

KR1229

Description

Model **KR1229** has a Infra Red LED and a Photo transistor with non-sphere lens on emitter and detector. This model can be installed on P.C.B.

Feature

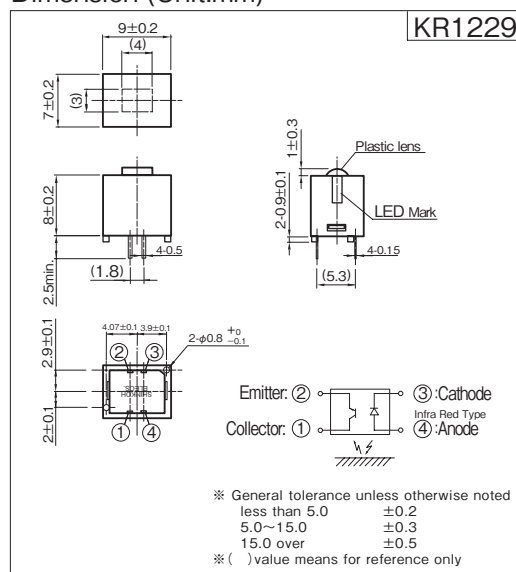
- High resolution-0.25mm(STD.) at d=5.1mm.
- Low Cost.
- Compact Package.
- Installed on PC board.
- Other beam type; Point Spot type ··· **KR1226, KR1227**
Bar-line Spot type ··· **KR1228**

Application

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

Bar-line Spot · Infra Red LED Type

Dimension (Unit:mm)



Absolute Maximum Ratings

[Ta=25°C Unless otherwise noted]

Item		Symbol	Rating	Units
Emitter	Forward Current	I _F	40	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=5.1mm
 ※ 3. No Object, in Dark

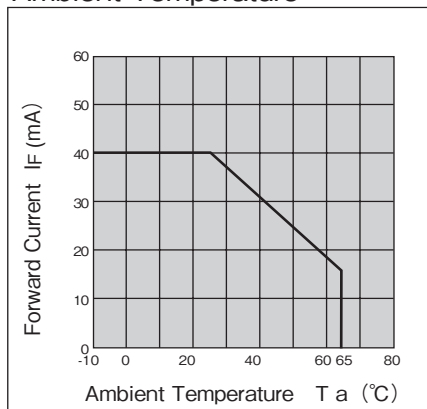
Electro-Optical Characteristics [Ta=25°C Unless otherwise noted]

Item		Symbol	Condition	min.	typ.	max.	Units
Emitter	Forward Voltage	V _F	I _F =20mA	—	1.3	1.5	V
	Reverse Current	I _R	V _R =5V	—	—	10	μA
	Peak Wavelength	λ _p	I _F =20mA	—	890	—	nm
Detector	Dark Current	I _{CEO}	V _{CE} =20V, 0 lux	—	1	200	nA
Coupled	Light Current※2	I _C	V _{CE} =5V, I _F =20mA	13	30	—	μA
	Leak Current※3	I _{LEAK}	V _{CE} =5V, I _F =20mA	—	—	5	μA
	Response Time	Rise	V _{CC} =5V, I _C =25 μA, R _L =1k Ω, d=5.1mm	—	90	—	μsec
		Fall		—	140	—	μsec

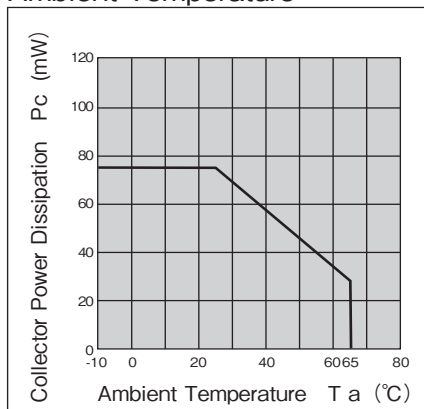
KR1229

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

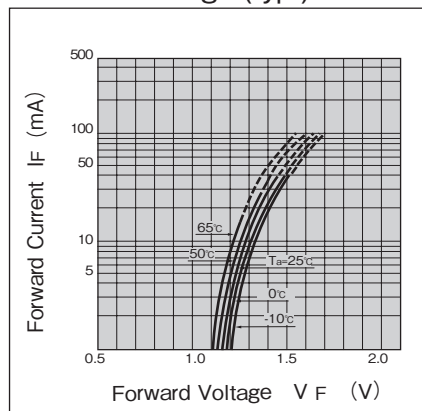
Forward Current vs.
Ambient Temperature



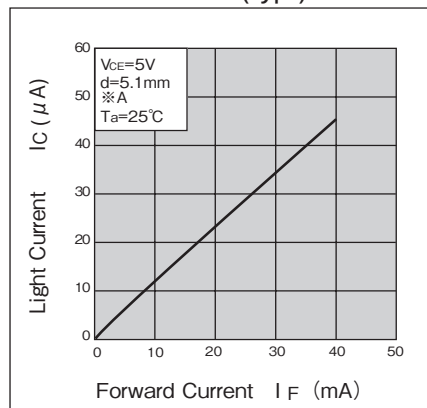
Collector Power Dissipation vs.
Ambient Temperature



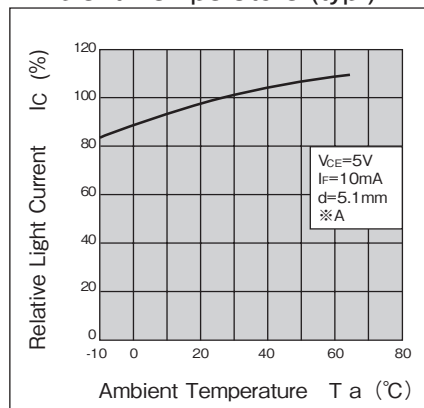
Forward Current vs.
Forward Voltage (typ.)



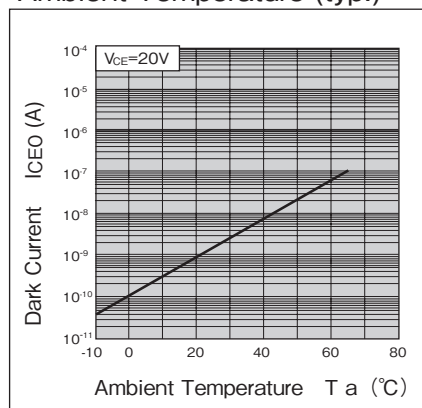
Light Current vs.
Forward Current (typ.)



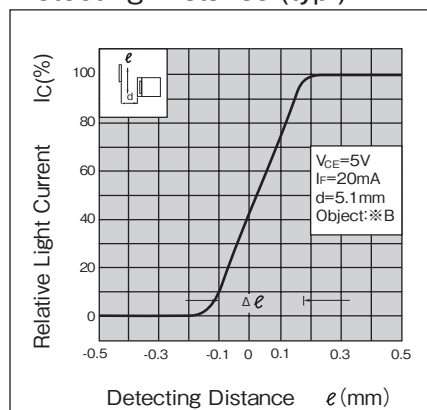
Relative Light Current vs.
Ambient Temperature (typ.)



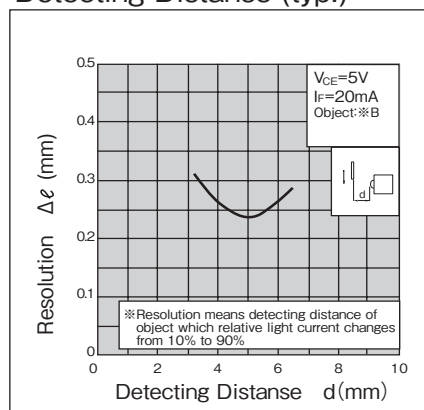
Dark Current vs.
Ambient Temperature (typ.)



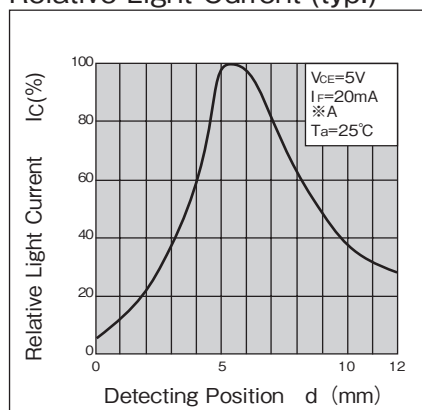
Response at Edge vs.
Detecting Distance (typ.)



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/>