

KR650,651

Description

Model **KR650/651** consist of an Infra Red LED and a Phototransistor.

Feature

- Cylindrical lens. (**KR651**), Plastic filter. (**KR651**)
- Custom model is available in;
 - Light Current(I_c)
 - Wire length or Connector model.
 - Visible Light cut filter.

Application

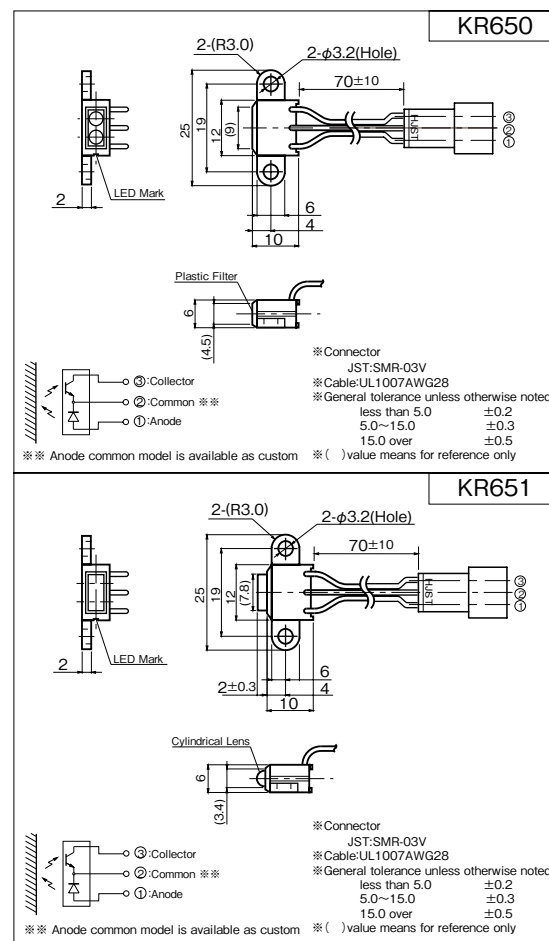
- Paper absence and Paper edge detection on Copying machine, Printer, and Facsimile.
- Paper detection/Size detection in Copying machine and Facsimile.
- Mark sensor of OMR and OCR.

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
	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}	0 ~ +65	°C
Storage Temperature		T _{stg}	-30 ~ +80	°C

Dimension (Unit:mm)



- ※ 1. Pulse width $t_w \leq 100 \mu$ sec Duty ratio=0.01
 ※ 2. 90% Reflective paper $d=3mm$
 ※ 3. No Object, in Dark

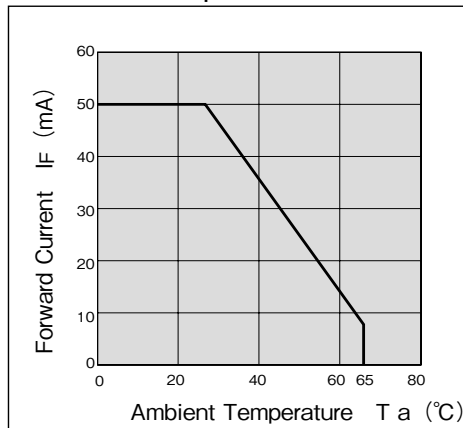
Electro-Optical Characteristics [Ta=25°C Unless otherwise noted] () means values of **KR651**

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 =4V	—	—	10	μ A
	Peak Wavelength	λ _p	I _F =40mA	—	940	—	nm
Detector	Dark Current	I _{CEO}	V _{CE} =10V, 0 lux	—	1	200	n A
Coupled	Light Current ^{※2}	I _C	V _{CE} =5V, I _F =20mA	40(100)	—	—	μ A
	Leak Current ^{※3}	I _{LEAK}	V _{CE} =5V, I _F =20mA	—	—	10(25)	μ A
	Response Time	Rise	V _{CC} =5V, I _F =200 μ A, R _L =1k Ω d=3mm	—	33	—	μ sec
		Fall		—	35	—	μ sec

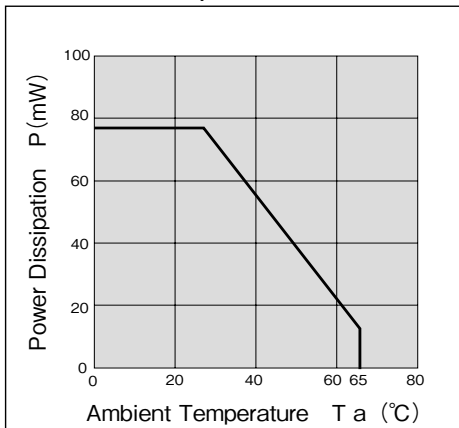
KR650/651

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

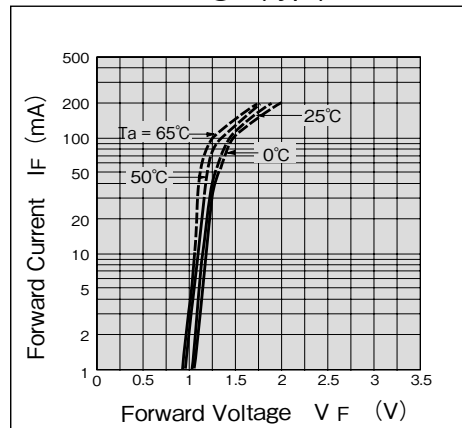
Forward Current vs. Ambient Temperature



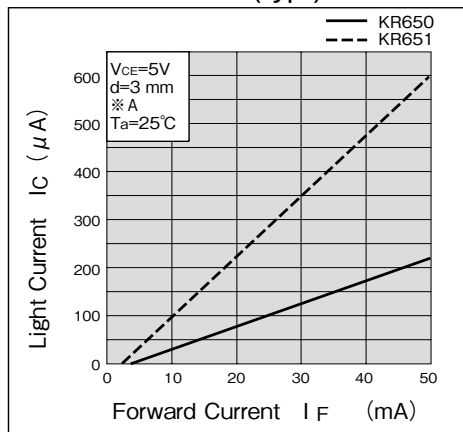
Collector Power Dissipation vs. Ambient Temperature



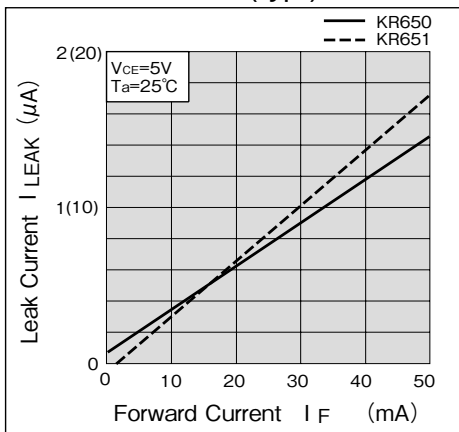
Forward Current vs. Forward Voltage (typ.)



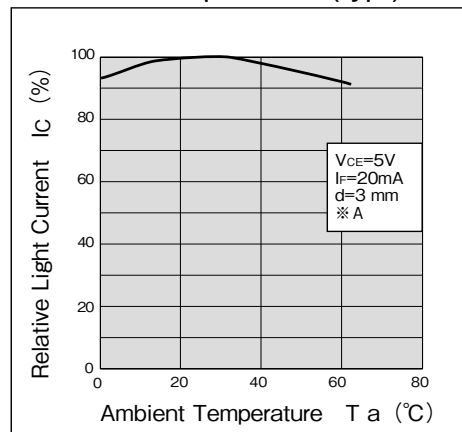
Light Current vs. Forward Current (typ.)



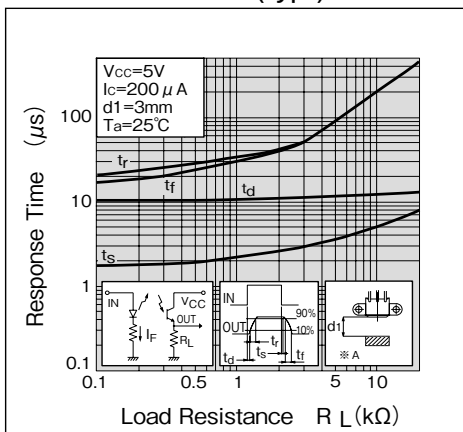
Leak Current vs. Forward Current (typ.)



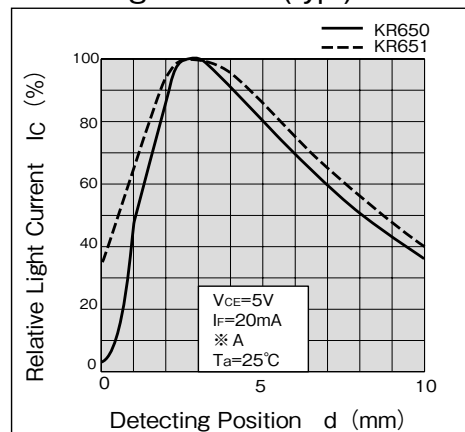
Relative Light Current vs. Ambient Temperature (typ.)



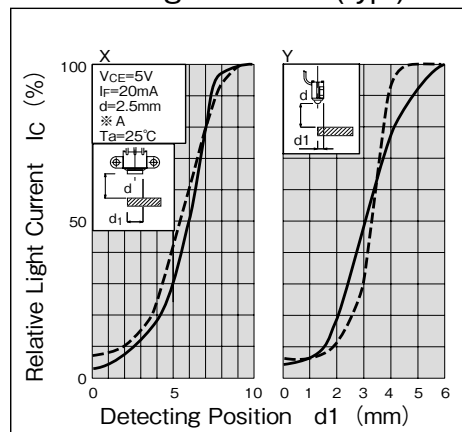
Response Time vs. Load Resistance (typ.)



Relative Light Current vs. Detecting Position (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.

06.01-1A



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