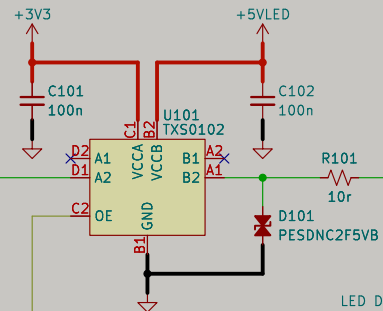
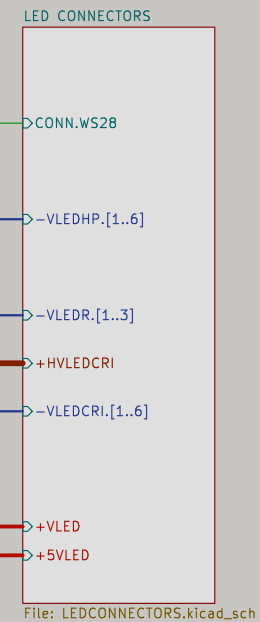
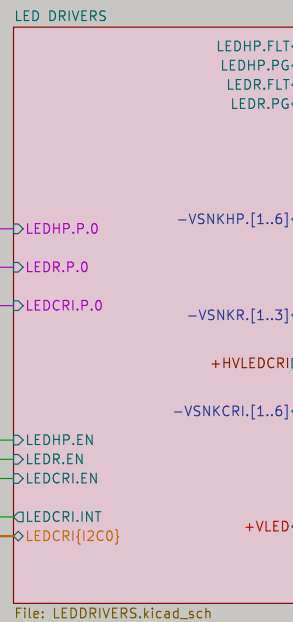
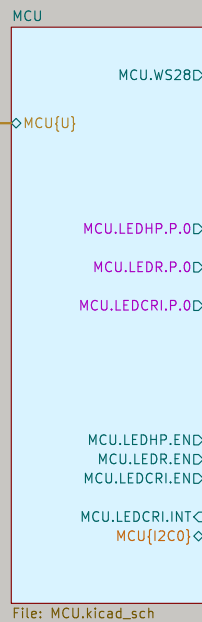
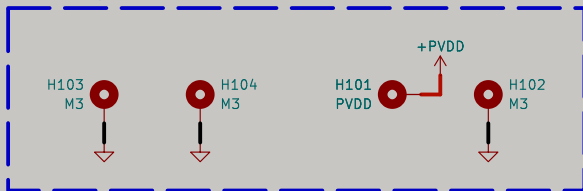


Mounting hardware and power connections



10u 0805 → HGC0805R5106K500NSLJ

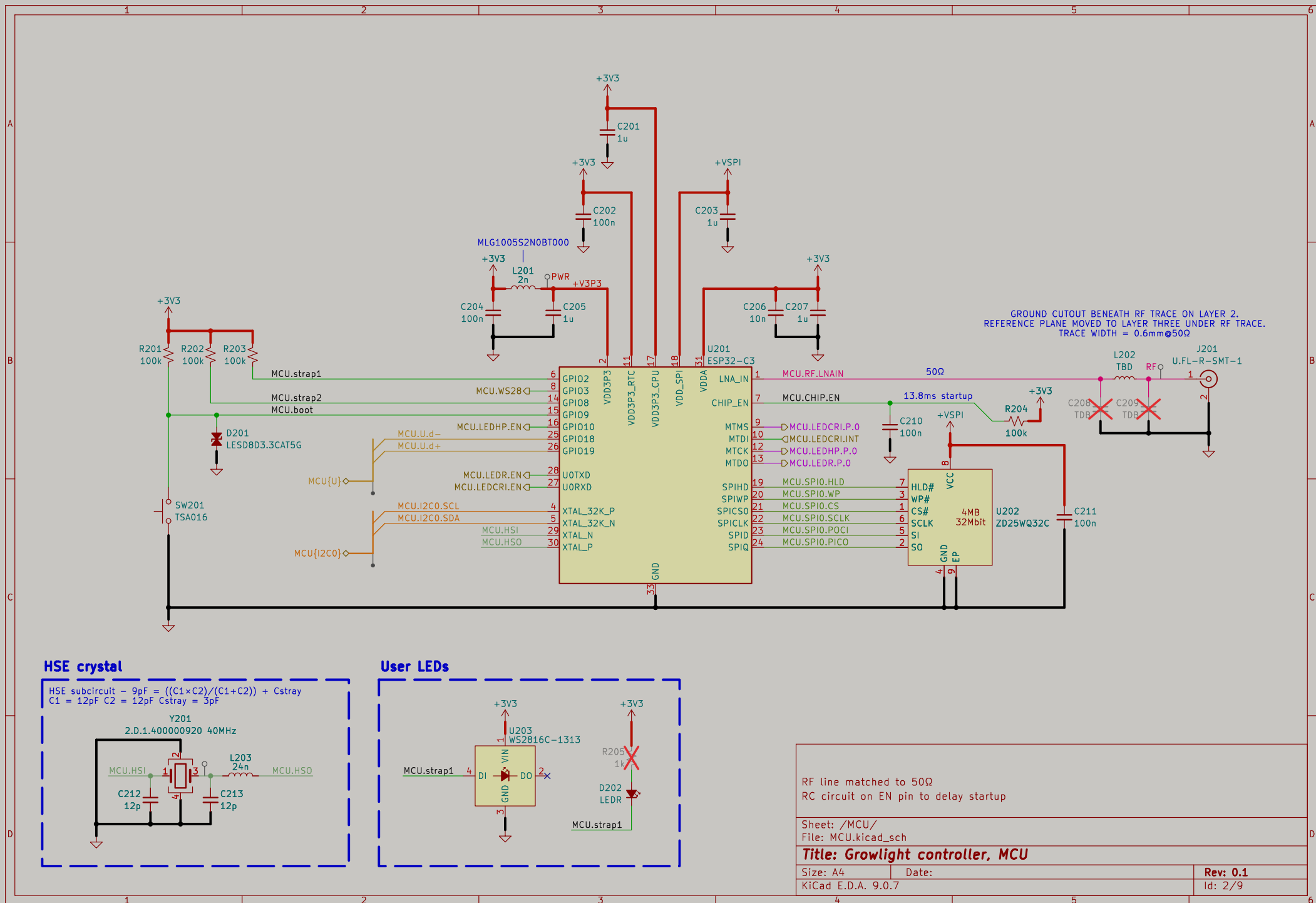
Sheet: /
File: Controller.kicad_sch

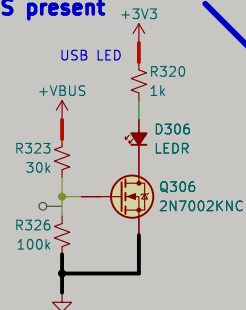
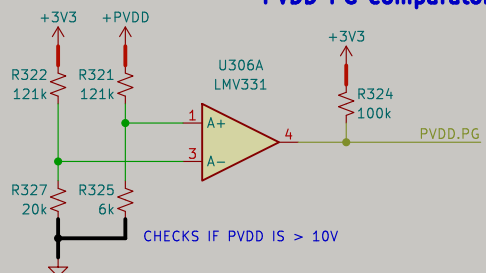
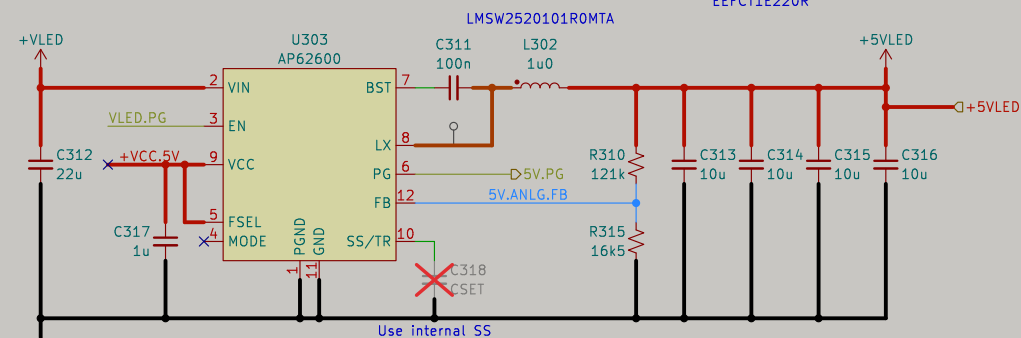
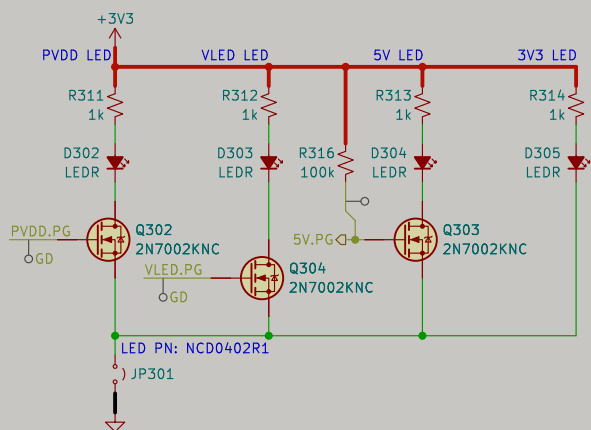
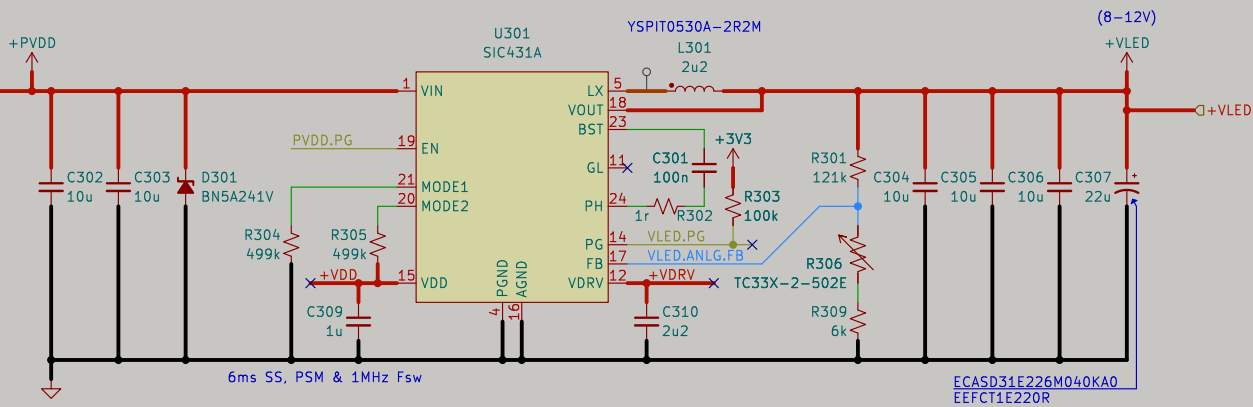
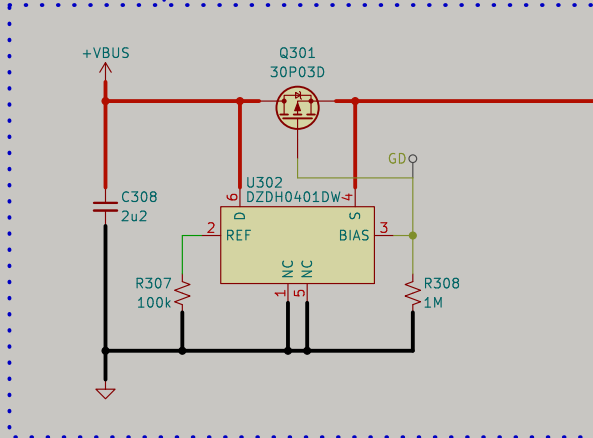
Title: Growlight controller, root page

Size: A4
KiCad E.D.A. 9.0.7

Date:

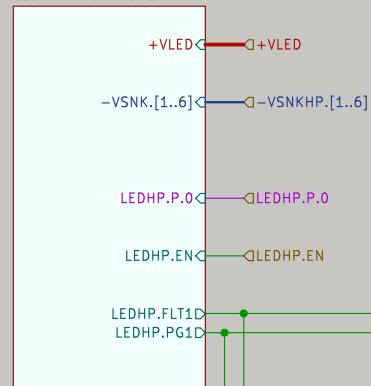
Rev: 0.1
Id: 1/9



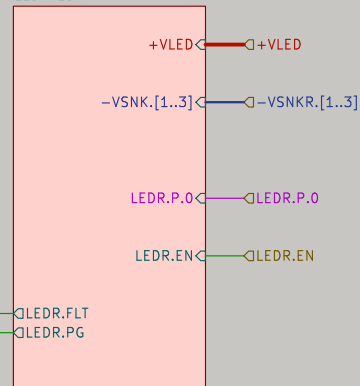


Id: 3/9

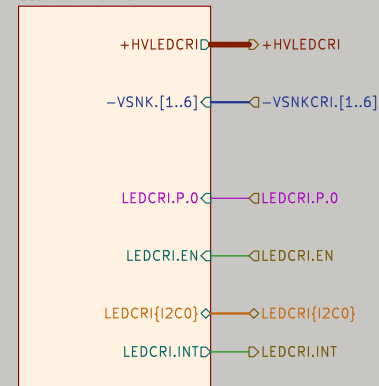
LED CW HIGH POWER



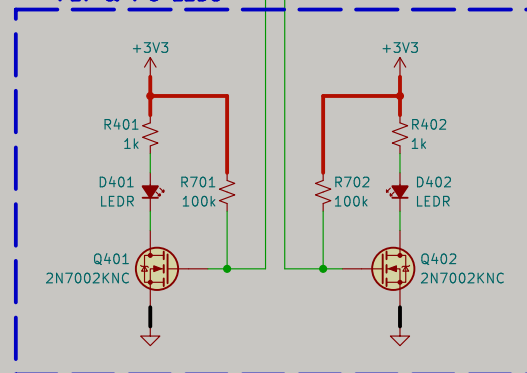
LED RED



LED WW HIGH CRI

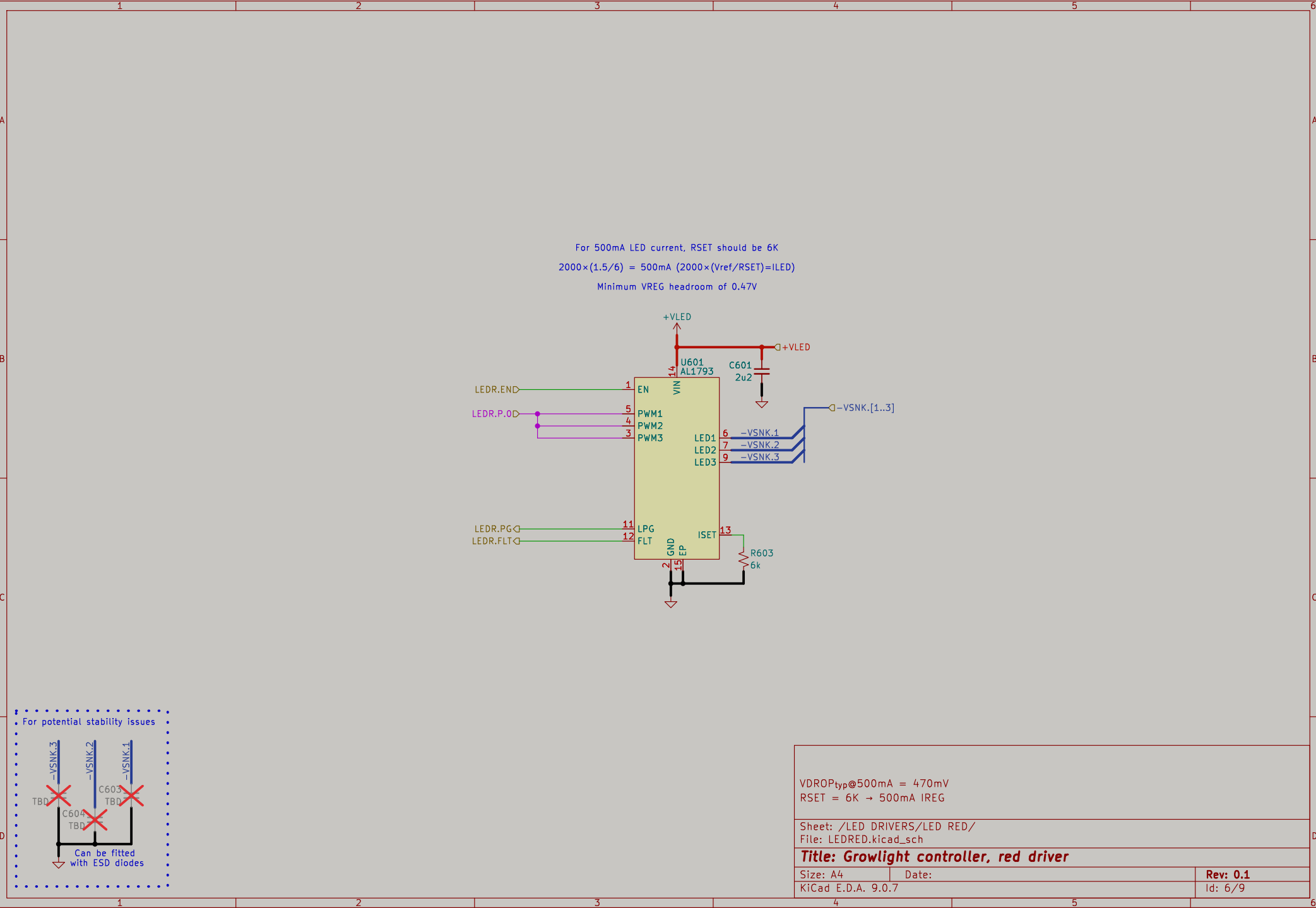


FLT & PG LEDs

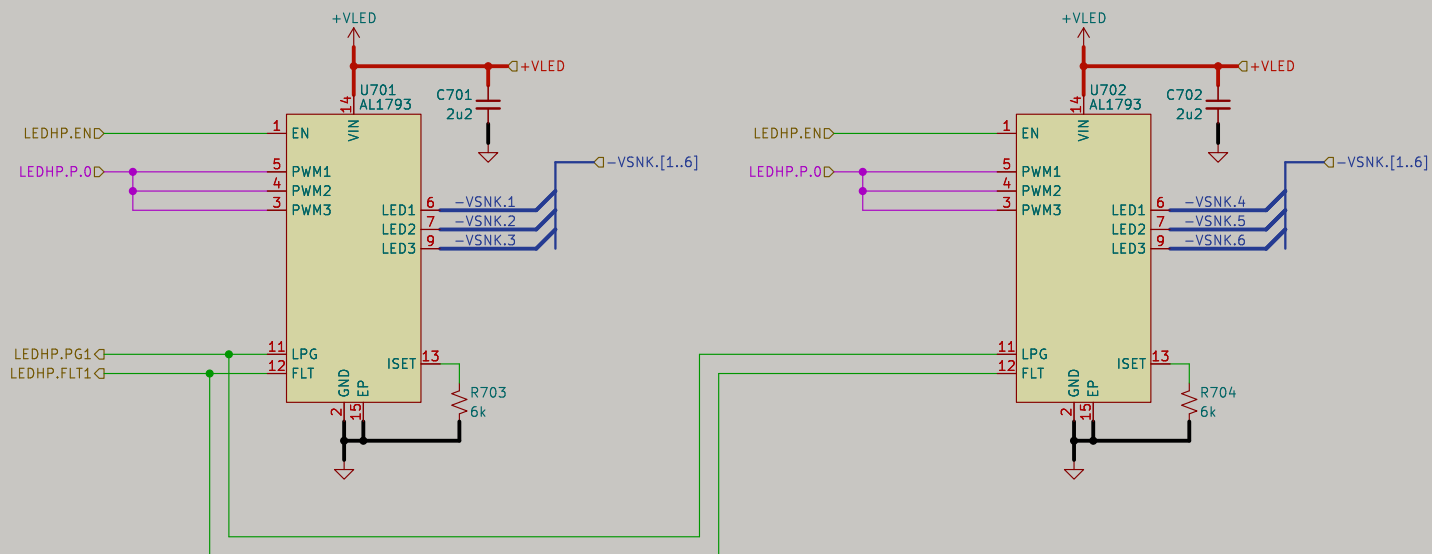


*All three AL1793 ICs FLT and PG pins have been tied together.
If any of their FLT or PG pins are pulled low, their respective
LED will turn off, indicating either a fault or bad VLED rail.

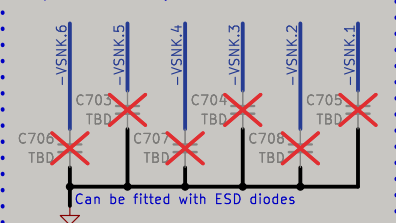
Sheet: /LED DRIVERS/ File: LEDDRIVERS.kicad_sch		
Title: Growlight controller, overview page		
Size: A4	Date:	Rev: 0.1
KiCad E.D.A. 9.0.7		Id: 4/9



For 500mA LED current, RSET should be 6K
 $2000 \times (1.5/6) = 500\text{mA}$ ($2000 \times (V_{\text{ref}}/R_{\text{SET}}) = I_{\text{LED}}$)
 Minimum VREG headroom of 0.47V



For potential stability issues

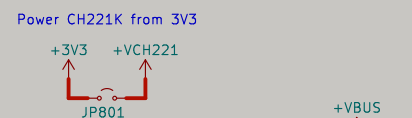


$V_{\text{DROPTyp@500mA}} = 470\text{mV}$
 $R_{\text{SET}} = 6\text{K} \rightarrow 500\text{mA IREG}$

Sheet: /LED DRIVERS/LED CW HIGH POWER/
 File: LEDHP.kicad_sch

Title: Growlight controller, cold white driver

Size: A4	Date:	Rev: 0.1
KiCad E.D.A. 9.0.7		Id: 7/9



VPDrequest = 20V		
Sheet: /USB + PD/ File: USB+PD.kicad_sch		
Title: Growlight controller, USB + PD page		
Size: A4	Date:	Rev: 0.1
KiCad E.D.A. 9.0.7		Id: 8/9

