

KR640,641

Description

Model **KR640/641** consists of an Infra Red LED and a Phototransistor and Model **KR641** type has one piece seamless plastic housing.

Feature

- For paper dust: Visible Light cut filter.(**KR641**)
- Long focus range.(5mm)
- The other model;
Photo IC out put type ... **KR642, KR643**

Application

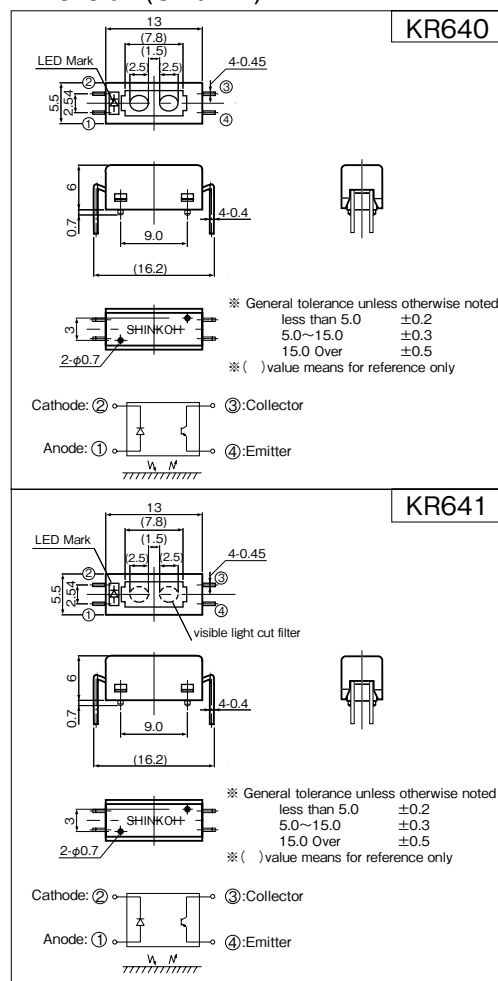
- Paper detection/Timing detection in Copying machine, Printer, and Facsimile.
- Object passing in Auto vender and Ticket vending machine.

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	4	V
Detector	Collector-Emitter Voltage	V_{CEO}	30	V
	Collector Current	I_C	20	mA
	Power Dissipation	P_C	75	mW
Operating Temperature		T_{opr}	-25 ~ +85	°C
Storage Temperature		T_{stg}	-40 ~ +85	°C
Soldering Temperature*2		T_{sol}	260	°C

Dimension (Unit:mm)



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

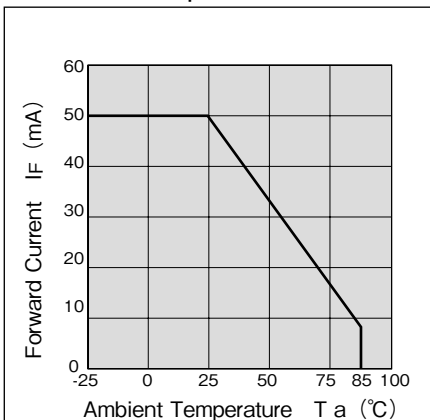
Electro-Optical Characteristics [Ta=25°C Unless otherwise noted] () means values of **KR641**

Item		Symbol	Condition	min.	typ.	max.	Units
Emitter	Forward Voltage	V_F	$I_F=20mA$	—	1.2	1.5	V
	Reverse Current	I_R	$V_R=3V$	—	—	10	μA
Detector	Dark Current	I_{CEO}	$V_{CE}=20V, 0 \text{ lux}$	—	—	200	n A
Coupled	Light Current*3	I_C	$V_{CE}=5V, I_F=20mA$	100(70)	—	—	μA
	Leak Current*4	I_{LEAK}	$V_{CE}=5V, I_F=20mA$	—	—	1(1.5)	μA
	Response Time	Rise	$V_{CC}=5V, I_C=100 \mu A, R_L=1k \Omega$ $d=5mm$	—	26	—	μ sec
		Fall		—	43	—	μ sec

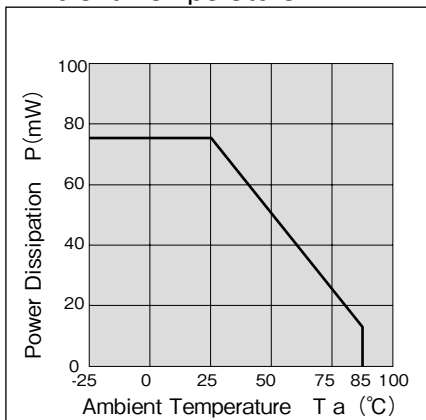
KR640/641

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

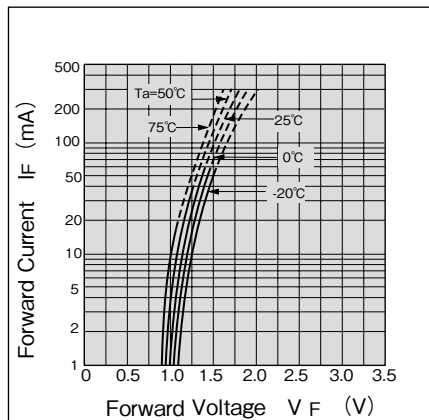
Forward Current vs. Ambient Temperature



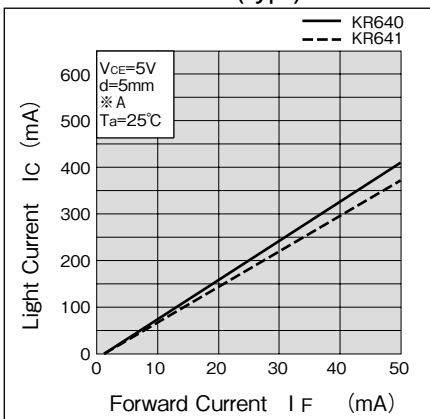
Collector Power Dissipation vs. Ambient Temperature



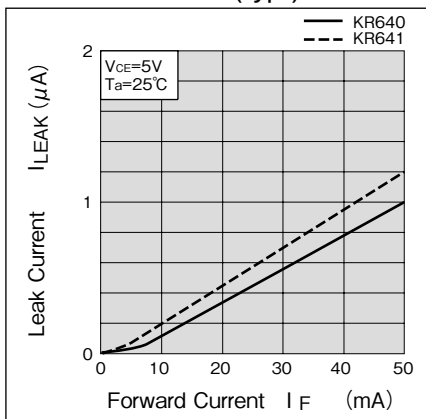
Forward Current vs. Forward Voltage (typ.)



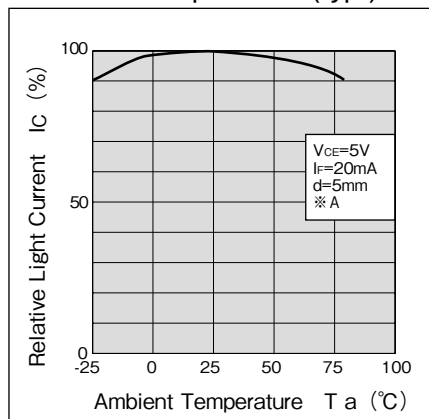
Light Current vs. Forward Current (typ.)



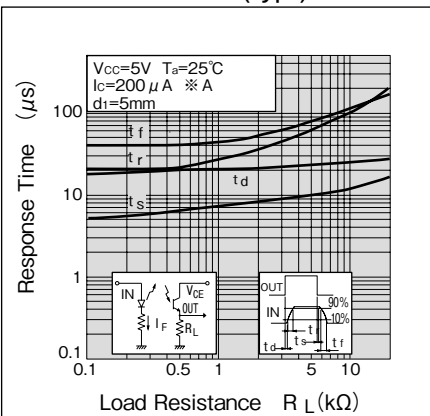
Leak Current vs. Forward Current (typ.)



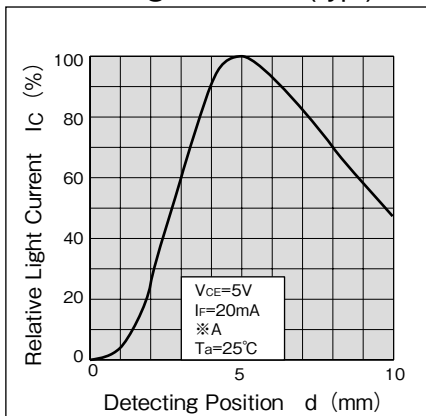
Relative Light Current vs. Ambient Temperature (typ.)



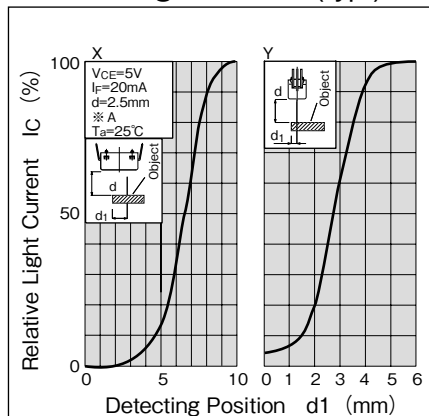
Response Time vs. Load Resistance (typ.)



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.

05.10-1B



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