

APD Avalanche Photodiodes

Series 8



Special characteristics

- optimized for high speed
- low temperature coefficient
- fast rise time
- low bias operation
- low capacitance

Application
Optimized
Solutions

General ratings

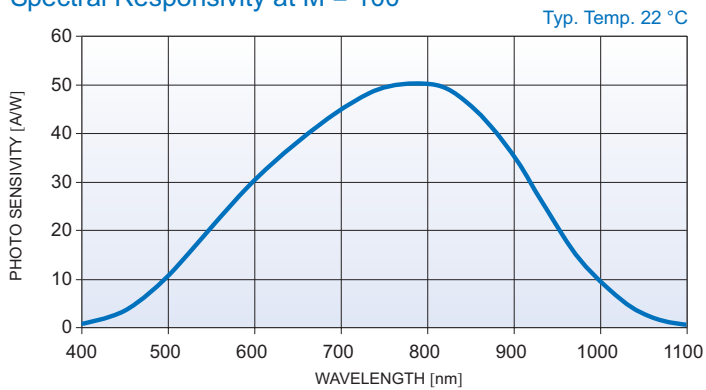
Type No.		Order number	Active area		Dimensional outline	Absolute maximum ratings	
Chip	Package		Size (mm)	Area (mm ²)	Window material	Operating temperatur	Storage temperatur
AD100-8	TO52S1	500011	∅ 0.100	0.00785	clear glass	-40 ... +100°C	-55 ... +125°C
AD230-8	TO52S1	500019	∅ 0.230	0.042			
AD230-8	TO52S3	500022					
AD500-8	TO52S1	500030	∅ 0.500	0.196			
AD500-8	TO52S3	500155					
AD800-8	TO5i	500036	∅ 0.800	0.50			
AD1100-8	TO5i	500013	∅ 1.130	1.00			
AD1900-8	TO5i	500015	∅ 1.950	3.00			
AD2500-8	TO5i	500025	∅ 2.520	5.00			
AD3000-8	TO5i	500158	∅ 3.000	7.07			
AD5000-8	TO8i	500160	∅ 5.000	19.63			

Electrical and optical characteristics (Typical values at 22 °C)

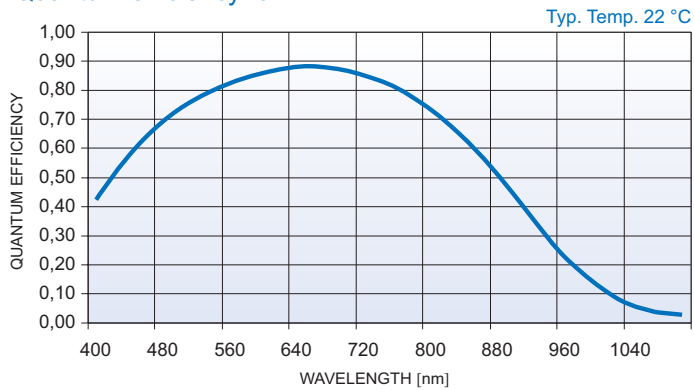
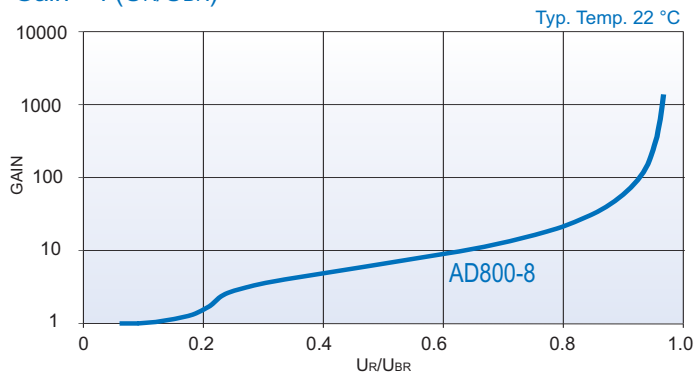
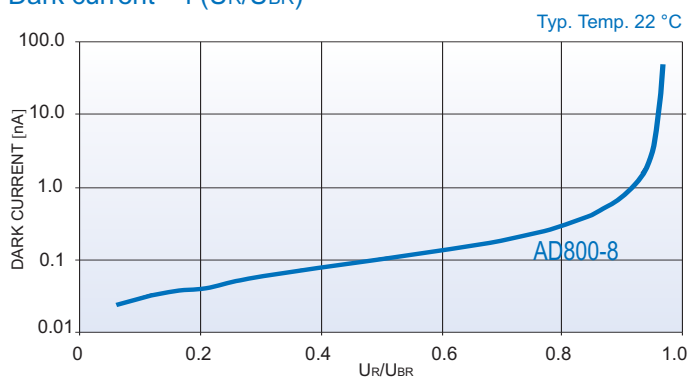
Type No		Spectral Responsivity	Dark current	Breakdown voltage	Capacitance	Rise time	Temp. coefficient	Cut-off frequency	N.E.P
		at 800 nm, M = 100 (A/W)	at M = 100 (nA)	at I _D = 2 A (V)	at M = 100 (pF)	at M = 100 (ps)	U _{BR} (V/K)	-3 dB (GHz)	at M = 100 (W/Hz ^{1/2})
AD100-8	TO52S1	min. 45 typ. 50	0.05	120 - 190	0.8	< 180	typ. 0.45	> 2	3* 10 ⁻¹⁵
AD230-8	TO52S1		0.3		1.2	180		2.0	1* 10 ⁻¹⁴
AD230-8	TO52S3								
AD500-8	TO52S1		0.5 - 1		2.2	350		1.0	2* 10 ⁻¹⁴
AD500-8	TO52S3								
AD800-8	TO5i		2.0		5.0	700		0.5	4* 10 ⁻¹⁴
AD1100-8	TO5i		4.0		8.0	1000		0.35	8* 10 ⁻¹⁴
AD1900-8	TO5i		15.0		20.0	1400		0.25	1.5* 10 ⁻¹³
AD2500-8	TO5i		20.0		28.0	1500		0.23	3* 10 ⁻¹³
AD3000-8	TO5i		30.0		45.0	2000		0.18	4.5* 10 ⁻¹³
AD5000-8	TO8i		60.0		120.0	3000		0.12	9* 10 ⁻¹³

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Spectral Responsivity at M = 100



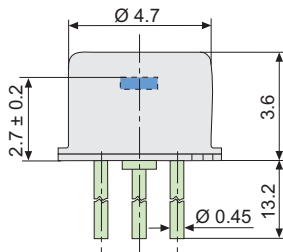
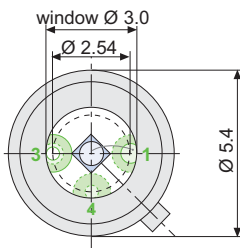
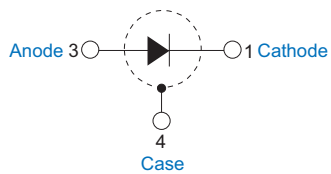
Quantum efficiency for M = 1

Gain = f (U_R/U_{BR})Dark current = f (U_R/U_{BR})

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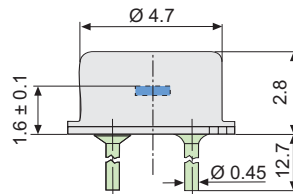
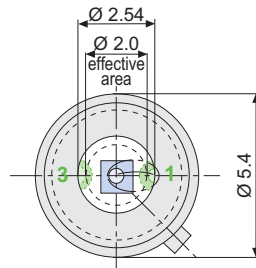
scale 4:1

TO52S1



scale 4:1

TO52S3



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