

Photo Interrupters(Reflective)

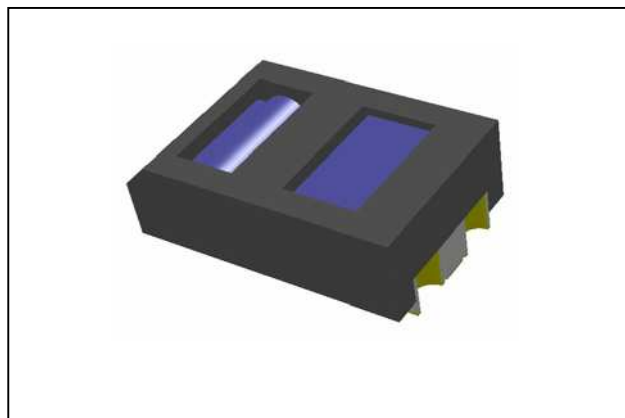
KPI-3020R

Description

KPI-3020R is a very small reflect type of photo interrupter that has phototransistor output, thin and mini-size photo surface mount type of package.

Features

- Miniature Leadfree Surface Mount Package
- Reflective with Phototransistor Output
- Reflow Soldering
- Optical Sensing Distance : 1.0mm
- RoHS compliant and Lead free package

**Applications**

- Limit Switch for linear drive system
- Edge Sensor
- Digital Camera Module
- AF Camera Phone Module
- Detection of object presence or motion.

Absolute Maximum Ratings

(Ta=25°C)

Parameter		Symbol	Rating	Unit
Input	Forward current	I_F	50	mA
	Reverse voltage	V_R	5	V
	Power dissipation	P_D	75	mW
Output	Collector-emitter voltage	V_{CEO}	30	V
	Emitter-collector voltage	V_{ECO}	5	V
	Collector current	I_C	20	mA
	Collector power dissipation	P_C	50	mW
Total power dissipation		P_{tot}	100	mW
Operating temperature		T_{opr}	-20 to+85	°C
Soldering temperature *1		T_{sol}	260	°C

*1. For 5sec or less

The contents of this data sheet are subject to change without advance notice for the purpose of improvement.
When using this product, would you please refer to the latest specifications.

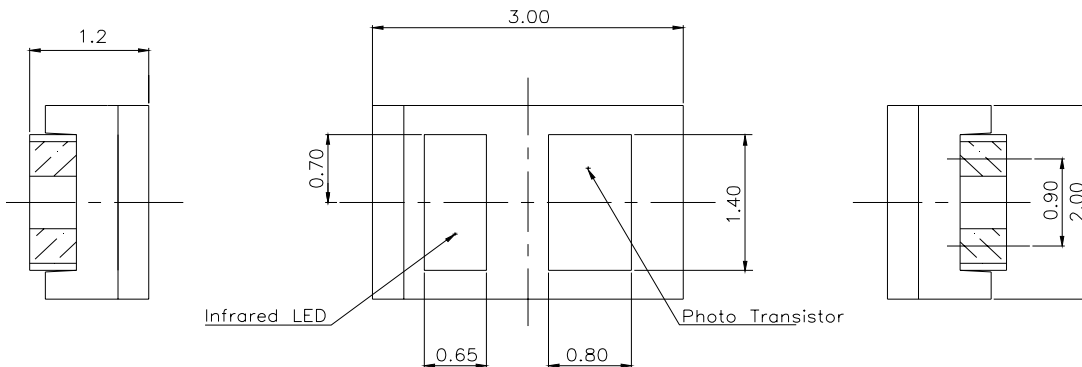
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Electrical Characteristics

(Ta=25)

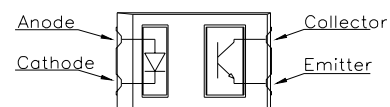
Parameter		Symbol	Conditions	Min.	Typ.	Max.	Unit	
Input	Forward voltage	I_F	$I_F=20\text{mA}$	-	1.2	1.4	V	
	Reverse current	I_R	$V_R=5\text{V}$	-	-	10	μA	
	Peak wavelength	λ_p	-	-	940	-	nm	
Output	Collector dark current	I_{CEO}	$V_{CE}=10\text{V}$	-	1	100	nA	
Transfer Characteristic	Collector current	I_C	$I_F=4\text{mA}, V_{CE}=2\text{V}$	100	380	750	μA	
	Leakage current	I_{LEAK}	$I_F=4\text{mA}, V_{CE}=2\text{V}$	-	-	20	μA	
	Response time	Rise time	t_r	$V_{CE}=2\text{V}, I_C=100\mu\text{A}$ $R_L=1\text{K}, d=1\text{mm}$	-	30	100	μA
		Fall time	t_f		-	25	100	μs

Package Outline Dimensions



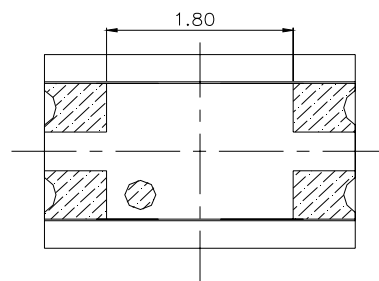
NOTE :

1. Internal Connection Diagram (TOP View)



2. Au Plating Area

3. General Tolerance : ± 0.1
(Perfect Outline Dimension)



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