

KR1201

Description

Model **KR1201** has an Infra Red LED and a Photo transistor reflection Photo sensor.

Feature

- Cylindrical lens.
- Custom model is available in;
 - Light Current(Ic)
 - Visible Light cut filter.
- Installed on PC board.
- The other model; Connector type ... **KR651**
- Paper dust proof.

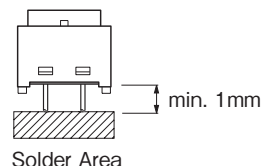
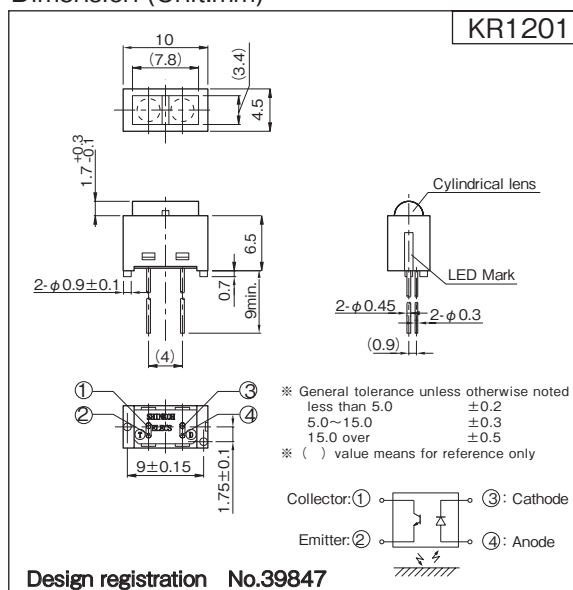
Application

- Paper absence and Paper edge detection on Printer.
- Paper detection/Size detection in Copying machine and Facsimile.
- Mark sensor of OMR and OCR.
- Scanning for Color-discrimination and Pattern.

Absolute Maximum Ratings
[Ta=25°C Unless otherwise noted]

Item		Symbol	Rating	Units
Emitter	Forward Current	I _F	50	mA
	Pulse Forward Current ^{※1}	I _{FP}	1	A
	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
	Collector Power Dissipation	P _C	75	mW
Operating Temperature		T _{opr}	-20 ~ +85	°C
Storage Temperature		T _{stg}	-30 ~ +85	°C
Soldering Temperature ^{※2}		T _{sol}	260	°C

Dimension (Unit:mm)



- ※ 1. Pulse width $t_w \leq 100 \mu \text{ sec}$ Duty ratio=0.01
- ※ 2. Soldering condition 5sec. At 1mm over from body.
- ※ 3. 90% reflective paper d=4mm
- ※ 4. No Object, in Dark

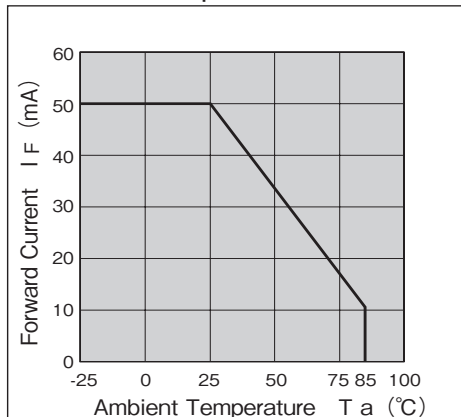
Electro-Optical Characteristics [Ta=25°C Unless otherwise noted]

Item		Symbol	Condition	min.	typ.	max.	Units
Emitter	Forward Voltage	V _F	I _F =20mA	—	1.2	1.5	V
	Reverse Current	I _R	V _R =5V	—	—	10	μ A
	Peak Wavelength	λ _p	I _F =20mA	—	940	—	nm
Detector	Dark Current	I _{CEO}	V _{CE} =20V, 0 lux	—	1	200	n A
Coupled	Light Current ^{※3}	I _C	V _{CE} =5V, I _F =20mA	200	700	—	μ A
	Leak Current ^{※4}	I _{LEAK}	V _{CE} =5V, I _F =20mA	—	—	50	μ A
	Response Time	Rise	V _{CC} =5V, I _C =200 μ A, R _L =1k Ω , d=4mm	—	30	—	μ sec
		Fall		—	35	—	μ sec

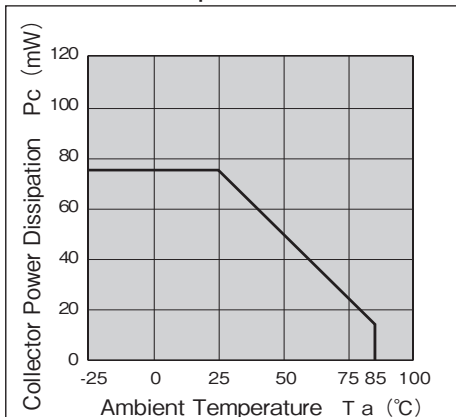
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Note: Operation never exceeds each value of Absolute Maximum Ratings.

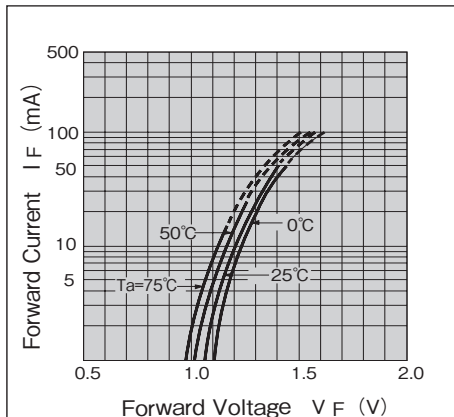
Forward Current vs. Ambient Temperature



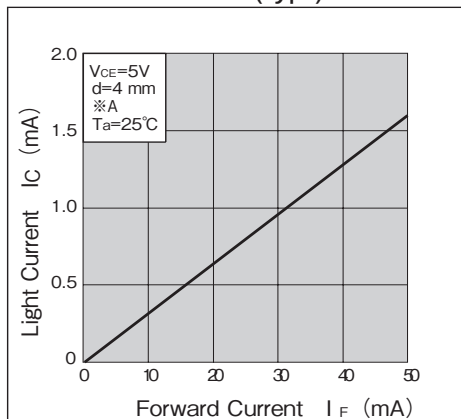
Collector Power Dissipation vs. Ambient Temperature



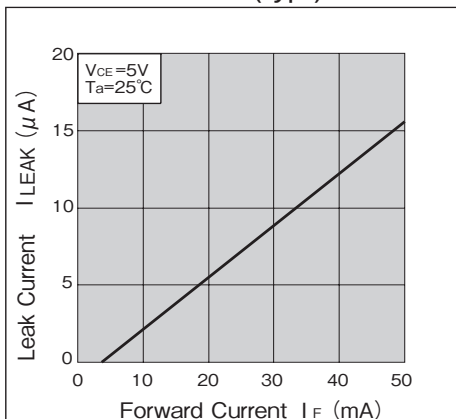
Forward Current vs. Forward Voltage (typ.)



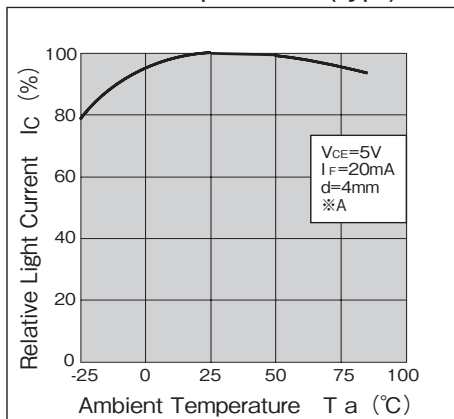
Light Current vs. Forward Current (typ.)



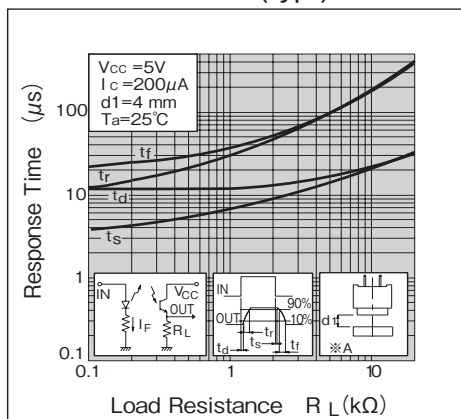
Leak Current vs. Forward Current (typ.)



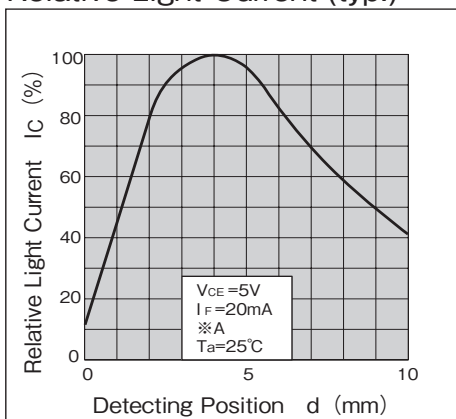
Relative Light Current vs. Ambient Temperature (typ.)



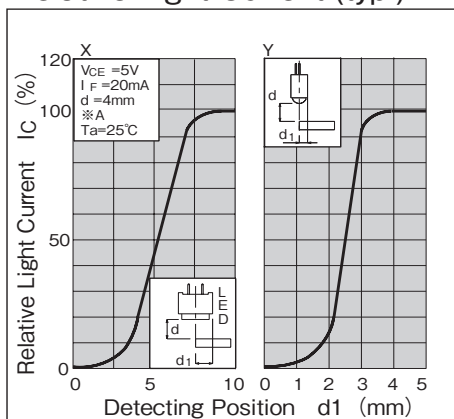
Response Time vs. Load Resistance (typ.)



Detecting Position vs. Relative Light Current (typ.)



Detecting Position vs. Relative Light Current (typ.)



※A 90% Reflective Paper

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

04.09-1A



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