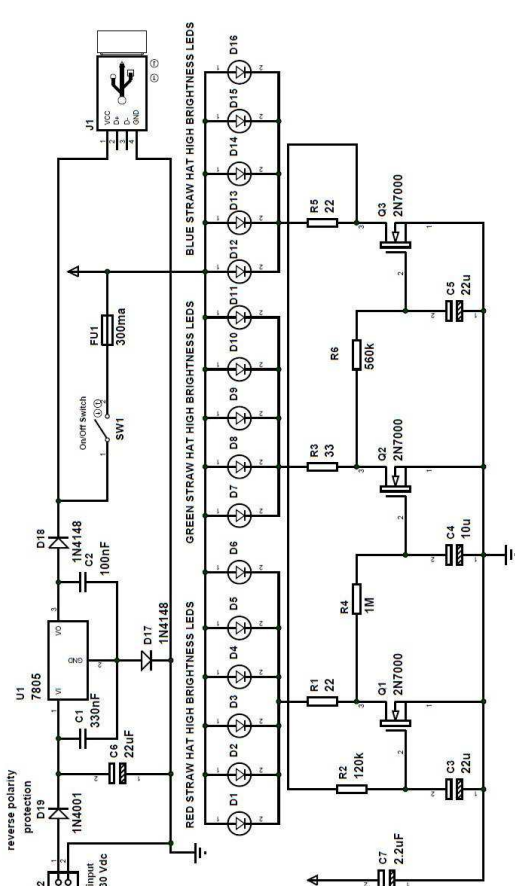
Each mosfet is triggered from the output of the previous when a capacitor on the gate of the mosfet gets charged.

The mosfet drives 3 high brightness straw hat leds through a current limiting resistor.

The leds slowly go to the peak of their brightness (fade on effect) while the capacitor on the base charges until gets full charged and they “stay” there until the capacitor begin to discharges and then we have the fade off effect.

Each mosfet follows the situation of the previous and so the procedure goes on!

## Circuit schematic



DATE: 19/12/12  
TITLE: RGB MOOD LAMP PR003 V2  
BY: usbekkits

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## Part list

<u>Ref.</u>	<u>Type</u>	<u>Value</u>
C1	Ceramic Capacitor	330nF
C2	Ceramic Capacitor	100nF
C3	Electrolytic Capacitor	22u
C4	Electrolytic Capacitor	10u
C5	Electrolytic Capacitor	22u
C6	Electrolytic Capacitor	22uF
C7	Electrolytic Capacitor	2,2uF
D1-D6	Straw hat LED	RED
D7-D11	Straw hat LED	GREEN
D12-D16	Straw hat LED	BLUE
D17	Diode	1N4148
D18	Diode	1N4148
D18	Diode	1N4001
FU1	Fuse Glass 20mm	300ma
J1	Usb jack	Type B
J2	Terminal Block	2 pin Dc Input
Q1-Q3	n-channel mosfet	2N7000
R1	Resistor 1/4 watt	22
R2	Resistor 1/4 watt	120k
R3	Resistor 1/4 watt	33
R4	Resistor 1/4 watt	1M
R5	Resistor 1/4 watt	22
R6	Resistor 1/4 watt	560k
SW1	jst 2 pin cable	ON/OFF Switch