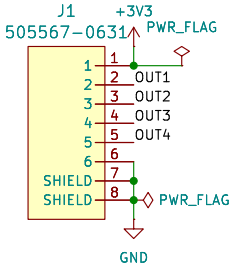
ADCS Connector



Photovoltaic Mode:
Vout = Rf * Id

EIVE -> photoconductive (common cathode on their 4 cell photodiode)
SOURCE -> photovoltaic? assumption because of lower current consumed.

solar_flux = 1.3608e3 # W/m² (also called solar irradiance)
flux2lux_LEO = 98 # lux, 1 W/m² = 98 lux
solar_lux = solar_flux * flux2lux_LEO = 133358.4
Id_per_lux_typical = 6.3 * 1e-9 # A/lx typical
Id_per_lux_min = 5 * 1e-9 # A/lx min

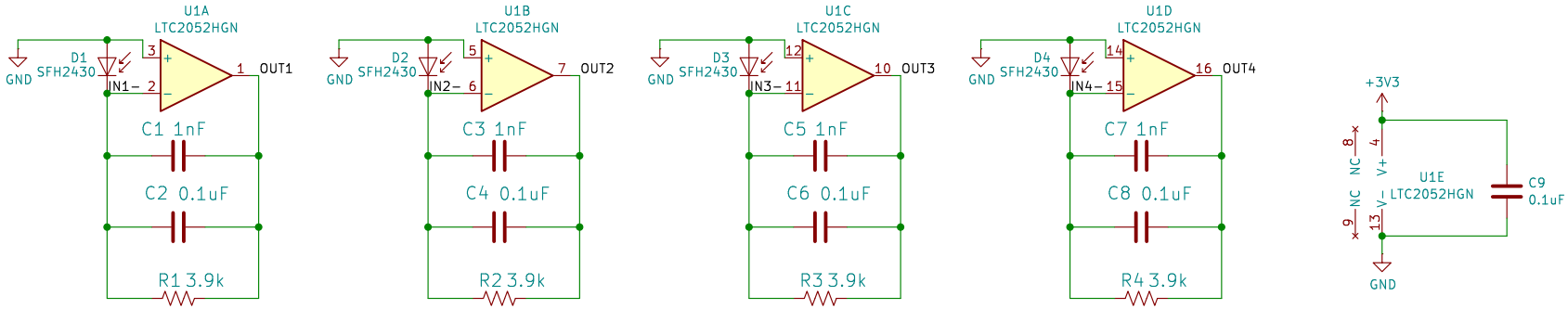
max_curr_typical = Id_per_lux_typical * solar_lux
3.3V / max_curr_typical = 3927.8329959681864

R = 3.9k

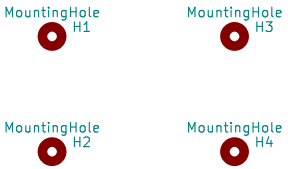
Could maybe go a bit lower on this...

Op-Amp Supply Current: 0.75mA * 4 = 3.5mA at 3V

Photodiodes & Op-amp



Mounting Holes



Not grounded to avoid current flow from X panel (see there for design) and associated electrical noise

Re: Hunter Liu		
Stanford Student Space Initiative		
Sheet: /		
File: Piramide_Del_Sol.kicad_sch		
Title: Piramide del Sol		
Size: A4	Date: 2025-04-07	**Rev: 3.2**
KiCad E.D.A. 9.0.1		Id: 1/1