

50um InGaAs M=30 Avalanche Photodiode

Version: 3.1 17-05-12

Model: LSIAPD-50
Features:

- High reliability, low dark current
- 800-1700nm wavelength range
- High Gain up to M=30
- High bandwidth up to 2.5GHZ
- Hermetic TO46 Can or with fiber coupling



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Fiber coupling

Applications:

- Ultra Weak pulse optical detecting
- Optical fiber sensor, OTDR
- Laser lidar, laser range finding
- high resolution Optical Coherence Tomography
- Science analysis and experiment

The absolute values

Operating voltage	$0.99 \times V_{BR}$	Operating temperature	$-40 \sim +85^{\circ}\text{C}$	Power dissipation	50mW
Forward current	4mA	storage temperature	$-45 \sim +100^{\circ}\text{C}$	Soldering temperature(time)	260°C (10s)

The opto-eletronic characteritics (@Tc=22±3℃)

Parameters	Sym.	Test conditions	Min	Typ	Max	Unit
Response Spectrum	λ	—	800~1700			nm
Active diameter	φ	—	50			μm
Responsivity	Re	$\lambda=1.55\mu\text{m}, \varphi_e=1\mu\text{W}, M=1$		0.9		A/W
Multiplication gain	M	$\lambda=1.55\mu\text{m}, \varphi_e=1\mu\text{W}, V_{BR}=4\text{V}$		10		
		$\lambda=1.55\mu\text{m}, \varphi_e=1\mu\text{W}, V_{BR}=2\text{V}$		20		
		$\lambda=1.55\mu\text{m}, \varphi_e=1\mu\text{W}, V_{BR}=1.2\text{V}$		30		
-3dB bandwidth	BW	$M=10, R_L=50\Omega$		2.5		GHz
Dark current	I_D	$M=10$		0.8		nA
Total capacitance	C_{tot}	$M=10$		0.7		pF
Reverse breakdown voltage	V_{BR}	$I_R=10\mu\text{A}$	40	44	48	V
Maximum instantaneous input power	P	$M=10, 1550\text{nm}, 10\text{ns}, 10\text{KHZ}$			300	μW
Operating voltage temperature coefficient	δ	$T_c=-40 \sim +85^{\circ}\text{C}$		0.11	0.15	V/°C
package	Hermetic TO46 Can or with fiber coupling					

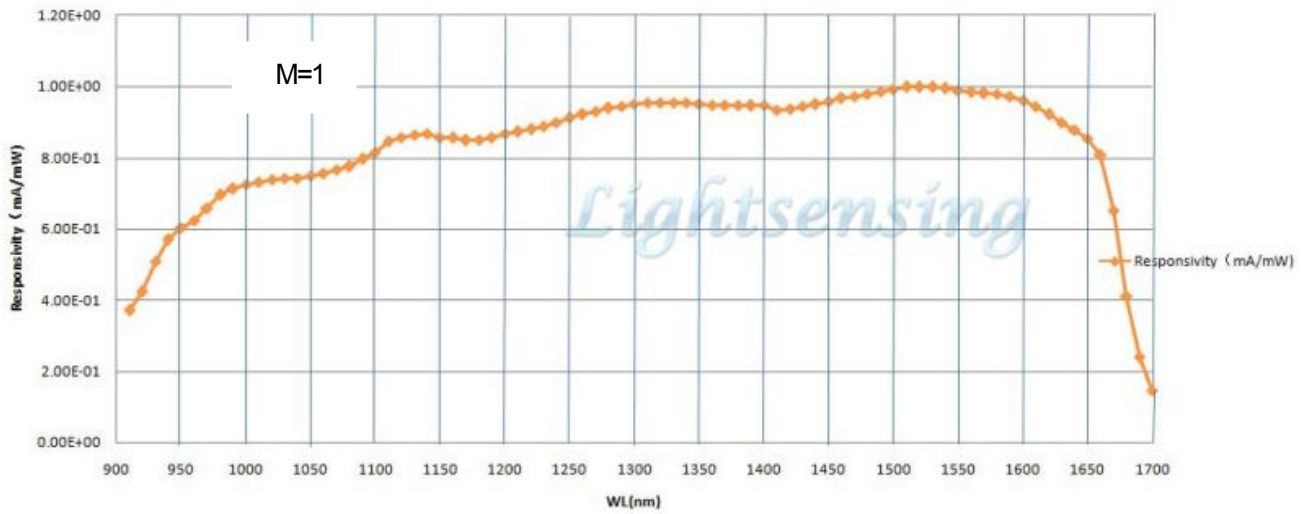
NOTICE: The above product specifications are subject to change without notice.

地址: 北京市海淀区苏州街12号西屋国际E座1201 邮编: 100080

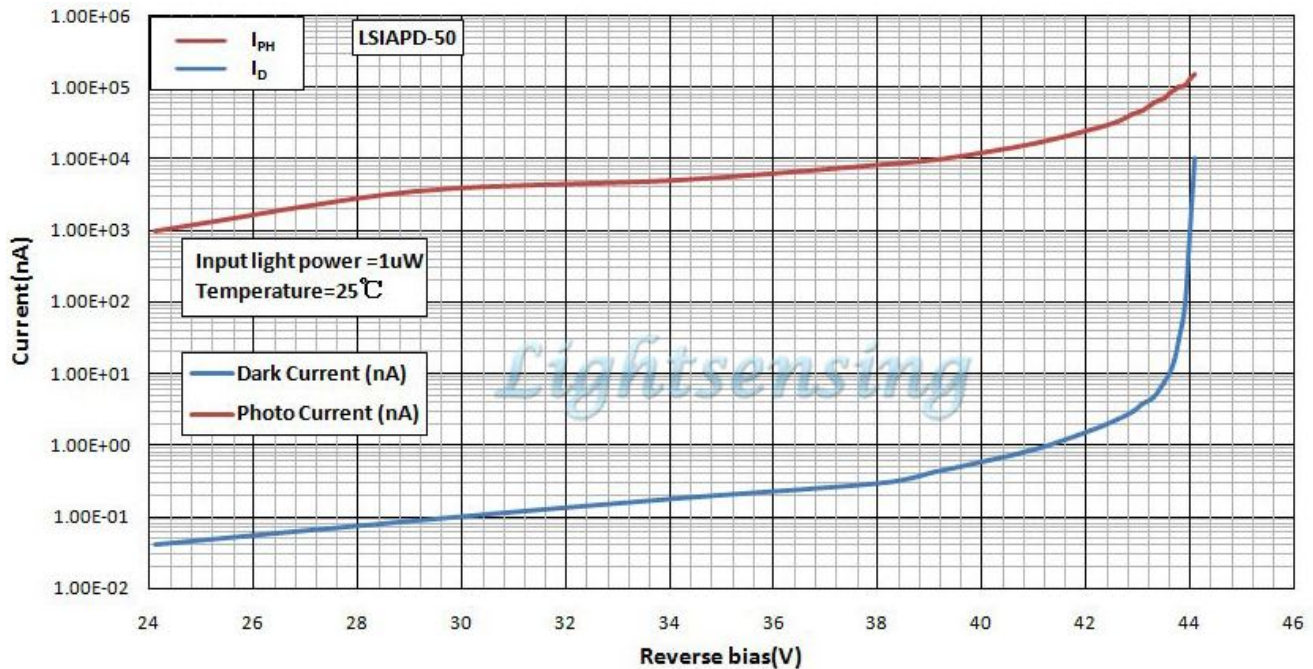
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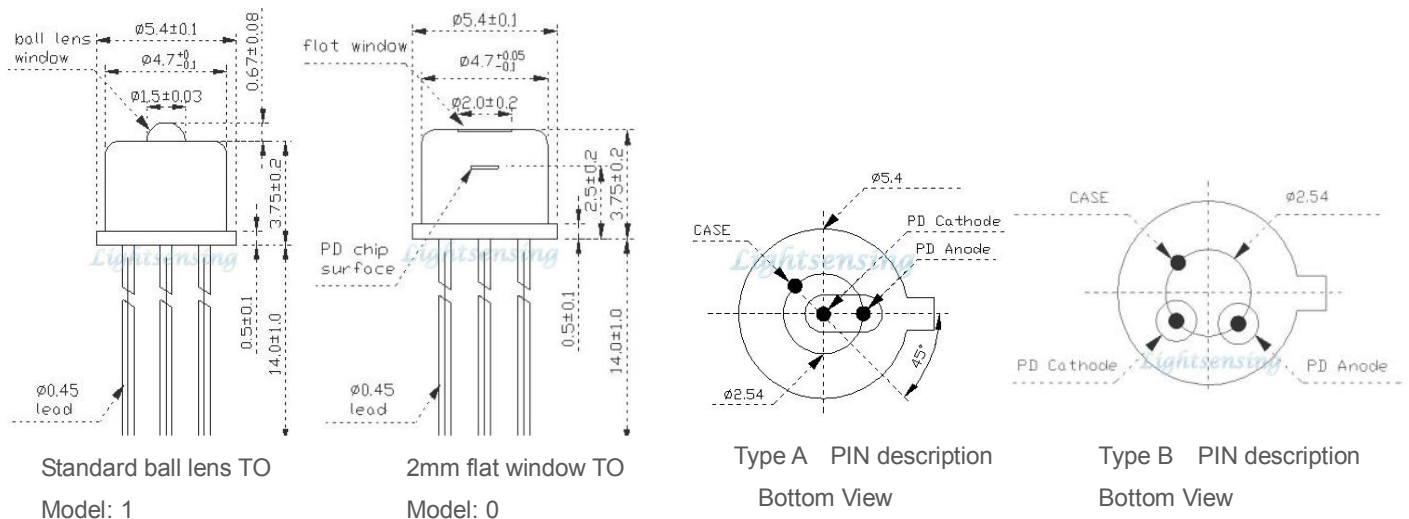
The typical characteristic curve



Dark current and photo current vs voltage



TO package and Lead



Ordering information

LSIAPD-50-X - X

X=A	Type A PIN description	X=1	TO-46 Can with ball lens cap
X=B	Type B PIN description	X=1A	TO-46 Can with ball lens cap and Antireflection Coatings
		X=0	TO-46 Can with 2mm flat window cap
		X=0A	TO-46 Can with 2mm flat window cap and Antireflection Coatings
		X=SMFA/P	TO-46 Can with SM Fiber coupling with FC-APC/FC-PC connector
		X=SMSA	TO-46 Can with SM Fiber coupling with SC-APC connector
		X=5MMFA/P	TO-46 Can with 50um MM Fiber coupling with FC-APC/FC-PC connector
		X=6MMFA/P	TO-46 Can with 62.5um MM Fiber coupling with FC-APC/FC-PC connector
		X=Other	By customer's request

The Cautions

- 1: The above product specifications are subject to change without notice.
- 2: The suitable ESD protecting measures are recommend in storage,transporting and using.
- 3: The fiber bending radius no less than 20mm for avoiding fiber damaged ,Be sure the fiber coupling facet is clean before connecting it to opto-circuit.