OSI Optoelectronics
An OSI Systems Company

APD Series 8-150

Silicon Avalanche Photodiodes, 800 nm band

FEATURES

- 0.2, 0.5, 1, 1.5mm diameter Active Area
- Low Temperature Coefficient: 0.45 V/°C
- High Sensitivity, Low Noise
- High Bandwidth

APPLICATIONS

- Optical Fiber Communication
- Laser range finder
- High speed photometry

GENERAL RATINGS / ABSOLUTE MAXIMUM RATINGS

Product Model	Active Area		Package Style	Storage Temperature (°C)		Operating Temperature (°C)	
	Diameter* (mm)	Area (mm2)		Min	Max	Min	Max
APD02-8-150-T52	0.2	0.03	TO-52	-55	+125	-40	+100
APD05-8-150-T52	0.5	0.19	TO-52	-55	+125	-40	+100
APD10-8-150-T52	1.0	0.78	TO-52	-55	+125	-40	+100
APD15-8-150-TO5	1.5	1.77	TO-5	-55	+125	-40	+100
APD15-8-150-T5H	1.5	1.77	TO-5	-55	+125	-40	+100

* Area in which a typical gain can be obtained

ELECTRO-OPTICAL CHARACTERISTICS (Typ. T_A = 23°C)

Product Model	Responsivity M = 100 λ = 800 nm (A/W)	Dark Current M = 100 (nA)		Capacitance M = 100 (pF)	Q.E. M = 1 λ = 800 nm (%)	Breakdown Voltage 10uA (V)		Temperature Coefficient of Breakdown Voltage (V/°C)	Bandwidth -3dB M = 100 λ = 800 nm (MHz)	Excess Noise Figure M = 100 λ = 800 nm
		Typ	Max			Typ	Max			
APD02-8-150-T52	50	0.05	0.5	1.5	75	150	200	0.45	1000	0.3
APD05-8-150-T52		0.1	1	3	75	150	200	0.45	900	0.3
APD10-8-150-T52		0.2	2	6	75	150	200	0.45	600	0.3
APD15-8-150-TO5		0.5	5	10	75	150	200	0.45	350	0.3
APD15-8-150-T5H		0.5	5	10	75	150	200	0.45	350	0.3

MODEL NUMBER DESCRIPTION: APDxx-y-zzz-pppp

APD	Silicon Avalanche Photodiode		
xx	Active Area Diameter (mm)	02, 05, 10, 15	0.2, 0.5, 1.0, 1.5 mm
y	Optimal Spectrum	8	800nm band
zzz	Breakdown Voltage (typical)	150	Typical breakdown close to 150V
pppp	Package options	T52, TO5, T5H	Add suffix **L for Lens**

12525 Chadron Avenue, Hawthorne, CA 90250, USA
Tel +1 310-978-0516 Fax +1 310-644-1727 www.osioptoelectronics.com

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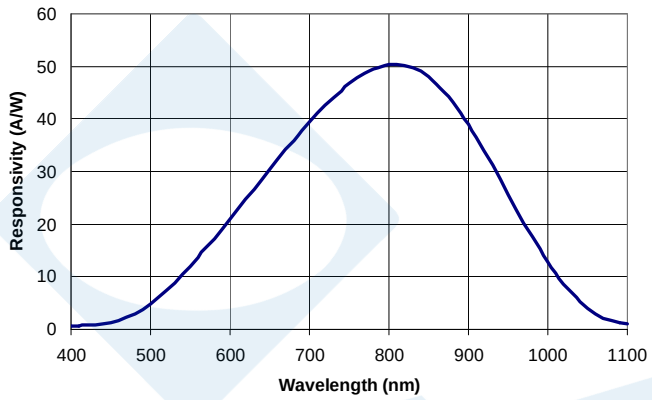
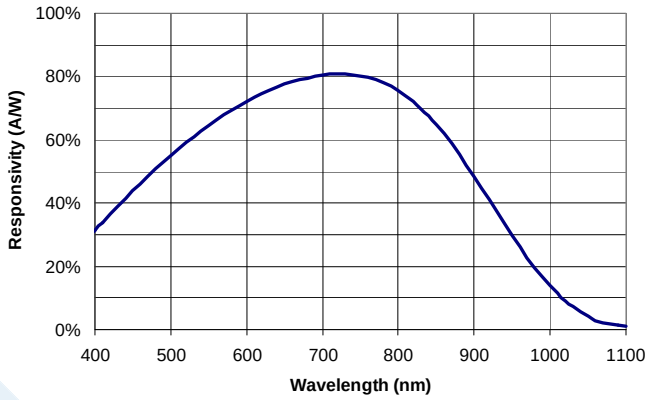
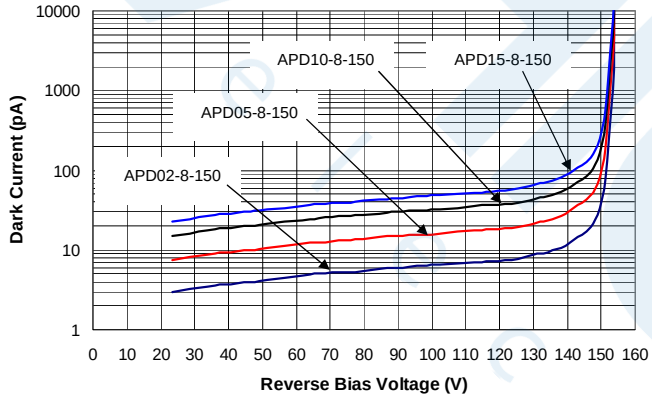
TYP. SPECTRAL RESPONSE (T_A = 23°C, M = 100)



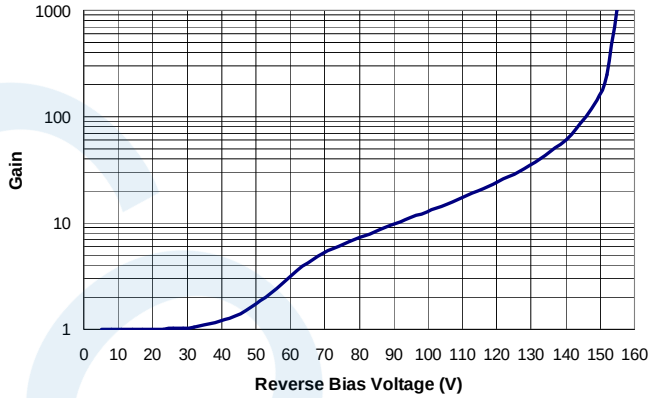
TYP. QUANTUM EFFICIENCY vs. WAVELENGTH (T_A = 23°C)



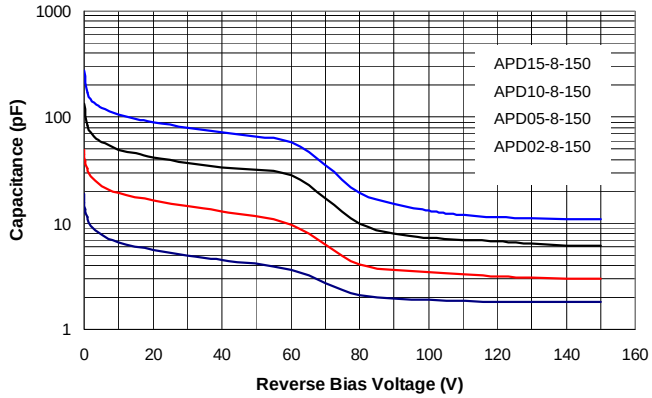
TYP. DARK CURRENT vs. REVERSE BIAS (T_A = 23°C)



TYP. GAIN vs. REVERSE BIAS (T_A = 23°C)



TYP. CAPACITANCE vs. REVERSE BIAS (T_A = 23°C, f = 1MHz)



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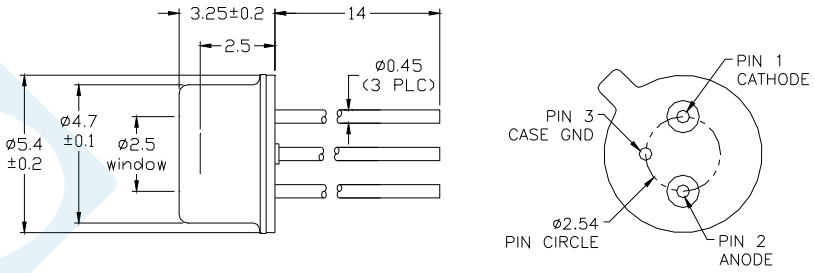
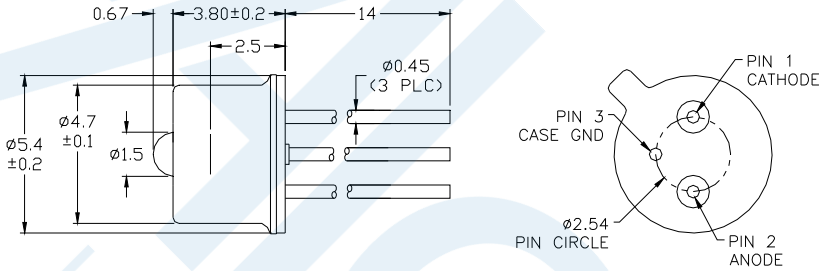
DIMENSIONAL OUTLINES: (in mm)

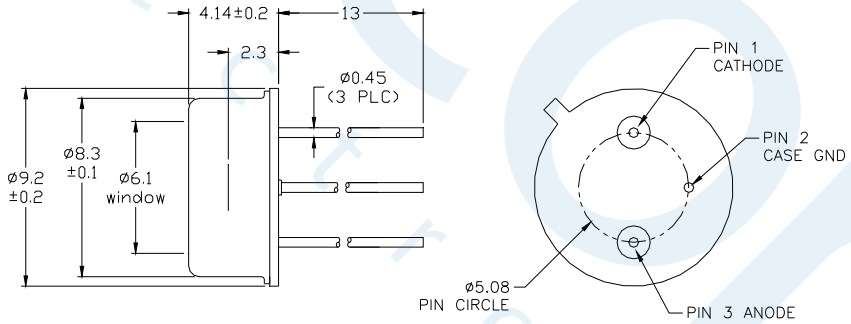
T52 (TO-52 package)



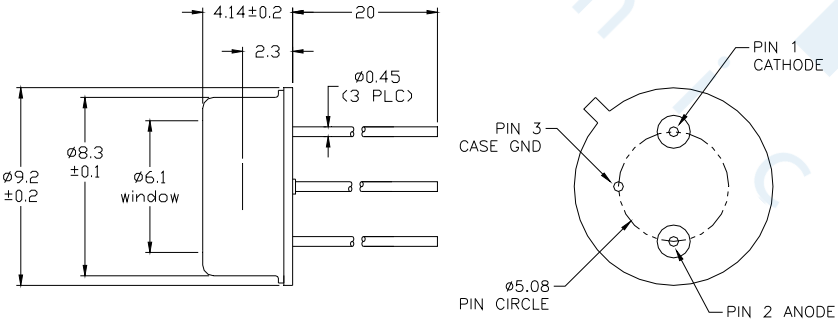
T52L (TO-52 package with lens)



T05 (TO-5 package)



T5H (TO-5 package)



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