

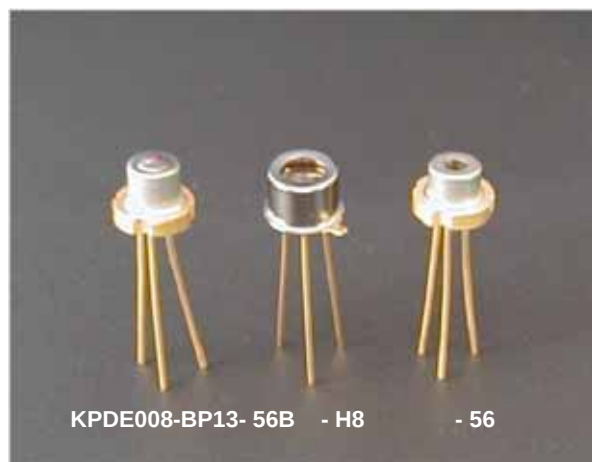
1.3μm Bandpass PD

Features

- Low capacitance and high speed with a PIN structure
- Low dark current
- Low voltage operation
- High reliability
- Pigtail type is available as an option

Applications

- FTTH, FTTB
- Digital and analog optical communication
- Optical LAN



Description

Reliable planar InGaAs photodiodes are packaged in hermetically sealed cans with an AR coated glass window or an AR coated ball lens. KPDE008-BP13 has the sensitive area of 80μm dia. and it can be efficiently coupled with a single and multi mode fiber through the ball lens cap. The pigtail type, KPDE008-BP13T is available with various industry - standard connectors.

Specifications

Absolute Maximum Ratings

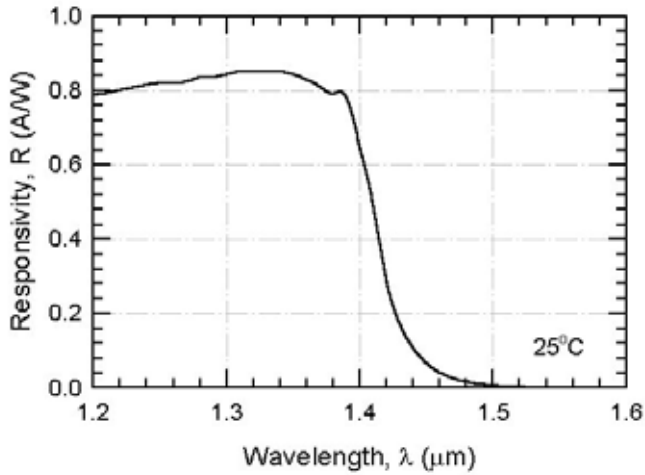
Parameter	Symbol	Value	Units
Reverse voltage	V_R	20	V
Maximum optical power input	P_{max}	10	mW
Forward current	I_F	10	mA
Operating ambient temperature	T_a	-40 to +85	
Storage temperature	T_{stg}	-40 to +85	

Characteristics ($V_R = 5V$, $T_a = 25^\circ C$ unless otherwise noted)

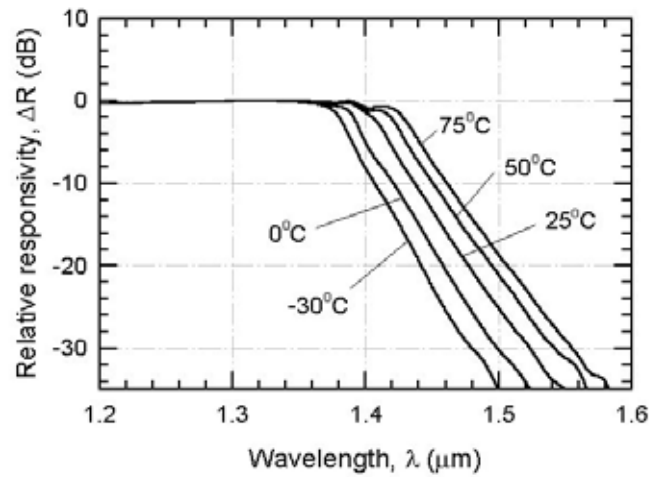
Parameter		Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Active diameter		D		80		μm	
Bandwidth		B		1.5		GHz	$P_{in} = -10dBm$, small signal modulation
Responsivity	@1310nm	R13	0.8			A/W	$T_a = -10$ to $+85^\circ C$
	@1550nm	R15			0.003	A/W	$T_a = -10$ to $+85^\circ C$
1550/1310 isolation ratio		R13/R15			-25	dB	$T_a = -10$ to $+85^\circ C$
Dark current		I_D		20	200	pA	
Total capacitance		C		1.3	1.9	pF	f=1MHz
Chip capacitance		C_{chip}		1.0	1.6	pF	f=1MHz
Responsivity uniformity		ΔR	-0.5		+0.2	dB	$\lambda = 1260-1360nm$ $T_a = -10$ to $+85^\circ C$

Specifications are subject to change without notice.

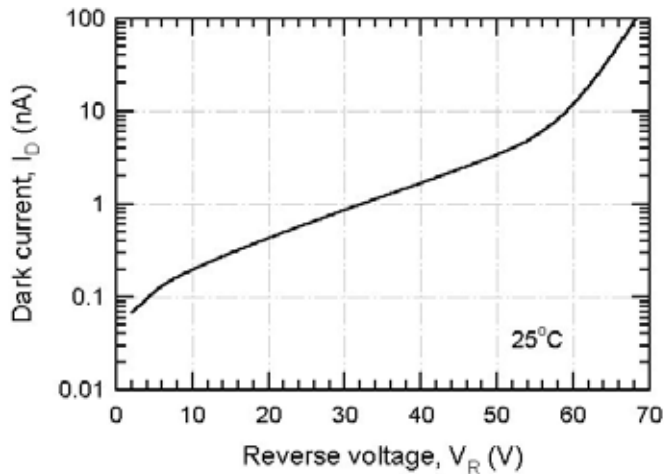
Spectral Responsivity



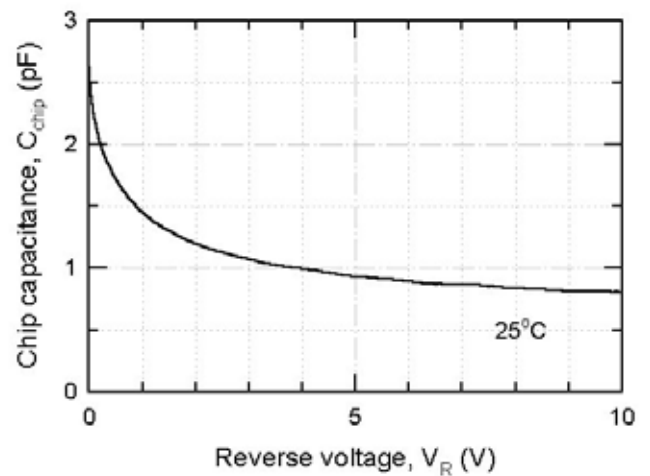
Isolation Ratio



I-V Characteristics



C-V Characteristics



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