

$$U_o = I_p \cdot R_2 + U_a + I_b \cdot R_2 + I_d \cdot R_2$$

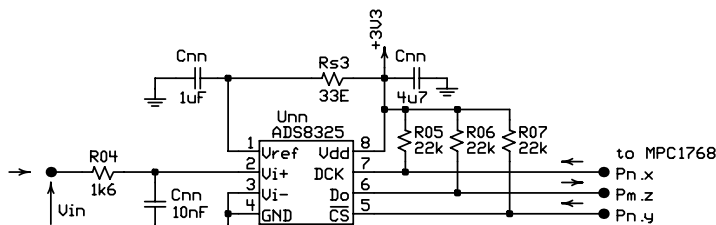
Photo-Diode Type:
 BPW34
 $C_d = 72\text{pF}$ ($U_r=0$)
 $A = 7\text{ mm}^2$
 $S = 0.62\text{ A/W}$ (80nA/lx)
 $I_p = 50\mu\text{A}$ @ 1mW/cm^2 @ 850nm
 $I_d < 10\text{pA}$ ($U_r=10\text{mV}$)
 $\lambda_{pk} = 850\text{ nm}$
 $\lambda_{rg} = 400\text{--}1100\text{ nm}$

OPA376
 $U_{ofs} = 5\mu\text{V}$ typ. ($25\mu\text{V}$ max)
 $I_b = 0.2\text{pA}$ typ. (10pA max, $T > 40\text{degC}$)
 $U_n(LF) = 1\mu\text{Vpp}$

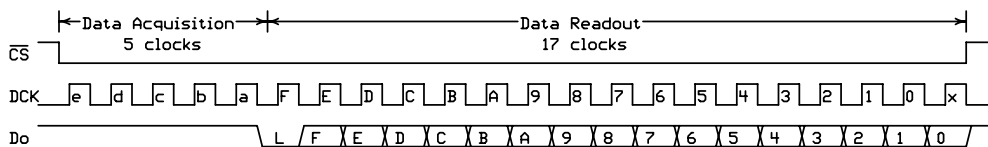
R02	1LSB $50\mu\text{V}/R_2$	Full Range $3\text{V}_3/R_2$
50M	1pA	66nA
25M	2pA	132nA
10M	5pA	330nA

Radiation reference: $1\text{pW/cm}^2/\text{sr}$
 Solid angle: $120^\circ/1\text{sr} \rightarrow \sim x4$
 Photodiode sensitivity: 0.62 A/W
 Coating attenuation: 0.27
 Area ratio: $7/100$
 Lens area ratio: $\text{pix}(50.8/2)^2/7$

Reference equivalent to:
 $10^{(-12)} \times 4 \times 0.62 \times 0.27 \times (7/100) \times \text{pix}(50.8/2)^2/7 = 1.36 \times 10^{(-11)} [\text{A}] = 13.6\text{pA}$



$$1\text{LSB} = 3.3\text{V} / 65535 = 50\mu\text{V}$$



Institut Jožef Stefan

projekt/naloga :	Astro Lab Optics		
sestavni del :	PhotoDiode Amp2	načrtoval	E. Margan
pripombe :	tolerance uporov	1 %	datum
	tolerance kondenzatorjev	10 %	2013.12.19.
			list
		koda	NGpt-PDA1-01