

KP-M InGaAs Photodiodes for Monitoring KPDE020-H8

Characteristics

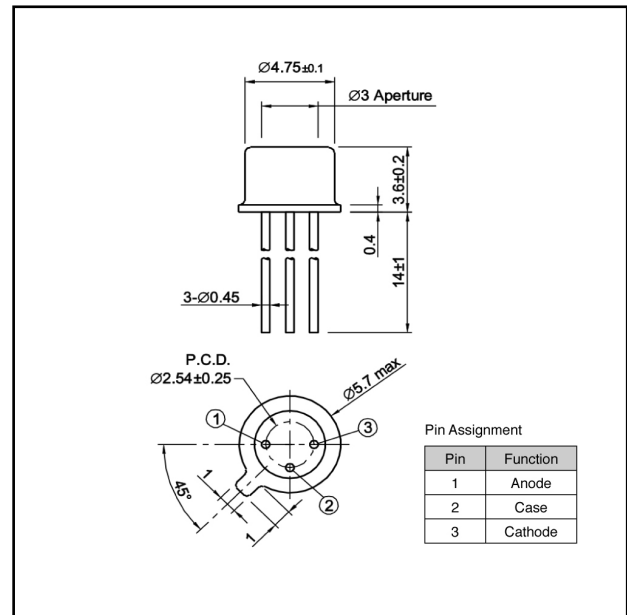
- Low dark current
- High reliability
- Pigtail type available as an Option

Applications

- Digital and analog optical communications
- Optical LAN
- OTDR

Package

- TO-CAN



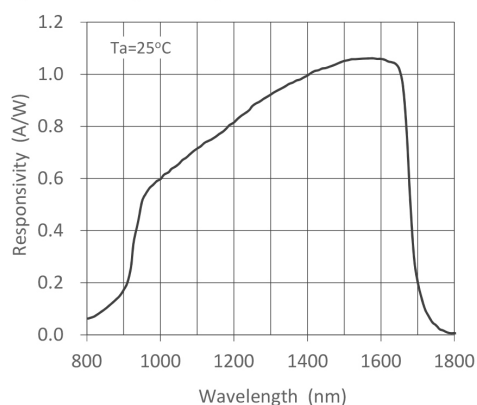
Absolute Maximum Ratings

Parameter	Symbol	Value	Unit	Conditions
Reverse voltage	V_R	20	V	-
Maximum optical power input	P_{imax}	20	mW	-
Forward current	I_F	50	mA	-
Operating temperature	T_{opr}	-40 to +85		Avoid dew condensation
Storage temperature	T_{stg}	-40 to +85		Avoid dew condensation

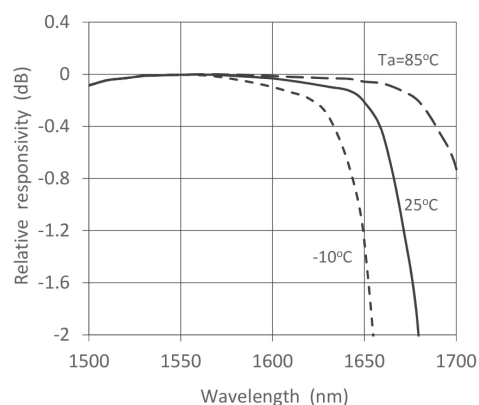
Electrical and Optical characteristics (Ta=25 unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Active area	S	-	200	-	μm	-
Sensitive wavelength		900	-	1700	nm	-
Bandwidth	BW	-	1	-	GHz	$P_i = -10\text{dBm}$ $V_R = 5\text{V}$ small signal modulation
Responsivity	R	0.8 0.9	0.9 1.0	-	A/W	$V_R = 5\text{V}$ $\lambda = 1310\text{nm}$ $V_R = 5\text{V}$ $\lambda = 1550\text{nm}$
Dark current	I_D	-	50	400	pA	$V_R = 5\text{V}$
Chip capacitance	C_{chip}	-	3	5	pF	$V_R = 5\text{V}$ $f = 1\text{MHz}$
Total capacitance	C_t	-	3.0	5	pF	$V_R = 5\text{V}$ $f = 1\text{MHz}$
Responsivity uniformity	R	-	-	0.5	dB	$\lambda = 1530\text{-}1610\text{nm}$ $T_{opr} = -10$ to $+85$

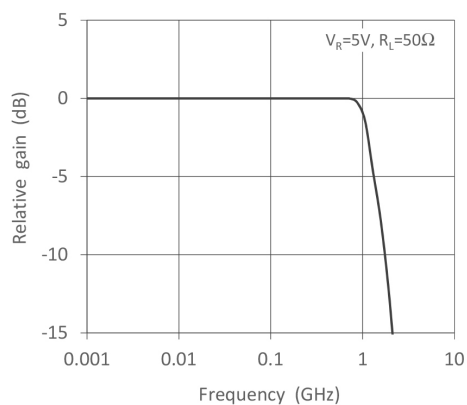
Spectral Responsivity



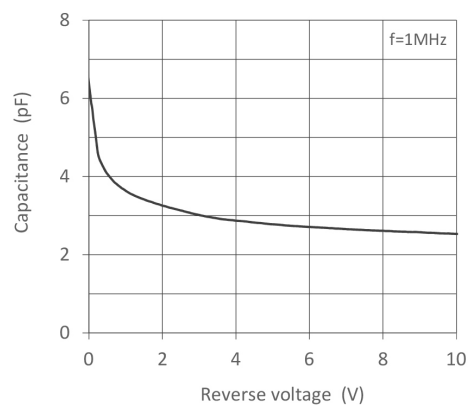
Uniformity of Spectral Responsivity



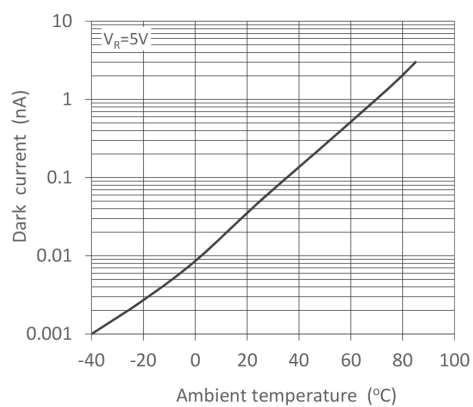
Frequency Response



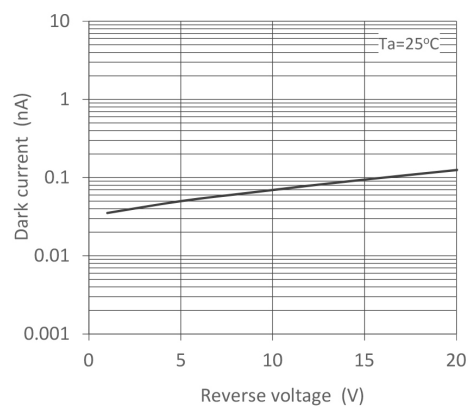
Capacitance - Reverse Voltage



Dark Current - Ambient Temperature



Dark Current - Reverse Voltage



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