

200um InGaAs APD with pre-amplifier

Version: sample 17-05-15

Model: LSIAPDT-S200

Features:

- High sensitivity at the wavelength of 1310nm/1550nm
- wavelength range 800-1700nm
- Low voltage power supply: 3.3V and Differential output
- Built-in 200um InGaAs APD+TIA
- Hermetic TO-46 Can or with fiber coupling

Applications:

- Free-Space Optical communication (FSO)
- laser range finding and laser lidar
- Low light sensor
- Analytical instruments and Medical equipment
- high resolution Optical Coherence Tomography
- Industrial automatic control



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Fiber coupling

The absolute values

APD Operating voltage	$0.99 \times V_{BR}$	Operating temperature	$-40 \sim +85^{\circ}\text{C}$	Input light power	-5dBm
Amp Operating voltage	4V	storage temperature	$-55 \sim +85^{\circ}\text{C}$	Soldering temperature(time)	260°C (10s)

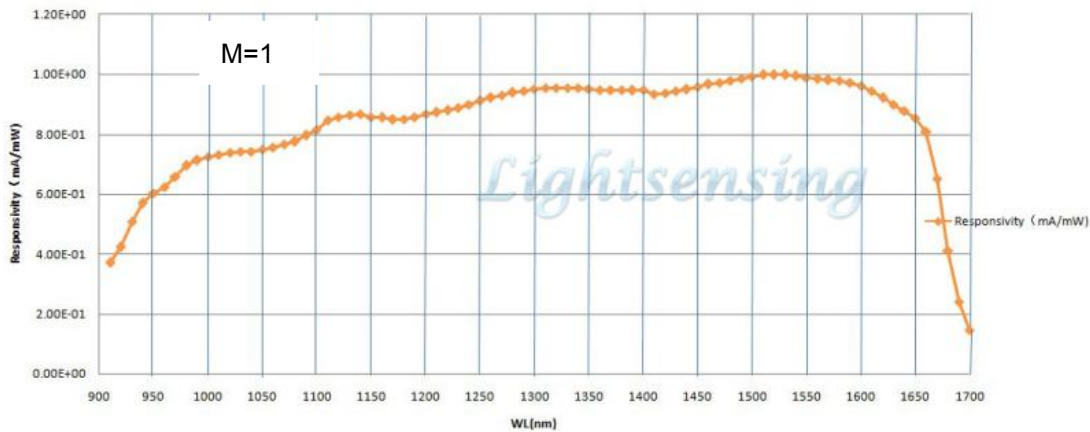
The opto-electronic characteristics (@ $T_c=22\pm3^{\circ}\text{C}$)

Parameters	Sym.	Test conditions	Min	Typ	Max	Unit
Response Spectrum	λ	—	800~1700			nm
APD responsivity	Re	$\lambda=1.55\mu\text{m}, \phi_e=1\mu\text{W}, V_R=V_{BR}-3$		10		A/W
Small signal bandwidth(-3dB)	BW	$V_R=V_{BR}-3$		155(1)		Mbps
Small signal bandwidth(-3dB)	BW	$V_R=V_{BR}-3$		1.25(2)		Gbps
Low frequency cut-off	LF	-3dB		20		KHZ
Sensitivity	S	PRBS= $2^{23}-1$, BER= 10^{-10} , 1310nm ER=10dB@2.5Gbps, $V_R=V_{BR}-3$		-42(1)		dBm
Sensitivity	S	PRBS= $2^{23}-1$, BER= 10^{-10} , 1310nm ER=10dB@2.5Gbps, $V_R=V_{BR}-3$		-32(2)		dBm
Output impedance	Rout	Differential output	60	100	140	Ω
APD reverse breakdown voltage	V_{BR}	ID=100μA	40		60	V
APD operation voltage	V_{APD}	Best sensitivity		$V_{BR}-3$		V
Saturated optical power	Psat			-7		dBm
Operating voltage of TIA	Vcc		3.0	3.3	3.6	V
Operating current of TIA	Icc			23(1)	33(1)	mA
Operating current of TIA	Icc			28(2)	36(2)	mA
Transimpedance	Zt		40(1)		300(1)	K Ω
Transimpedance	Zt		16(2)	26(2)	36(2)	K Ω
Operating voltage temperature coefficient	δ	$T_c=-40 \sim +80^{\circ}\text{C}$		0.12	0.15	V/ $^{\circ}\text{C}$
package	Hermetic TO-46 Can with pre-amplifier and lens cap or with fiber coupling					

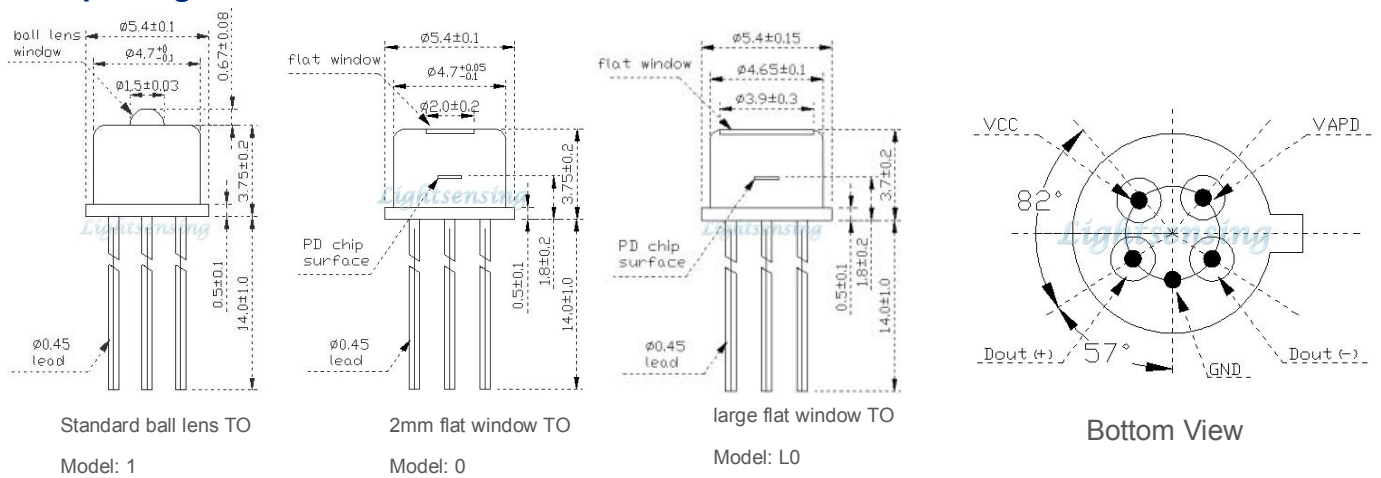
Note: (1) for 155M amplifier; (2) for 1.25G amplifier.

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

The typical Responsivity curve



The package and Lead



Note: In order to get other dimensions, please contact us.

Ordering Information

LSIAPDT-S200-X-X

X=155M 155Mbps
X=1.25G 1.25Gbps

X=1	TO-46 Can with ball lens cap
X=0	TO-46 Can with flat window cap
X=0A	TO-46 Can with 2mm flat window cap and Antireflection Coatings
X=L0	TO-46 Can with 3.9mm flat window cap
X=L0A	TO-46 Can with 3.9mm flat window cap and Antireflection Coatings
X=SMFP	SM Fiber coupling with FC-PC connector
X=SMFA	SM Fiber coupling with FC-APC connector
X=SMSA	SM Fiber coupling with SC-APC connector
X=5MMFA	50um MM Fiber coupling with FC-APC connector
X=6MMFA	62.5um MM Fiber coupling with FC-APC connector
X=Other	By customer's request

The Cautions