

## KP-M InGaAs Photodiodes for Monitoring KPDE008S-TU

### Characteristics

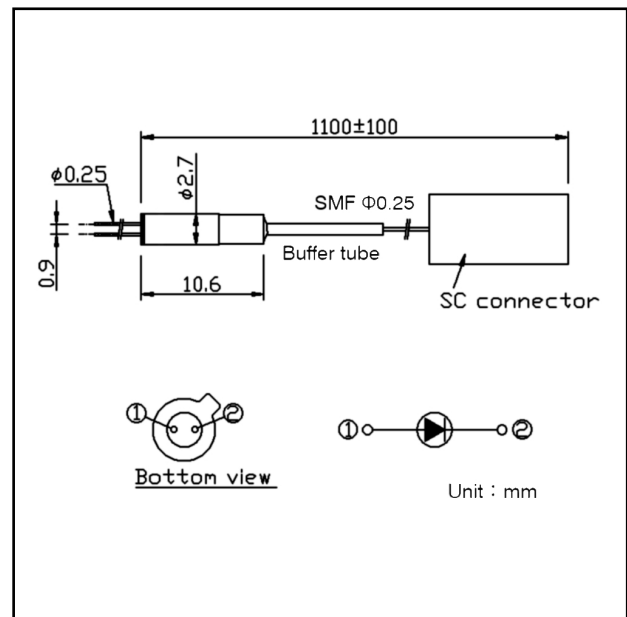
- High density packaging of multiple PD channels
- Low capacitance and high speed with a PIN structure
- Low dark current
- High reliability

### Applications

- Optical power monitor for WDM
- DWDM system
- Digital optical communications

### Package

- PIGTAIL



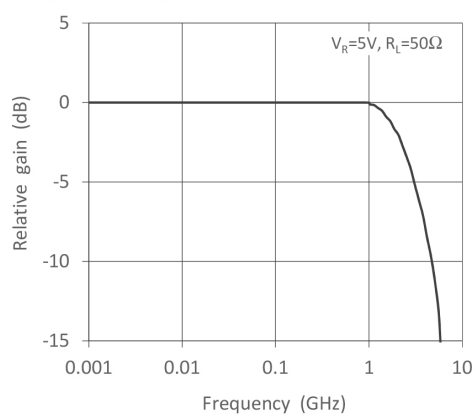
## Absolute Maximum Ratings

Parameter	Symbol	Value	Unit	Conditions
Reverse voltage	$V_R$	20	V	-
Maximum optical power input	$P_{imax}$	10	mW	-
Forward current	$I_F$	10	mA	-
Operating temperature	$T_{opr}$	-40 to +85		Avoid dew condensation
Storage temperature	$T_{stg}$	-40 to +85		Avoid dew condensation

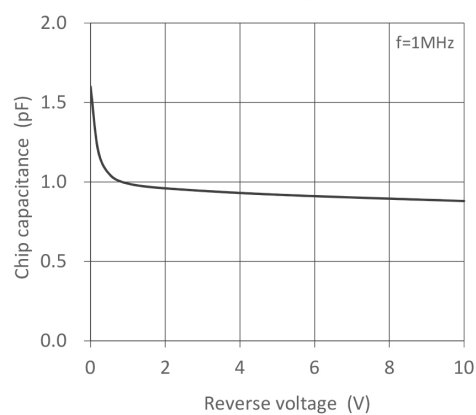
## Electrical and Optical characteristics (Ta=25 unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Active area	S	-	80	-	$\mu\text{m}$	-
Sensitive wavelength		900	-	1700	nm	-
Bandwidth	BW	1	2	-	GHz	$P_i = -10\text{dBm}$ $V_R = 5\text{V}$ small signal modulation
Responsivity	R	0.80 0.85	0.85 0.98	-	A/W	$V_R = 5\text{V}$ $\lambda = 1310\text{nm}$ $V_R = 5\text{V}$ $\lambda = 1550\text{nm}$
Dark current	$I_D$	-	30	160	pA	$V_R = 5\text{V}$
Total capacitance	$C_t$	-	0.91	1.1	pF	$V_R = 5\text{V}$ $f = 1\text{MHz}$

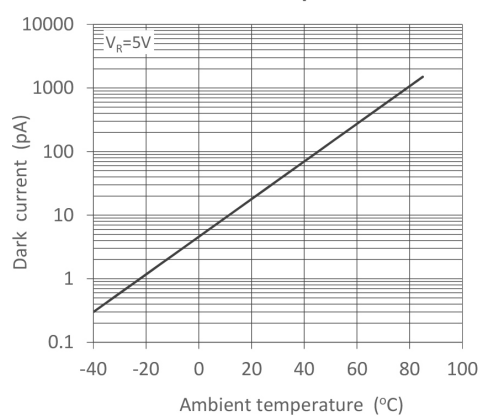
Frequency Response



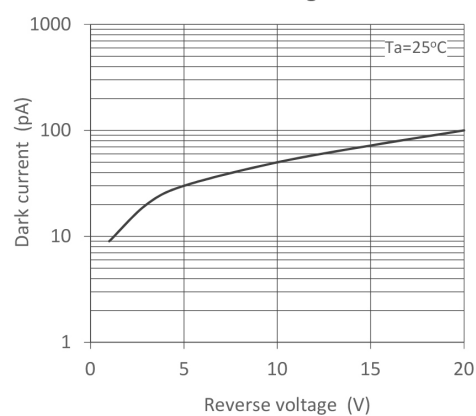
Capacitance - Reverse Voltage



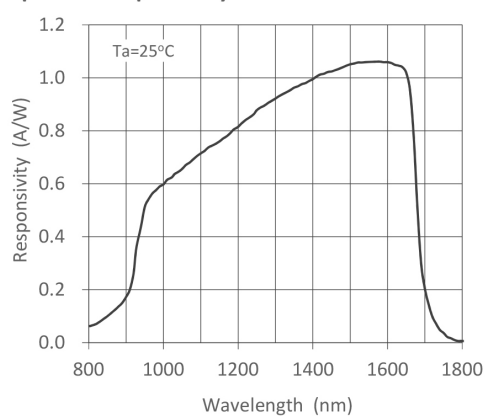
Dark Current - Ambient Temperature



Dark Current - Reverse Voltage



Spectral Responsivity



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