

Components – Mouser Part Numbers

- Twin Industries prototype board 10x10 in. 589-8000-1010-LF
 - Enough for nine circuits
- Vishay bridge rectifier 1A 100V 625-DF01M-E3
- Meder Electronic magnetic reed switch 876-KSK-1A66-1015
 - Two per circuit
- TE Connectivity dual latching relay 655-D3066
- Elna Supercapacitors 5.5V 0.33F 555-DX-5R5H334U
 - Three per circuit
- ST voltage regulator 3.3V .05A 511-LF33ABV
- Bourns trimmer resistor 5K ohms 10% 652-3362W-1-502LF
- Warm white “chip” LED 2800-3200K TBD by testing
 - Nine per circuit for 85’ HW cars to simulate incandescent lighting
- Cool white “chip” LED 4000-5000K TBD by testing
 - Nine per circuit for 85’ LW cars to simulate fluorescent lighting

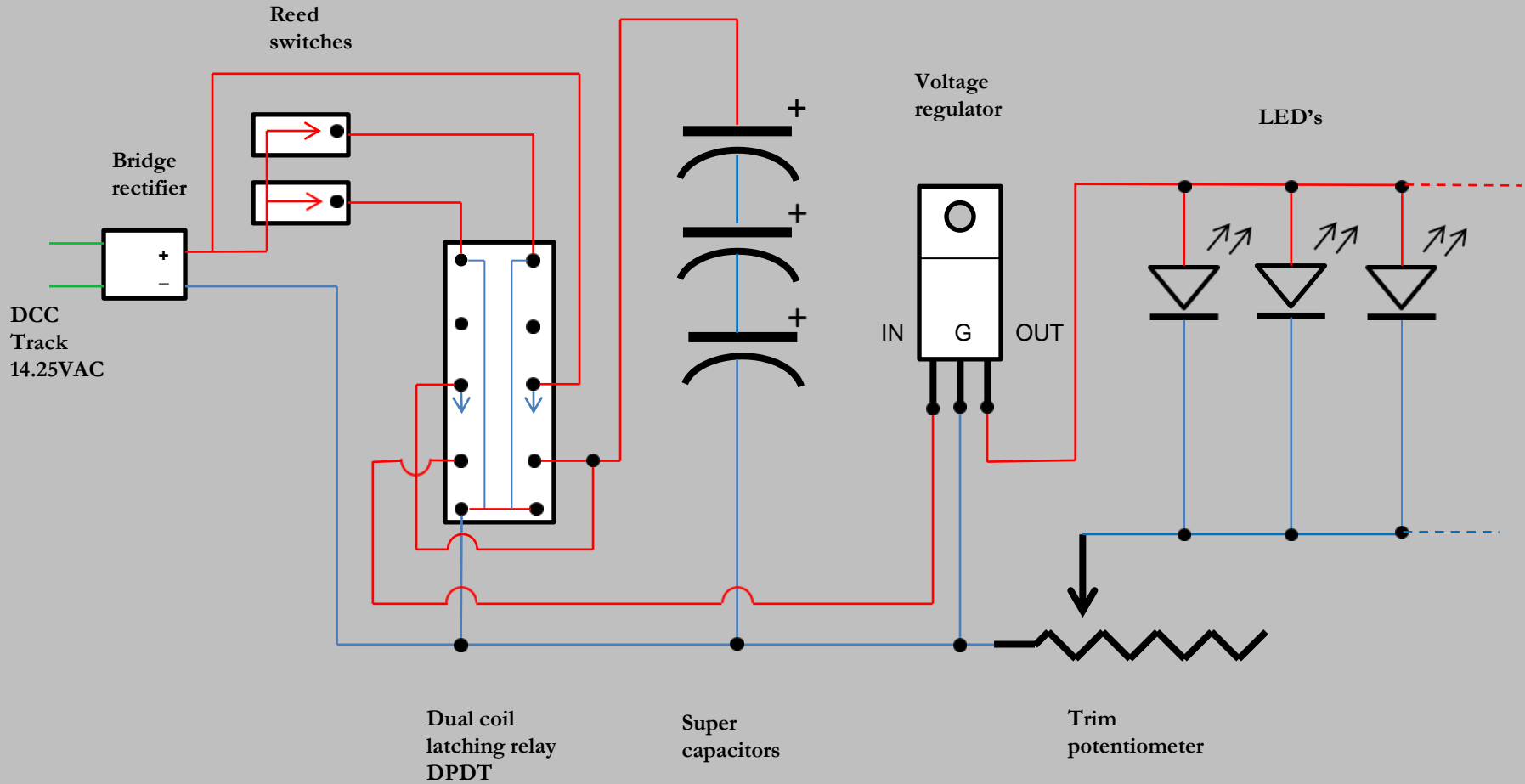
Approximate cost per circuit +/- \$25

Other Supplies

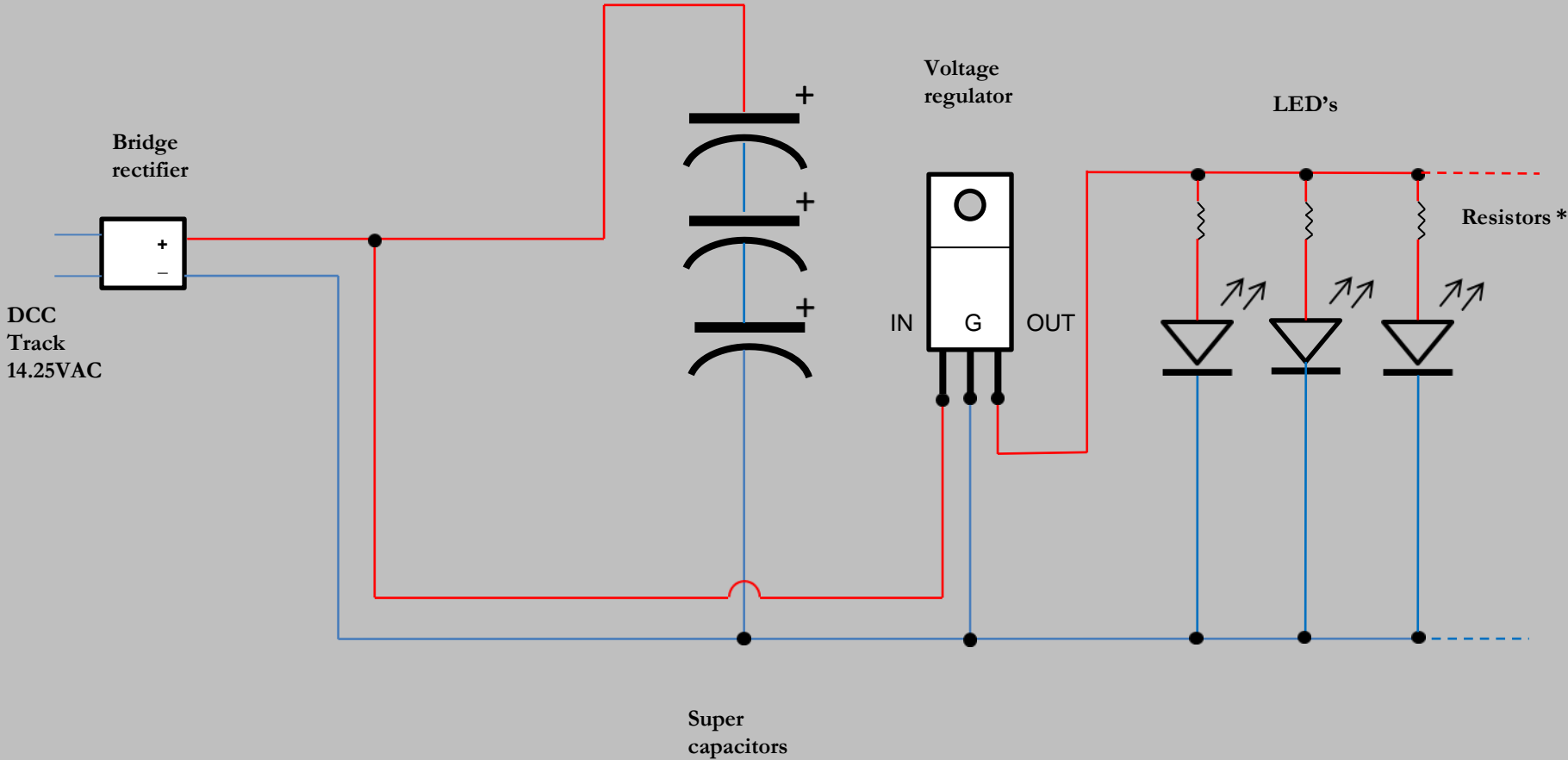
Engineering/Mouser/Home Depot

- Miniature 12 watt soldering iron N40M2
- Needle tip – iron clad & nickel plated N4081
- Low temperature silver bearing solder N4200
- Wire wrap hook-up 30AWG wire – white 50' 801-R-30W-0050
- Wire wrap hook-up 30AWG wire – blue 50' 801-R-30B-0050
- 32 AWG super flexible wire - 5 feet N5032
- CAT-5 Telephone cable Home Depot
- Pin Strip Headers – male (36) 517-800-01-36
- Headers –female (10) 517-929984-01-10-RK

LED Non-Flicker Lighting Circuit



Simplified LED Non-Flicker Lighting Circuit (No On/Off Switch – No Potentiometer)



NOTE: Resistors required for each LED. Value determined by testing.

LED Non-Flicker Lighting Circuit for Tomar LED Markers with On-Off Reed Switches

