

DC Light Dimmer

Thank you for purchasing this Simtelic DIY Electronic Kit.

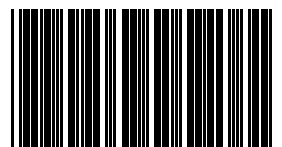
No part of this book shall be reproduced by any means; electronic, photocopying, or otherwise without written permission from the Simtelic (Pvt) Ltd.



Revision: 1.0.0-EN

Copyright © 2024 Simtelic (Pvt) Ltd.

Web Site: <https://simtelic.com>



KT0003

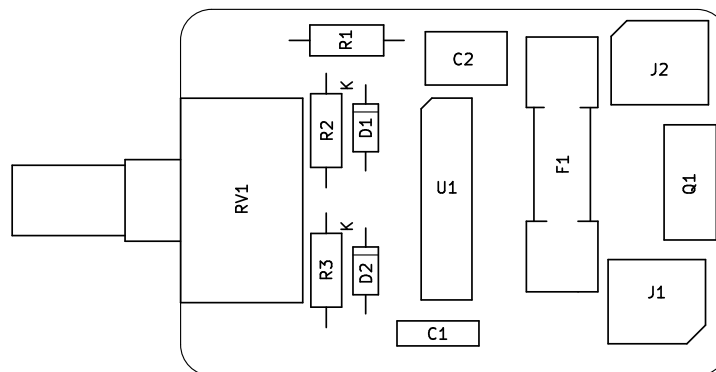
Introduction

Ever wished you could create the perfect ambiance in your room with a simple twist? This DIY light dimmer kit is your answer! Using readily available CMOS logic ICs and Pulse Width Modulation (PWM) technology, you can control the brightness of any DC bulb, breathing new life into your lighting options.

- **Affordable Fun:** Built with budget-friendly CMOS logic ICs, this project is a fantastic introduction to electronics without breaking the bank.
- **Universal DC Compatibility:** Breathe new life into any DC bulb you have lying around. From classic incandescent bulbs to modern LEDs, this dimmer kit can handle it all.
- **Perfect for Auto Bulbs:** Get the most out of your favorite 6V or 12V auto bulbs. This kit is ideally suited for these commonly available bulbs, allowing you to create custom lighting effects for projects or task lighting in your garage.
- **Applications:**
 - Solar Lighting Control
 - Automobile application
 - Decoration application
 - DC Home Lighting

Identify connectors and adjustments

Top Side



J1 - DC Light blub.

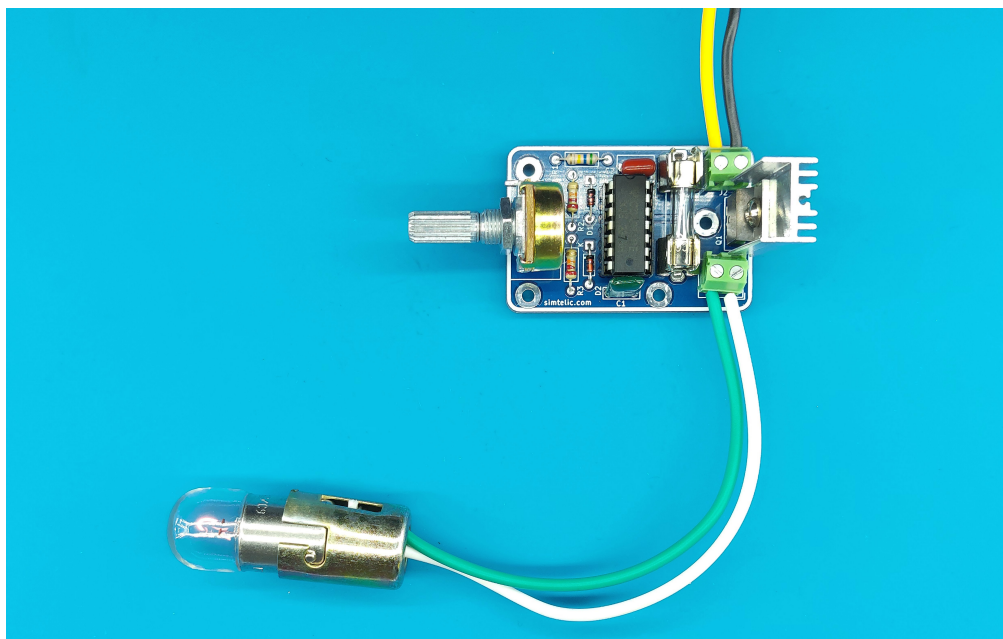
J2 - DC In.

RV1 - Brightness Adjustment

C1	0.022 μ F/25V	(THT)
C2	0.1 μ F	(THT)
D1, D2.....	1N4148	(THT)
F1	Fuse Holder	(THT)
Q1	IRFZ44	(THT)
R1	560k Ω	(THT)
R2, R3.....	22k Ω	(THT)
RV1	100k Ω (LOG) Potentiometer	
J1 and J2.....	3.5mm - Screw - 2-pin	
U1	CD4011	(DIP-14)

How to use

1. Connect the DC bulb with J1 3.5mm screw terminal
2. Attached the DC power source to J2 3.5mm screw terminal (please refer kit specifications)



Brightness of the bulb can be adjusted using potentiometer

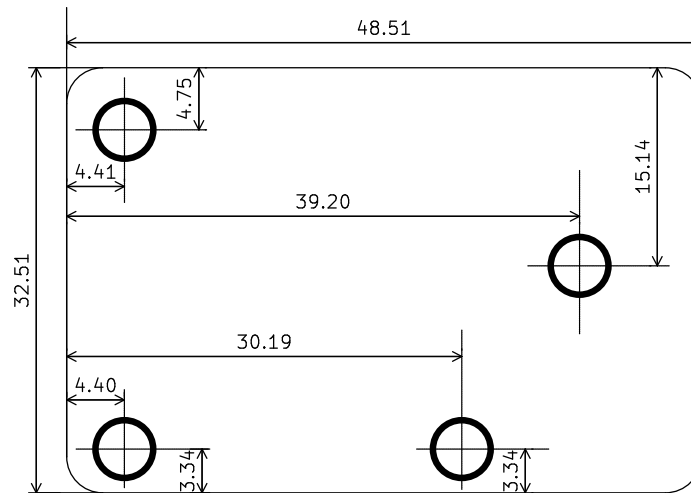
PCB assembly video : https://youtu.be/safb_Q11Rg8



Scan for the video

Kit specifications

Power supply..... DC 6V - 12V / 10A
Maximum allowed load..... 12V 10W
Dimensions..... 45.5mm x 32.5mm



**Simtelic (Pvt) Ltd cannot be held responsible in the event of damage or injury resulting from
(incorrect) use of this electronic kit.**

The continuous improvement of its products is the policy of Simtelic (Pvt) Ltd who reserve the right to
improve design without notice.

Simtelic (Pvt) Ltd.

Phone: +094 76 831 5048

Web Site: simtelic.com

E-mail: info@simtelic.com

