

Si Photodiodes

KPD31S

Characteristics

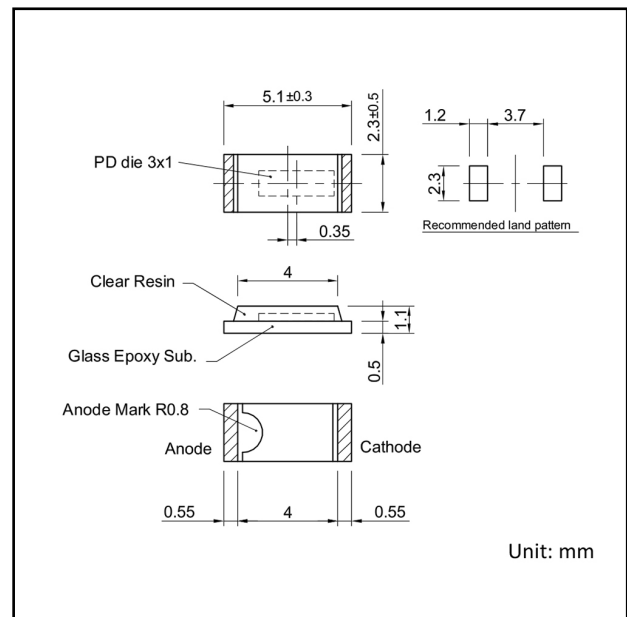
- Transparent epoxy mold
- High sensitivity
- SMD package

Applications

- Optical switches
- Optical encoders
- Pulse detectors
- Sensors and industrial controls

Package

- SMD



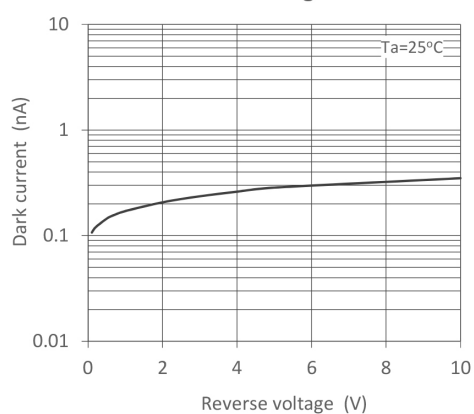
Absolute Maximum Ratings

Parameter	Symbol	Value	Unit	Conditions
Reverse voltage	V_R	10	V	-
			null	
Reverse Current	I_R	3	mA	-
			null	
Operating temperature	T_{opr}	-25 to +80		Avoid dew condensation
Storage temperature	T_{stg}	-25 to +85		Avoid dew condensation
Soldering temperature	T_{sol}	260		Soldering time less than 3 seconds

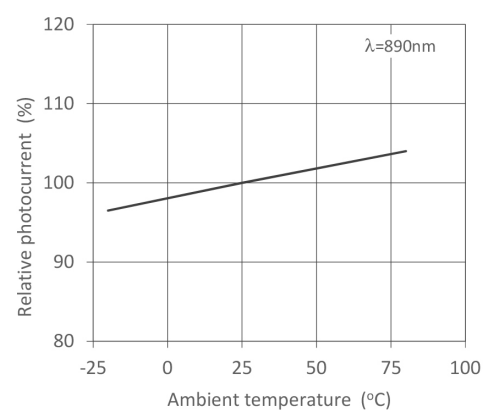
Electrical and Optical characteristics (Ta=25 unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Active area	S	-	2.80x0.80	-	mm ²	-
					null	
Sensitive wavelength		400	950(p)	1100	nm	p=Peak wavelength
					null	
Open circuit voltage	V_{op}	-	350	-	mV	1000lx @2856k
Short Circuit Current	I_{sh}	-	22	-	μA	1000lx @2856k
Dark current	I_D	-	-	10	nA	$V_R=5V$
					null	
Terminal capacitance	C_t	-	7	-	pF	$V_R=5V$ f=1MHz
					null	

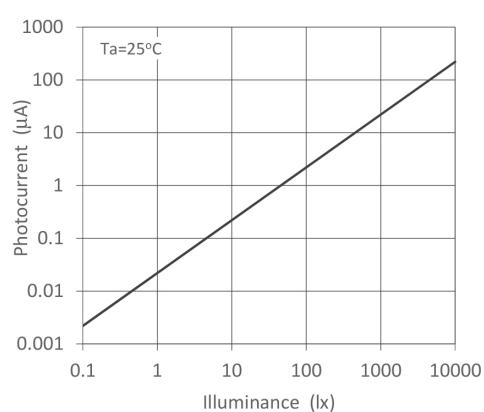
Dark Current - Reverse Voltage



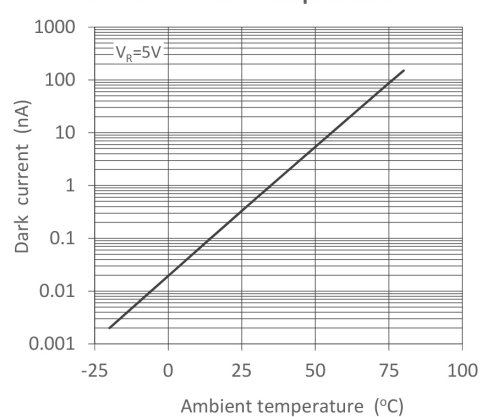
Photocurrent - Ambient Temperature



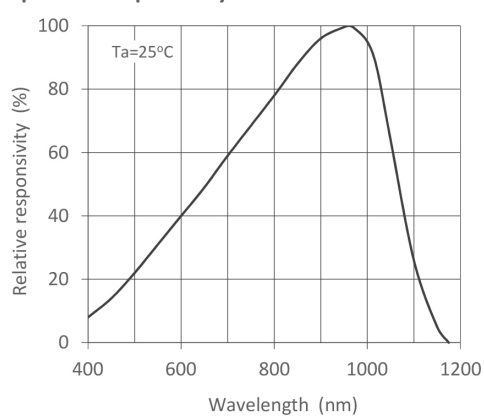
Photocurrent - Illuminance



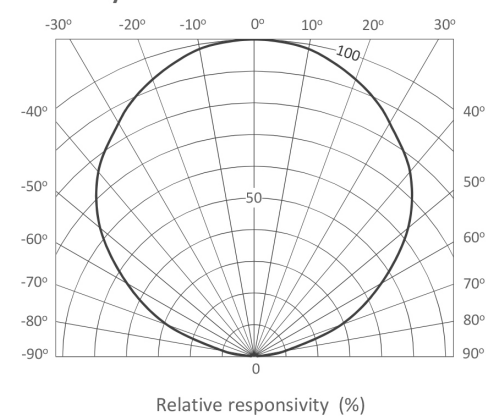
Dark Current - Ambient Temperature



Spectral Responsivity



Directivity



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