

KR1228

Description

Model **KR1228** has a Red LED and a Photo transistor with non-sphere lens on emitter and detector. This model can be installed on P.C.B.

Feature

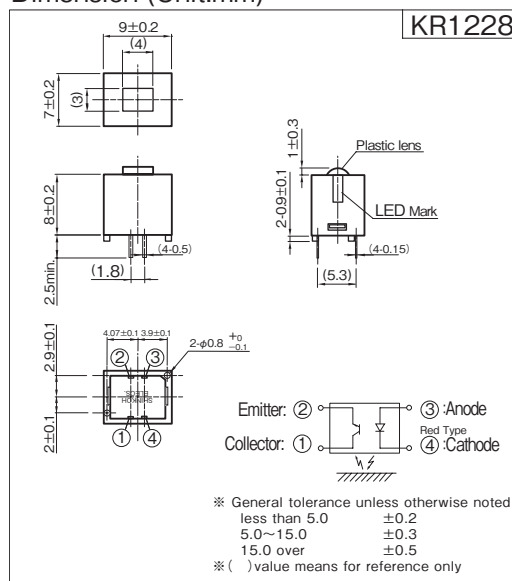
- High resolution-0.25mm(STD.) at d=4.9mm.
- Low Cost.
- Compact Package.
- Installed on PC board.
- Other beam type; Point Spot type ... **KR1226, KR1227**
Bar-line Spot type ... **KR1229**

Application

- Bar-code Reader.
- Paper edge detection.
- Mark sensor of OMR and OCR.

Bar-line Spot • Red LED Type

Dimension (Unit:mm)



Absolute Maximum Ratings

[Ta=25°C Unless otherwise noted]

Item	Symbol	Rating	Units
Emitter	Forward Current	I _F	30 mA
	Reverse Voltage	V _R	5 V
	Power Dissipation	P	75 mW
Detector	Collector-Emitter Voltage	V _{CEO}	20 V
	Emitter-Collector Voltage	V _{ECO}	5 V
	Collector Current	I _C	20 mA
	Power Dissipation	P _C	75 mW
Operating Temperature	T _{opr}	-10 ~ +65	°C
Storage Temperature	T _{stg}	-20 ~ +75	°C
Soldering Temperature ^{※1}	T _{sol}	260	°C

- ※ 1. Soldering condition 5sec. At 1mm over from body.
- ※ 2. 90% Reflective paper d=4.9mm
- ※ 3. No Object, in Dark

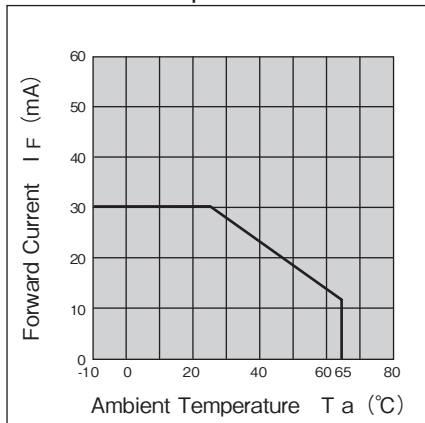
Electro-Optical Characteristics [Ta=25°C Unless otherwise noted]

Item	Symbol	Condition	min.	typ.	max.	Units
Emitter	Forward Voltage	I _F =20mA	—	1.8	2.2	V
	Reverse Current	V _R =5V	—	—	10	μ A
	Peak Wavelength	I _F =20mA	—	660	—	nm
Detector	Dark Current	V _{CE} =20V, 0 lux	—	1	200	n A
Coupled	Light Current ^{※2}	V _{CE} =5V, I _F =20mA	13	30	—	μ A
	Leak Current ^{※3}	V _{CE} =5V, I _F =20mA	—	—	5	μ A
	Response Time	V _{CC} =5V, I _C =20 μ A, R _L =1k Ω , d=4.9mm	—	110	—	μ sec
			—	210	—	μ sec

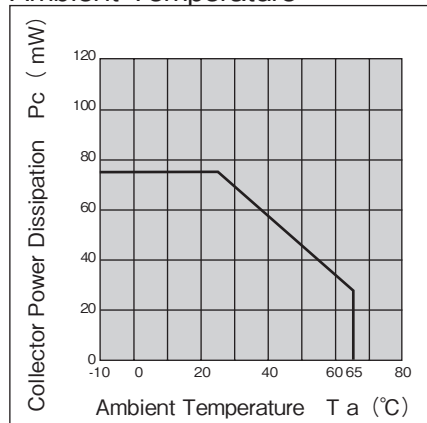
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Note: Operation never exceeds each value of Absolute Maximum Ratings.

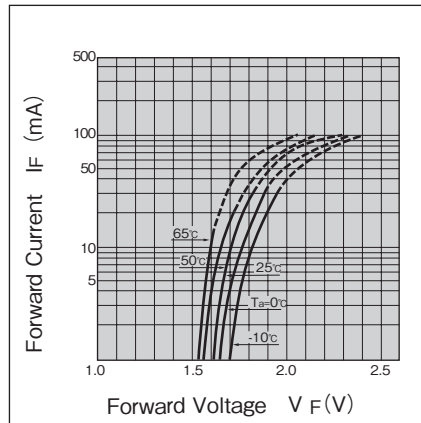
Forward Current vs. Ambient Temperature



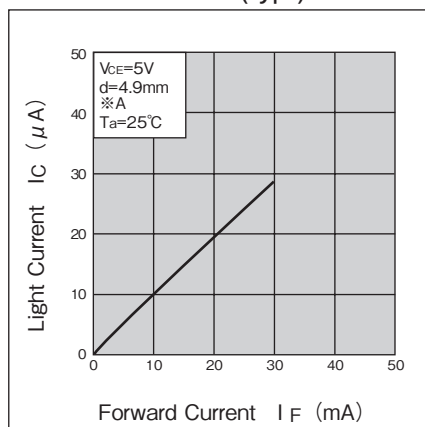
Collector Power Dissipation vs. Ambient Temperature



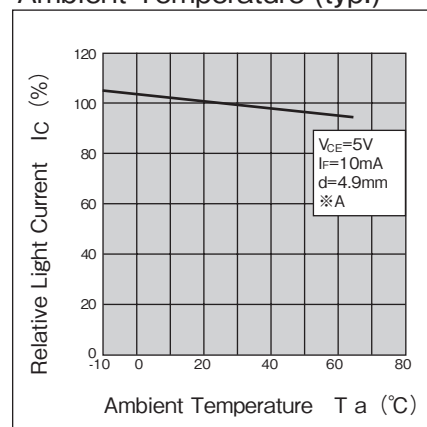
Forward Current vs. Forward Voltage (typ.)



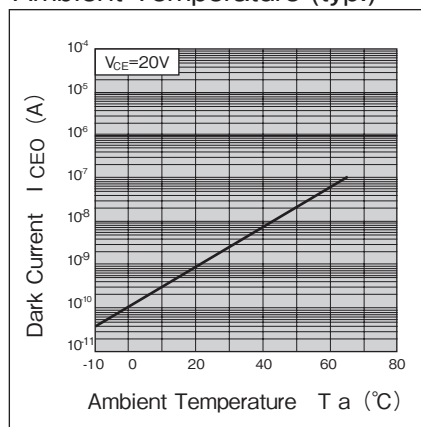
Light Current vs. Forward Current (typ.)



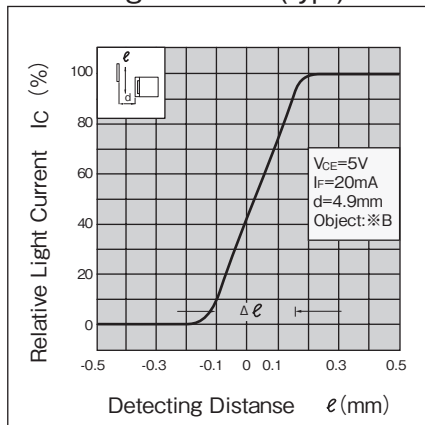
Relative Light Current vs. Ambient Temperature (typ.)



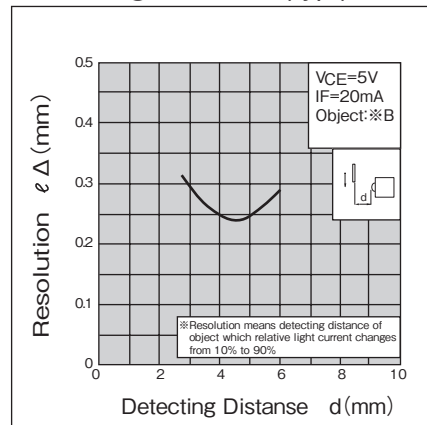
Dark Current vs. Ambient Temperature (typ.)



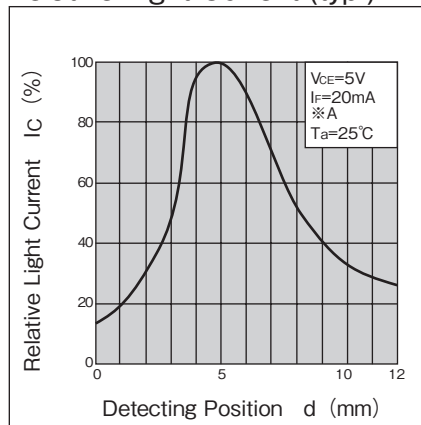
Response At Edge vs. Detecting Distance (typ.)



Resolution vs. Detecting Distance (typ.)



Detecting Position vs. Relative Light Current (typ.)



※A 90% Reflective Paper
 ※B Al Evaporation Mirror

- A Custom designed package is available on request.
- Specification are subject to change without notice.

04.09-1A

shinkoh electronics co., ltd.

Head Office: 3-16-9, Minami-Kamonomiya, Odawara, Kanagawa
 Zip code: 250-0875 Japan
 Tel: +81 -465-45-1212 / Fax: +81 -465-45-1213
 Tokyo Office: 5F, Ebuchi Bldg., 3-24-13, Minami-Ohi, Shinagawa,
 Tokyo
 Website: <http://www.shinkoh-elecs.com/>