

InGaAs APD-PIN Module

Features

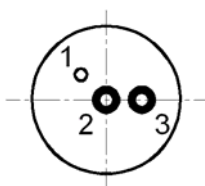
InGaAs planar APD structure
55um top-illuminated active area
Low dark current
Low capacitance
High reliability

Applications

Optical receivers up to 2.5Gb/s



PIN assignment



pin	function
1(case)	ground
2	APD(-)
3	APD(+)

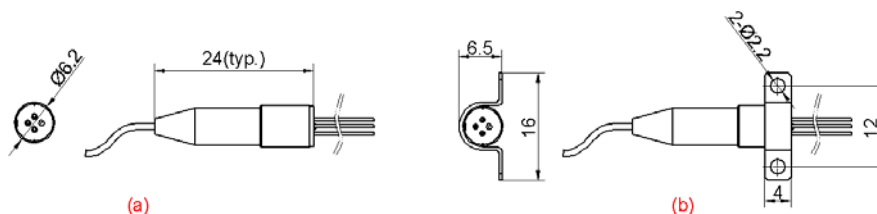
Absolute maximum ratings

Parameter	Symbol	Value	Unit
Storage temperature	T _{st}	-40~+100	°C
Operating temperature	T _{op}	-40~+85	°C
APD voltage	V _R	V _{br}	V
Soldering temperature/time	—	260/10	°C/ s

Optical & electrical characteristics(T=25°C)

Symbol	Parameter	Test conditions	Min.	Typ.	Max.	Unit
	Active area			55		um
R	Responsivity	$\lambda=1310\text{nm}$, M=1	0.75	0.9	-	A/W
		$\lambda=1550\text{nm}$, M=1	0.9	1.05	-	
V _b	Breakdown voltage	I _d =10uA	40	50	60	V
I _d	Dark current	V _r =0.9V _b		10	50	nA
C	Capacitance	f=1MHz, V _r =0.9V _b		0.38	0.5	pF
M _{max}	Maximum multiplication factor	$\lambda=1310\text{nm}, 1550\text{nm}$, I _{po} =2uA, V _r =V@I _d =1uA	25			
f _c	Cutoff frequency	M=10	2.0			GHz
	Temperature coefficient of V _b		0.09			V/°C
RL	Return loss	$\lambda=1310\text{nm}$	45			dB

Dimensions Diagram



This device is susceptible to damage as a result of electrostatic discharge (ESD). A static free environment is highly recommended. Follow guidelines according to proper ESD procedures



Order information

SPD2	X	X
	Package 1, (a) 2, (b) S, spec.	Connect 1, FC/APC 2, SC/APC

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