

# Si Photodiode

# KPD31S

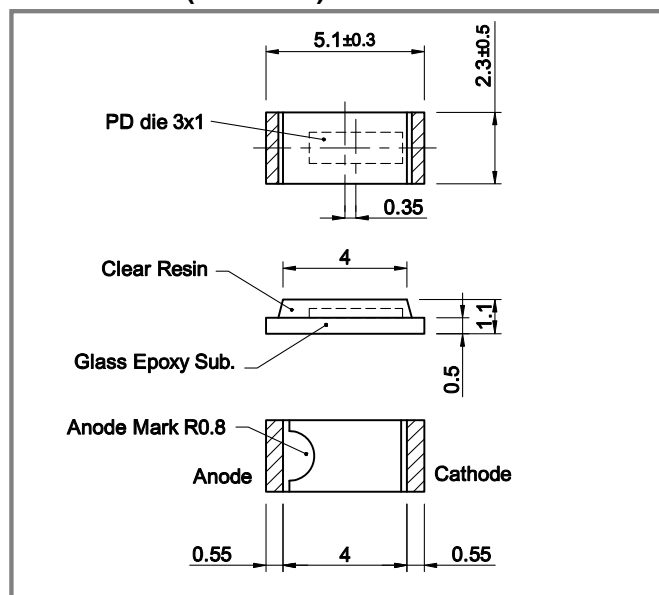
### Features

- Transparent epoxy mold
- High sensitivity

### Applications

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

### Dimensions (unit: mm)



### Absolute Maximum Ratings

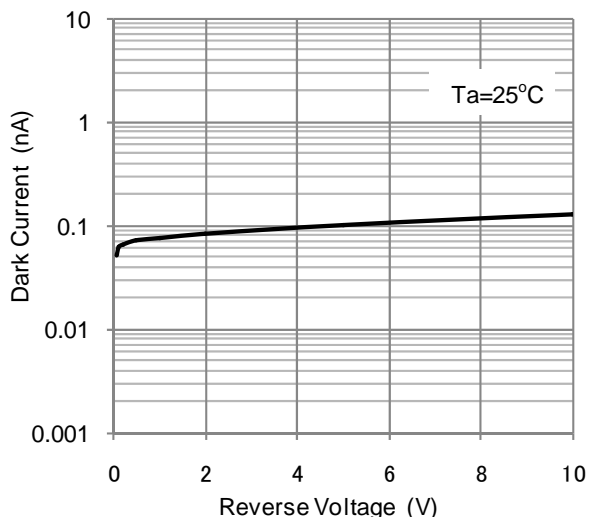
Parameter	Symbol	Value	Unit	Note
Reverse voltage	$V_R$	10	V	
Forward current	$I_F$	3	mA	
Operating temperature	$T_{opr}$	-25 to +80	°C	Avoid dew condensation
Storage temperature	$T_{stg}$	-25 to +85	°C	Avoid dew condensation
Soldering Temperature	$T_{sol}$	260	°C	5sec max

### Electrical and Optical Characteristics (Ta=25 °C unless otherwise noted)

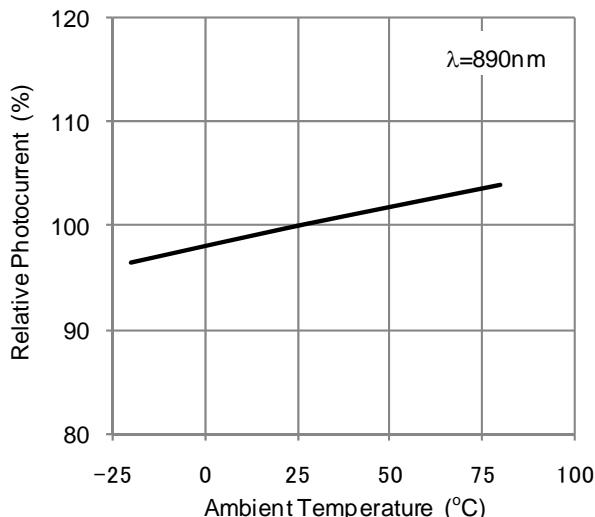
Parameter	Symbol	Min.	Typ.	Max	Unit	Test Conditions
Active area	S	2.8 x 0.8			mm <sup>2</sup>	
Operating voltage	$V_{opr}$	-	-	5	V	
Sensitive wavelength	$\lambda$	400	950( $\lambda_p$ )	1000	nm	$\lambda_p$ =Peak wavelength
Open circuit voltage	$V_{op}$	-	350	-	mV	1000lx @2856K
Short circuit current	$I_{sh}$	-	22	-	$\mu$ A	1000lx @2856K
Dark current	$I_D$	-	-	10	nA	$V_R=5V$
Terminal capacitance	$C_t$	-	7	-	pF	$V_R=5V, f=1MHz$

Specifications are subject to change without notice.

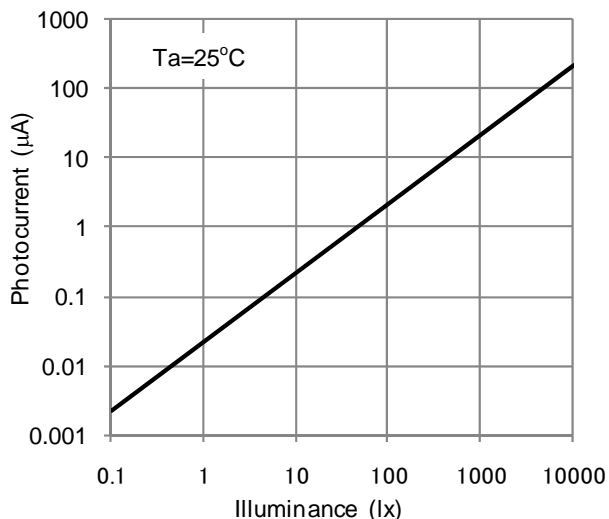
**Dark Current - Reverse Voltage**



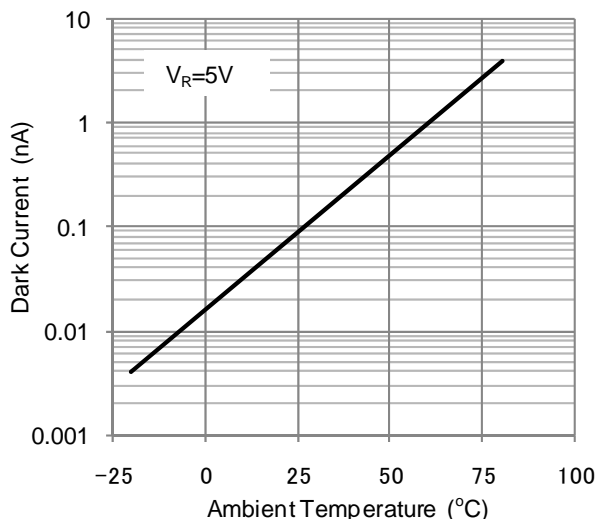
**Photocurrent - Ambient Temperature**



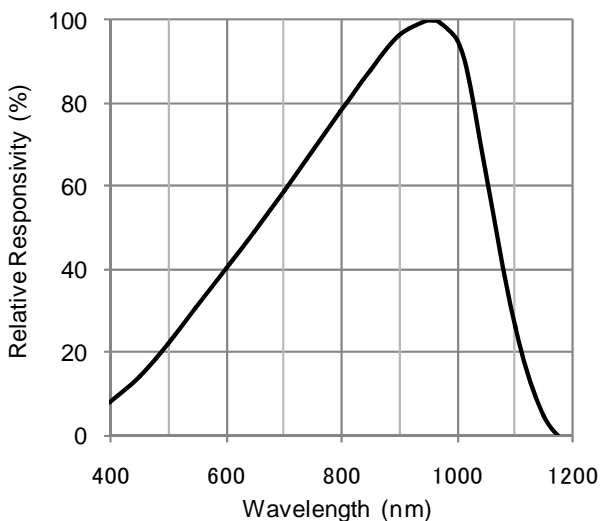
**Photocurrent - Illuminance**



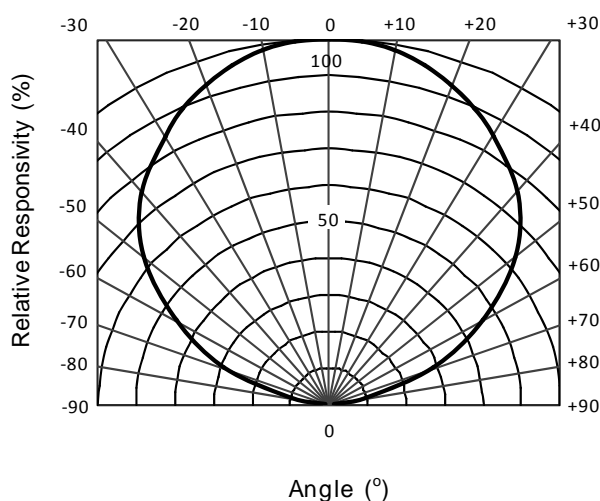
**Dark Current - Ambient Temperature**



**Spectral Responsivity**



**Directivity**



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**Contacts:**

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