LED Lights

From Henner DC0OS @ DB0UHI.#NDS.DEU.EU (Updated Jul 12)
(8 Bit ASCII graphics use code page 437 or 850, Terminal Font)

LED at 0.6-1.5V

![Diagram of LED circuit](image)

It works down to 0.7V. The LEDs (colours don't mix) may have an alternate connection to +ve with the cathodes. The current is dependant on the bias resistor, not from the number of the LED (tested with 1 & 3). 1 kilo-Ohm let flow 30 mA. More light will give a low ohm transistor, but not much. The transformer was built from a choke coil with a ferrite core like dumb-bells (that's was my Dictionary says |−| ). The 40 turns for the collector filled it half, the other half was for the basis-turns, the wire was thinner.

The fly-back generator is not optimized, you can experiment with core, turns & thickness of wire, or use a better transistor with more gain & more current. Also with the resistor & capacitor. I found the items in a box down in the dark of my work-bench. I replaced 2 of 3 cells of my lantern, & now it can swim, I dont have to dive to the ground to get back when it fall out of the boat...

73 from Henner, dc0os

White LEDs are about 3V hence the voltage step up circuit needed from 1 or 2 nicad cells. But you would not want to put one on top of a pole holding up HF Rx ant due to the possible small level QRM!

For automated garden lights..

![Diagram of automated garden lights](image)
The photocell is quite conductive in no light & turns on the PNP, this allows bias current flow to start up the inverter.

LED at 11-14V

In this circuit 2-3 times the current flows in the LED than is taken from the supply,

Why Don't U send an interesting bul?

73 de John G8MNY @ GB7CIP