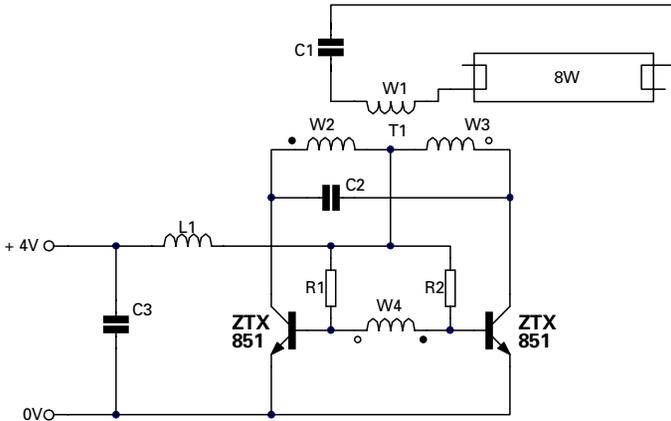


Emergency Lighting Fluorescent Lamp



The 8W emergency lighting converter shown here can be constructed at a fraction of the cost of older TO220 transistor based designs. Using the ZTX851, which has a saturation voltage of only 150mV at 4A (the cycle by cycle peak current seen with this design), the circuit runs with an efficiency of over 70%, a key feature for these battery operated circuits. Care with the transformer design and construction will allow the use of the higher gain ZTX869 which will raise efficiencies even higher. The ZTX851 and ZTX869 are available in the E-Line (TO92 style) package which has a 1.2W power rating for these device types. This permits significant space savings to be made

since the bulky TO220 transistors and corresponding heatsinks can be eliminated. The operating frequency has been limited to around 25kHz to minimise transformer losses, yet ensuring the converter is inaudible.

Emergency lighting systems provide illumination in the event of mains failure and consist of a monitor circuit, a battery pack with trickle charging, and a DC-AC inverter. The inverter is used with the existing fluorescent tubes or an additional smaller tube, and is enabled by the monitor circuit.