

80um InGaAs M=30 Avalanche Photodiode

Model: LSIAPD-S80

V4.2IAPD-003 22-01-01

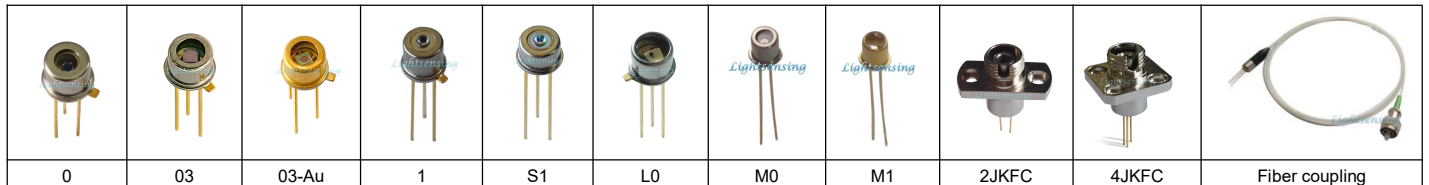
1.Features

- High reliability, low dark current
- 800-1700nm wavelength range
- High Gain up to M=30
- High bandwidth up to 1.25GHz
- Hermetic TO46 Can or Mini TO25 Can or with receptacle or with fiber coupling

2.Applications

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

3.Picture



4.Absolute maximum ratings:

Operating voltage	$0.99 \times V_{BR}$	Operating temperature	$-40 \sim +85^{\circ}\text{C}$	storage temperature	$-40 \sim +85^{\circ}\text{C}$
Soldering temperature(time)	$260^{\circ}\text{C}(10\text{s})$				

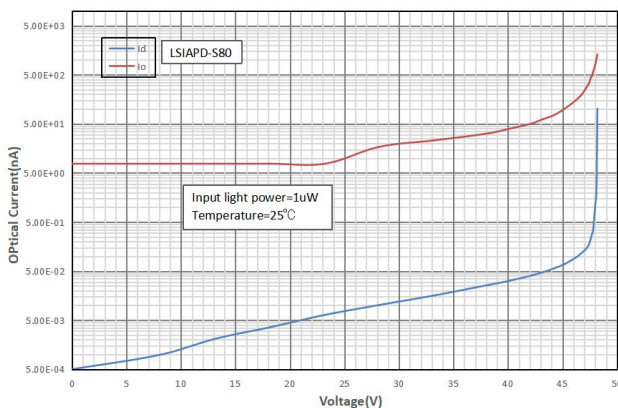
5.Electrical and optical characteristics:(T=25°C)

Parameters	Sym.	Test conditions	Min	Typ	Max	Unit
Response Spectrum	λ	—	800~1700			nm
Active diameter	φ	—	80			μm
Responsivity	Re	$\lambda=1.55\mu\text{m}, 1\mu\text{w}, M=1$		0.85		A/W
		$\lambda=1.064\mu\text{m}, 1\mu\text{w}, M=1$		0.50		A/W
Multiplication gain	M	$\lambda=1.55\mu\text{m}, 1\mu\text{w}, V_{BR}=4\text{V}$		10		
		$\lambda=1.55\mu\text{m}, 1\mu\text{w}, V_{BR}=2\text{V}$		20		
		$\lambda=1.55\mu\text{m}, 1\mu\text{w}, V_{BR}=1\text{V}$		30		
Rise time	Tr	M=10, RL=50 Ω		280		ps
-3dB bandwidth	BW	M=10, RL=50 Ω		1.25		GHz
Dark current	Id	M=10		5	20	nA
Total capacitance	Ctot	M=10		1		pF
Reverse breakdown voltage	V _{BR}	Id=10uA	35	43	55	V
Maximum instantaneous input power	P	M=10, 1550nm, 10ns, 10KHZ			0.6	mW
Operating voltage temperature coefficient	δ	Tc=-40~+85°C		0.11	0.15	V/°C
Package	Hermetic TO46 Can or Mini TO25 Can or with fiber coupling					

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

The typical characteristic curve

Dark current and photo current vs voltage



6. The package Dimensions and Lead

0	03	1	S1	L0	Type B PIN description Bottom View
2PC-M0	2PC-M1	2PA-M0	2PA-M1	Bottom View of Mini 2PC	Bottom View of Mini 2PA type

Note: For more information on dimension, please contact us

7. Order information

TO46 Can product order information: LS=Lightsensing

LS	IAPD	-S80	-B	-03A
	APD type	Active Area	PIN	Cap type
	IAPD= InGaAs APD	80=80um	B=Type B PIN	0=2mm flat window nickel-plated cap 0A=2mm flat window nickel-plated cap and Antireflection Coatings 03=3mm Flat window nickel-plated cap 03A=3mm flat window nickel-plated cap and Antireflection Coatings 03-Au=3mm Flat window Au-plated cap 1=ball lens nickel-plated cap 1A=ball lens nickel-plated cap and Antireflection Coatings S1=short ball lens nickel-plated cap S1A=short ball lens nickel-plated cap and Antireflection Coatings L0=3.9mm flat window nickel-plated cap L0A=3.9mm flat window nickel-plated cap and Antireflection Coatings Other

TO46 Receptacle product order information: LS=Lightsensing

LS	IAPD	-S80	-B	-2JKFC
	APD type	Active Area	PIN	Receptacle type
	IAPD= InGaAs APD	80=80um	B=Type B PIN	2JKFC=receptacle with FC connector and 2 mounting holes 4JKFC=receptacle with FC connector and 4 mounting holes Other

TO46 Fiber coupling product order information: LS=Lightsensing; Def=Default;

LS	IAPD	-S80	-B	-SM	FA	-	-	-
	APD type	Active Area	PIN	Fiber type	Fiber connector	Fiber tube	Fiber length	
	IAPD= InGaAs APD	80=80um	B=Type B PIN	SM=9um SM 5MM=50um MM 6MM=62.5um MM 10MM=105um MM Other	FA=FC/APC FP=FC/PC SA=SC/APC SP=SC/PC Other	Def=0.9mm tight S=0.9mm Loose Other	Def=1 meter 0.3m=0.3 meter 0.5m=0.5 meter Other	

TO25 Can product order information: LS=Lightsensing

LS	IAPD	-S80	-2PA	-M0
	APD type	Active Area	PIN	Cap type
	IAPD= InGaAs APD	80=80um	2PA=Type A 2PIN 2PC=Type C 2PIN	M0= flat window nickel-plated cap M1= ball lens Au-plated or nickel-plated cap Other

8. 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.

