



Resistance R1 & R2
needs to be adapted for
5mm LED current limitation
(depends on V_f),
 $V = 12 \dots 14V$

LEDs:
Standard 3mm LEDs,
connected to 12V with 160
Ohm current limiting
resistors

White LEDs to replace:
wide angle 5mm LEDs,
(warm) white, connected to
12V with current limiting
resistors

LEDs are spaced 51.5mm edge to edge, should be 50.9mm
5.925mm spacing instead of 6.000mm spacing

LED-Version to replace incandescent bulbs. If used with bulbs, replace R1 and R2 with wire bridges or 00hm Resistors		
Sheet: /		
File: BMW_E30_VFL_SI_Indicator_LED.kicad_sch		
Title: E30 VFL SI Indicator Board (9 LED)		
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