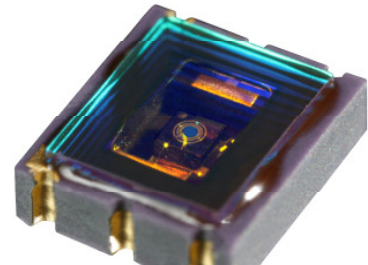


AD230-8 LCC6.1f low cost

High Gain Avalanche Photodiode with bandpass filter for 635 nm

Special characteristics:

high gain at low bias voltage
fast rise time
230 μm diameter active area
low capacitance
low cost



Parameters:	AD230-8 LCC6.1f
Active Area	0.042 mm ² Ø 230 μm
Dark Current ¹⁾ (M = 100)	max. 10 nA typ. 2 nA
Total Capacitance ¹⁾ (M = 100)	typ. 1.2 pF
Breakdown Voltage U _{BR}	120 V - 200 V
Temperature Coefficient of U _{BR}	typ. 0.45 V/K
Spectral Responsivity (at 635 nm, M = 100)	min. 30 A/W typ. 32 A/W
Cut-off Frequency (-3dB)	typ. 2.0 GHz
Rise Time	typ. 180 ps
Optimum Gain	50 - 60
Max. Gain	> 200
"Excess Noise" factor (M=100)	typ. 2.2
"Excess Noise" index (M = 100)	typ. 0.2
Noise Current (M = 100)	typ. 0.5 pA/Hz ^{1/2}
N.E.P. (M = 100, 635 nm)	typ. 1 * 10 ⁻¹⁴ W/Hz ^{1/2}
Operating Temperature	-20 ... +70 °C
Storage Temperature	-40 ... +100 °C

1) measurement conditions:

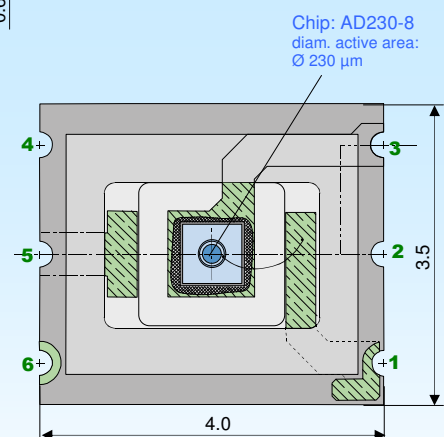
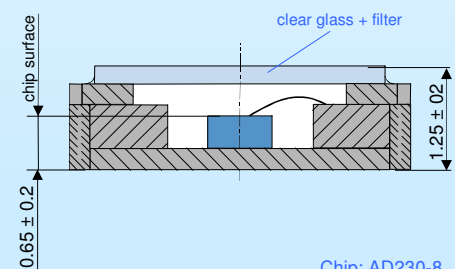
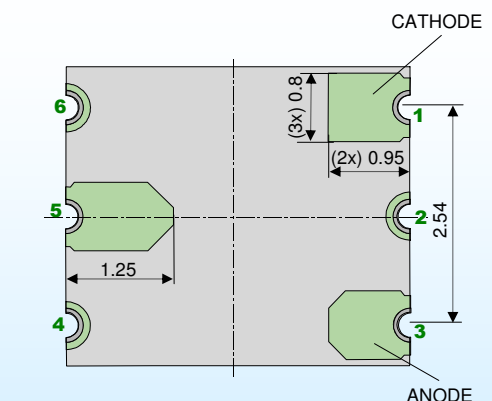
Setup of photo current 1.0 nA at M = 1 and irradiation by a LED (680 nm, 60 nm bandwidth).

Increase the photo current up to 1 μA , (M = 100) by internal multiplication due to an increasing bias voltage.

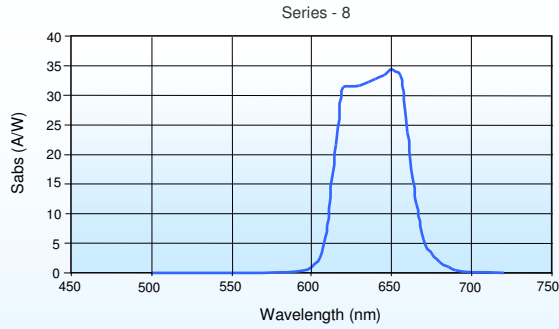
*Available without Bandpass Filter for 635 nm

RoHS compliant

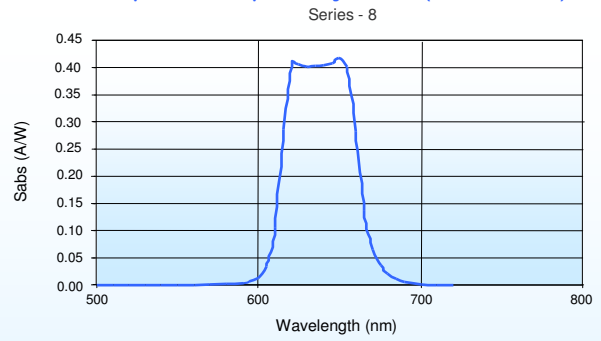
Package (LCC6.1f):



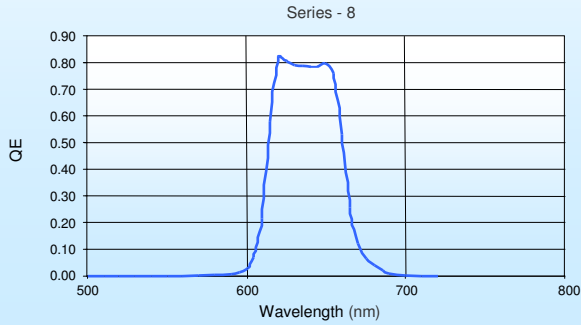
Spectral Responsivity at M=100 (filter 635 nm)



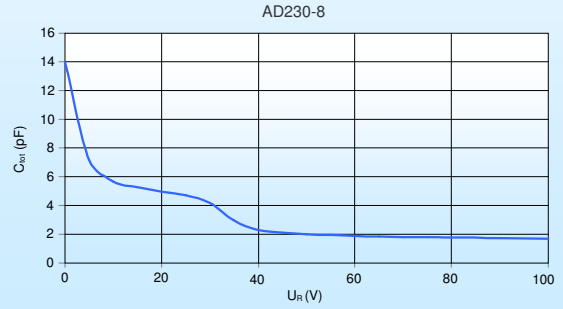
Spectral Responsivity at M=1 (filter 635 nm)



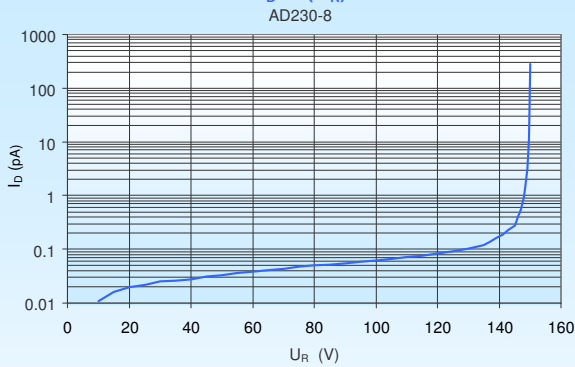
Quantum efficiency for M=1



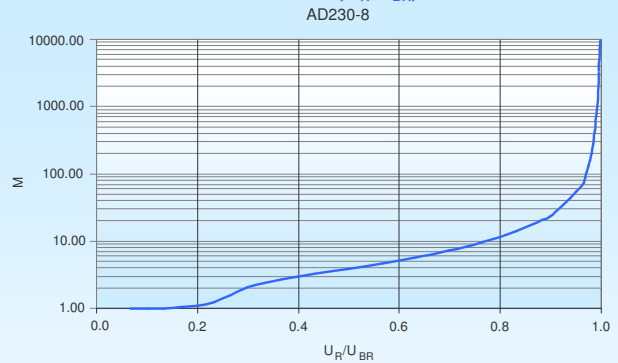
$C_{tot}=f(U_R)$



$I_D = f(U_R)$



$Gain = f(U_R/U_{BR})$



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