

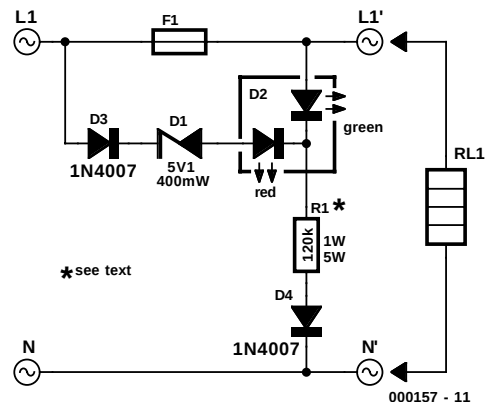
Fuse Failure Indicator

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This circuit indicates when a device is functioning or when its fuse has blown. It is a development of the Mains/Fuse Failure Indicator published in *Elektor Electronics* July/August 1995. It is smaller and cheaper than the previous design, even though it works on any mains supply voltage. A single bi-colour LED (D2) with separate anode connections indicates **operating** (green) or **fuse failure** (red). Resistor R1 limits the current through the LED to around 2 mA: the LED is thus reasonably bright. If higher brightness is desired, the resistor value can be reduced.

The zener diode prevents the red and green LEDs from lighting simultaneously in normal operation. With the fuse intact, the LEDs are effectively in parallel, but the greater voltage drop in the red LED's arm of the circuit means that only the green LED lights. General-purpose diodes D3 and D4 prevent damage to the LEDs in the negative half-cycle of the AC supply, the



diodes can be removed.

If the circuit is used to monitor the fuse on mains-operated equipment, it is vital to note that the components are not isolated from the mains and the voltages present on them can be lethal: do not touch!

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