## Convert your warning lights with High Intensity LED's By Marc Leydecker

Unfortunately, the warning lights in our Spiders are virtually "invisible" in daylight.
For less than two dollars a piece, we can easily convert these with High Intensity LED's

## PROS:

LED's use almost no current
LED's will more than likely last a lifetime
LED's do not produce heat
These High Intensity are at least 10X brighter than the original bulbs

## CONS:

LED's are polarized THUS the negative lead has to be connected to the cathode and the positive lead has to be connected to the anode.
LED's need a resistor in SERIES


The Original Spider Warning Light

The High Intensity LED's are available on EBay and usually come with the seriesresistors for 12 V applications. More than likely the best deals will be from Hong Kong, Philippines, China etc. when bought by the hundred. (I'm sure you find plenty of applications for the remainder of your batch)

I used 3mm LED's with a minimum of 15000 mcd

## STEP 1

Clean the contacts with a Motor tool or steel wool
Bend the resistor and solder it to one contact (see pictures)
Do not heat too long or the plastic socket might melt


## STEP 2

Put some heat-shrink around the legs of the LED The long leg is the Anode (or positive)
The short leg is the Cathode (or negative)


## STEP 3

Solder the Cathode (short leg) to the OTHER contact of the socket


## STEP 4

Twist the Anode (long leg) and resistor lead together and solder.
Cut and trim the excess wire


## STEP 5

The solder might run too far on the socket terminals making it difficult to put the connectors back on.
In that case; take a file and carefully file or sand of to excess solder

## STEP 6

Squeeze some bath-tub caulking in-between the LED legs, to prevent shorts due to vibration.

## STEP 7

Voila, you're done
Test your creation.
Positive to the terminal where you soldered the resistor ...


Note the caulking

