

Single-wavelength Reflective sensor

KPR16S6

This is a SWIR type reflective sensor that incorporates an InGaAsP LED and an InGaAs photodiode in a small package.

Characteristics

- Reflective sensor using wavelengths of SWIR
- Small SMD package

Applications

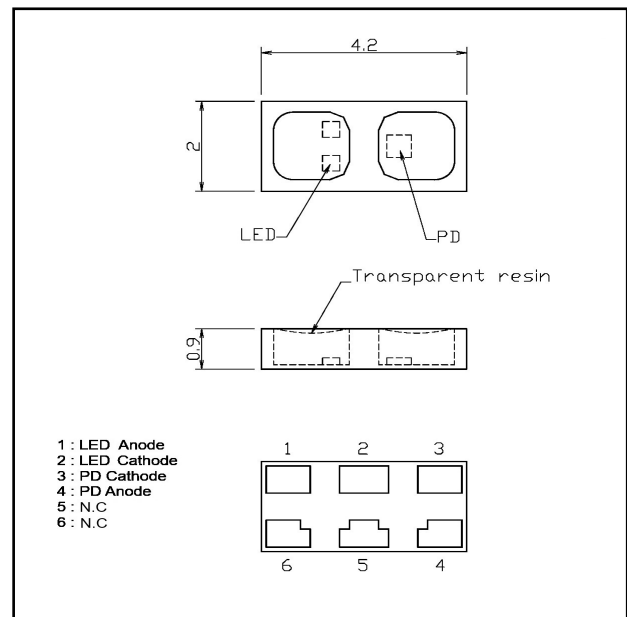
- Moisture detection
- Component analysis
- Gas detection
- Optical sensor
- Proximity sensor

Chip Material

- InGaAsP/InGaAs

Package

- SMD



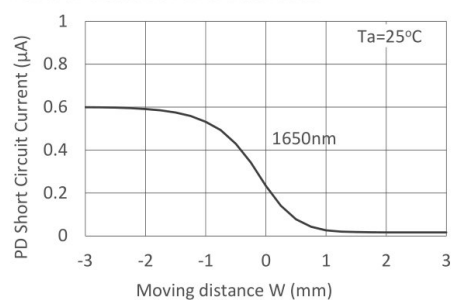
Absolute Maximum Ratings

Parameter	Symbol	Value	Unit	Conditions
LED Reverse voltage	V_R	5	V	-
PD Reverse voltage	V_R	20	V	-
Forward current	I_F	50	mA	-
Operating temperature	T_{opr}	-20 to +80		Avoid dew condensation
Storage temperature	T_{stg}	-25 to +100		Avoid dew condensation
Soldering temperature	T_{sol}	235		peak temperature

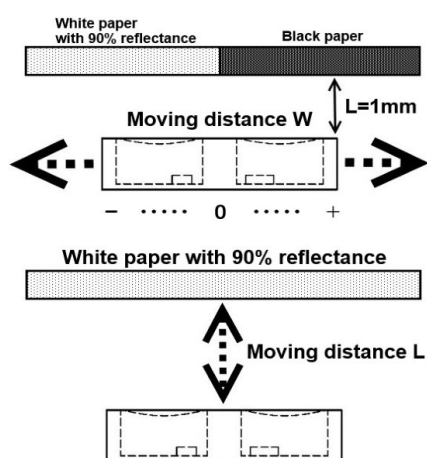
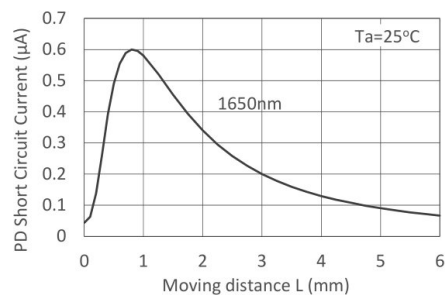
Electrical and Optical characteristics $T_a=25$ unless otherwise noted

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Reverse Current	I_R	-	-	10	μA	$V_R=1V$
Forward voltage	V_F	-	0.65	1.25	V	$I_F=20mA$
Peak wavelength	λ_p	-	1650	-	nm	$I_F=20mA$
Spectral width		-	100	-	nm	$I_F=20mA$
Sensitive size	D	-	300	-	μm	-
Short circuit current	I_{SH}	-	0.6	-	μA	$I_F=20mA$, $L=1mm$
Dark current	I_D	-	-	10	nA	$V_R=5V$

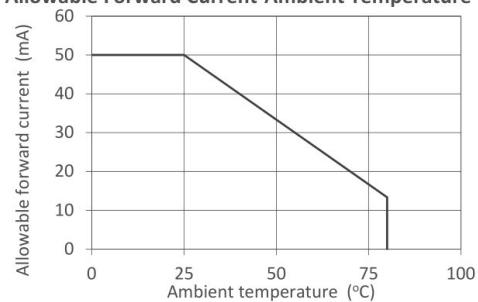
Position detection characteristics



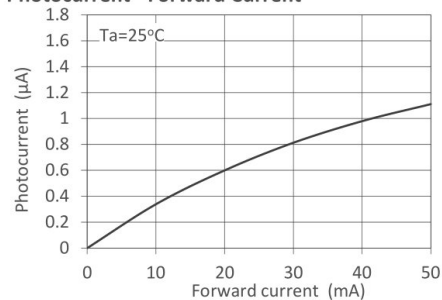
Position detection characteristics



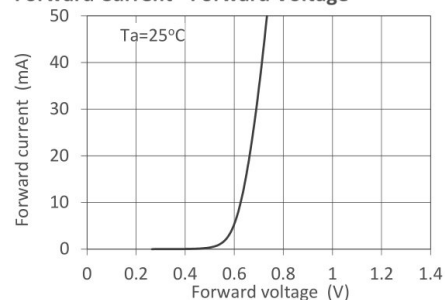
Allowable Forward Current-Ambient Temperature



Photocurrent - Forward Current



Forward Current - Forward Voltage



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