KI1221

Description

Model **KI1221** consists of an Infra Red LED and a High sensitive Photo transistor(Analog output).

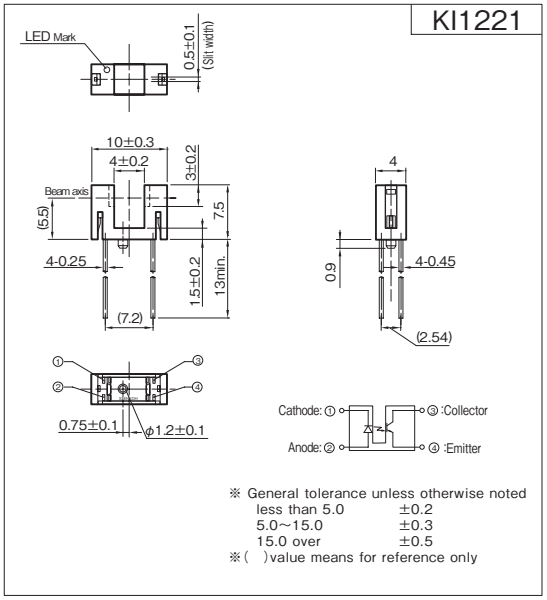
Feature

- Compact Package.
- Low Cost.
- Deep ditch-6mm.
- Wide gap-4mm.

Application

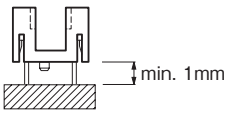
- Object passing for Card reader, Bill exchanger.
- Coin-passing for Auto vending machine and Amusement.
- Paper detection for O.A. equipment.

Dimension (Unit:mm)



Absolute Maximum Ratings [Ta=25℃ 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}	30	V
	Emitter-Collector Voltage	V_{ECO}	5	V
	Collector Current	Ic	20	mA
	Power Dissipation	Pc	75	mW
Operating Temperature		T_{opr}	-20 ~ +85	℃
Storage Temperature		T_{stg}	-30 ~ +85	℃
Soldering Temperature※2		T_{sol}	260	℃



※1. Pulse width tw ≦ 100 μ sec Duty ratio=0.01
※2. Soldering condition 5sec. At 1mm over from body.

Electro-Optical Characteristics [Ta=25℃ 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=3V	—	—	10	μ A
Detector	Dark Current		I_{CEO}	V_{CE}=10V, 0 lux	—	—	100	n A
Coupled	Light Current		Ic	V_{CE}=5V, I_F=20mA	0.3	—	—	m A
	Collector-Emitter Voltage		$V_{CE(sat)}$	I_F=20mA, Ic=0.15mA	—	—	0.4	V
	Response Time	Rise	tr	V_{CC}=5V, Ic=0.5mA, R_L=1k Ω	—	50	—	μ sec
		Fall	tf		—	50	—	

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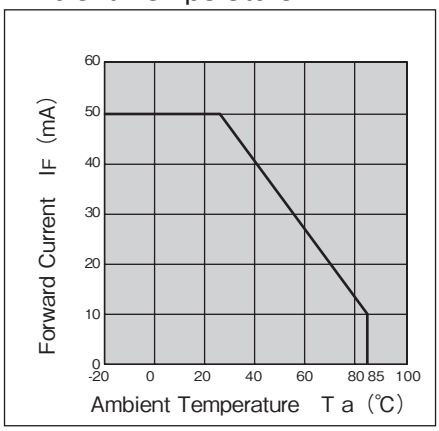
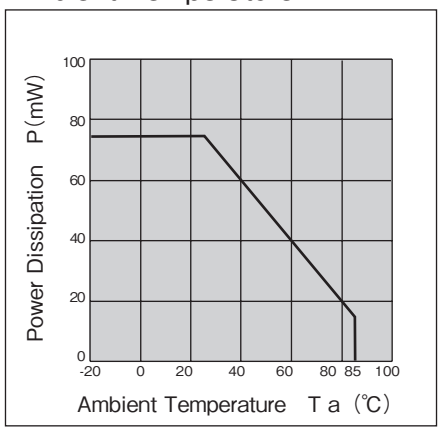
Note: Operation never exceeds each value of Absolute Maximum Ratings.

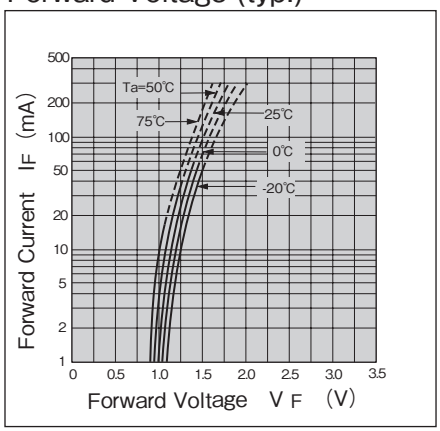
Forward Current vs. Ambient Temperature



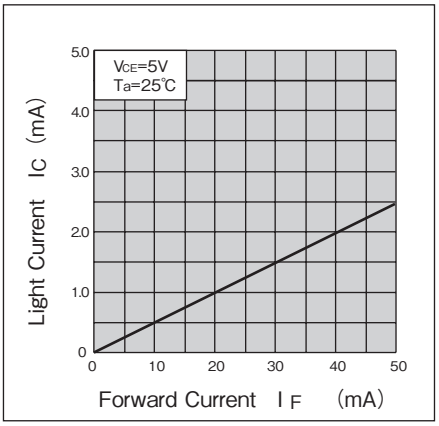
Collector Power Dissipation vs. Ambient Temperature



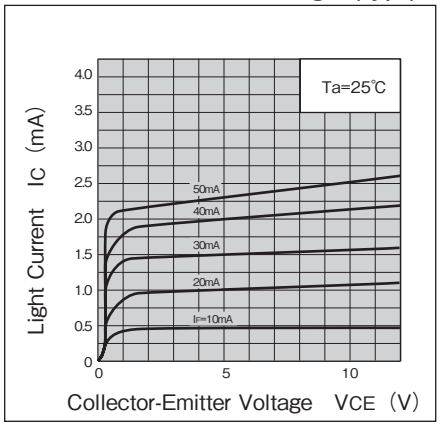
Forward Current vs. Forward Voltage (typ.)



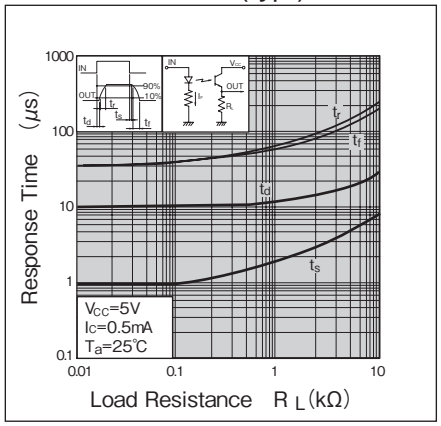
Light Current vs. Forward Current (typ.)



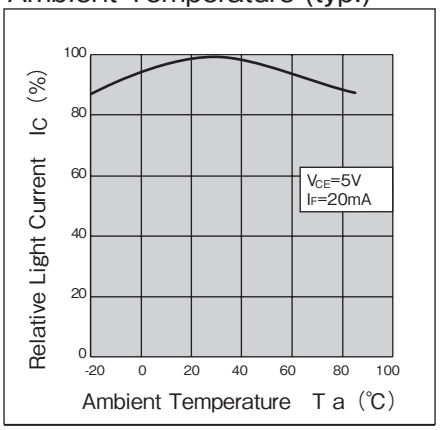
Light Current vs. Collector-Emitter Voltage (typ.)



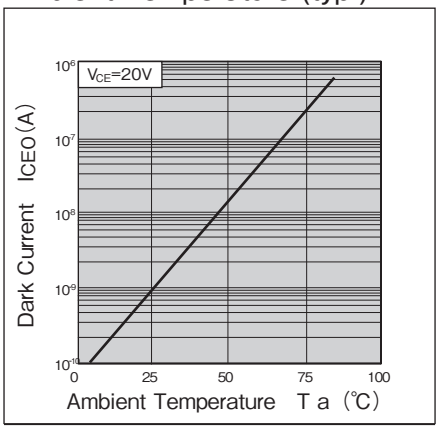
Response Time vs. Load Resistance (typ.)



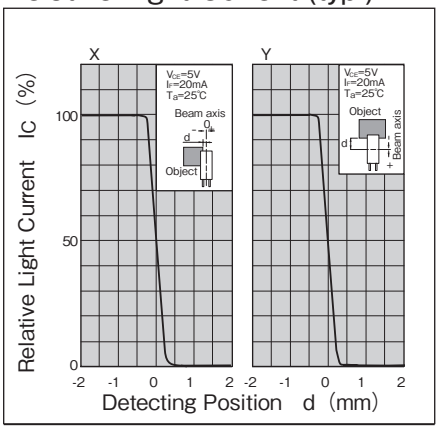
Relative Light Current vs. Ambient Temperature (typ.)



Dark Current vs. Ambient Temperature (typ.)



Detecting Position vs. Relative Light Current (typ.)



・A Custom designed package is available on request.

・Specification are subject to change without notice.

04.09-1A

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