

Part Number: KTIR0611S

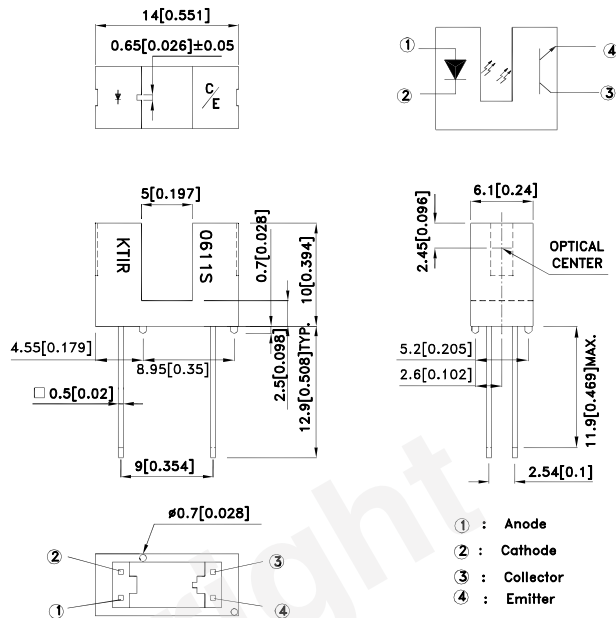
Package Dimensions

Features

- Ultra-small.
- Minimal influence from stray light.
- Low collector-emitter saturation voltage.
- RoHS Compliant.

Applications

- Optical control equipment.
- Cameras.
- Floppy disk drives.



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25 (0.01") unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4. The specifications, characteristics and technical data described in the data sheet are subject to change without prior notice.

*Absolute Maximum Ratings(Ta=25°C)

Parameter		Symbol	Rating	Unit
Input	Forward current	I_F	50	mA
	Reverse voltage	V_R	6	V
	Power dissipation	P_d	75	mW
	Peak Forward Current (Pulse Width $\leq 100\mu s$, Duty Cycle =1%)	I_{FP}	1	A
Output	Collector-emitter voltage	V_{CEO}	35	V
	Emitter-collector voltage	V_{ECO}	6	V
	Collector current	I_C	20	mA
	Collector power dissipation	P_C	75	mW
Operating temperature		T_{opr}	-25~+85	°C
Storage temperature		T_{stg}	-40~+100	°C
soldering temperature (1/16 inch from body for 5 seconds)		T_{sol}	260	°C

Note:

1. Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.



*Electro-optical Characteristics(Ta=25°C)

Parameter		Symbol	Conditions	Min.	TYP.	Max.	Unit
Input	Forward Voltage	V_F	$I_F=20\text{mA}$	1.0	1.2	1.5	V
	Reverse Current	I_R	$V_R=6\text{V}$	-	-	10	μA
	Peak Wavelength	λ_P	$I_F=20\text{mA}$	-	940	-	nm
Output	Collector dark current	I_{CEO}	$V_{CE}=20\text{V}$	-	-	100	nA
Transfer characteristics	Collector-emitter saturation voltage		$V_{CE(SAT)}$	$I_C=1\text{mA}$ $I_F=40\text{mA}$	-	0.4	V
	Current transfer ratio		CTR	$V_{CE}=5\text{V}$ $I_F=20\text{mA}$	2	14	%
	Response time	Rise time	t_r	$V_{CE}=2\text{V}$ $I_C=2\text{mA}$ $R_L=100\Omega$	-	5	μsec
		Fall time	t_f		-	4	μsec

*1 Excess driving current and/or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

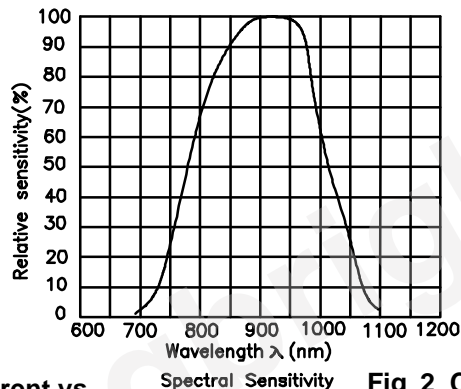


Fig. 1 Forward Current vs. Forward Voltage

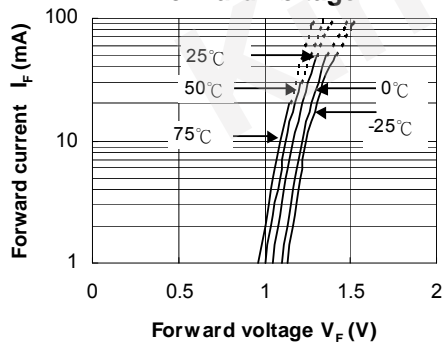


Fig. 2 Collector Current vs. Forward Current

Fig. 3 Collector Current vs. Collector-emitter Voltage

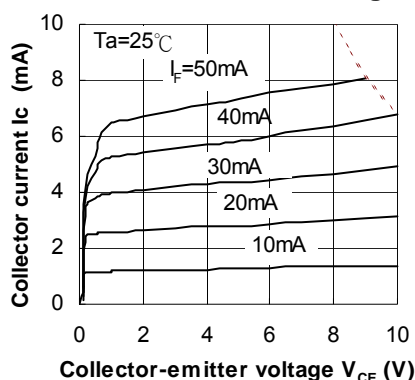


Fig. 4 Collector Current vs. Ambient Temperature

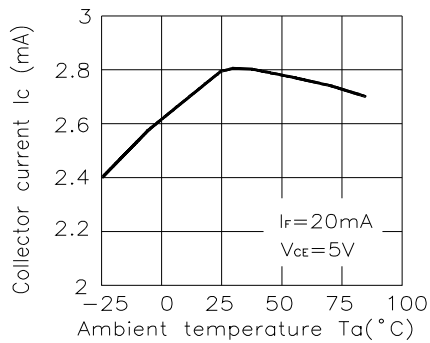


Fig.5 Collector-emitter Saturation Voltage vs. Ambient Temperature

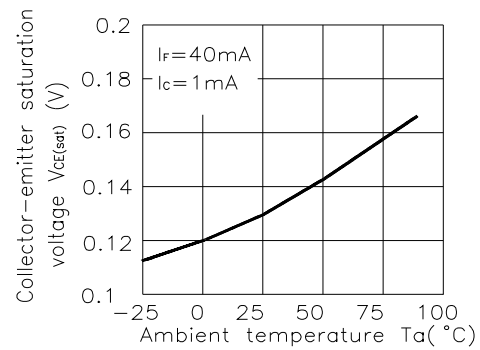


Fig.6 Relative Collector Current vs. Shield Distance (1)

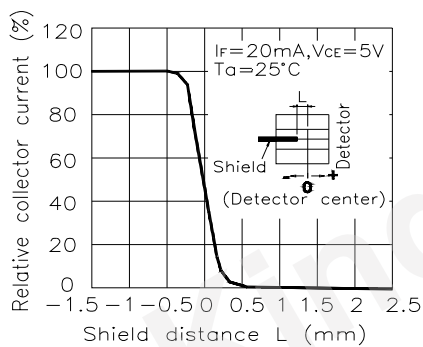


Fig.7 Relative Collector Current vs. Shield Distance (2)

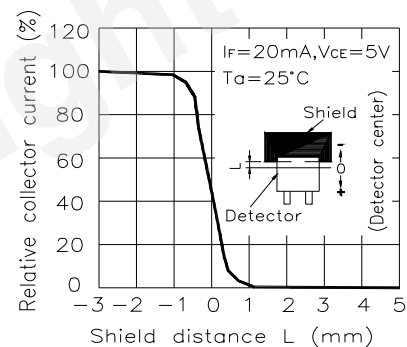
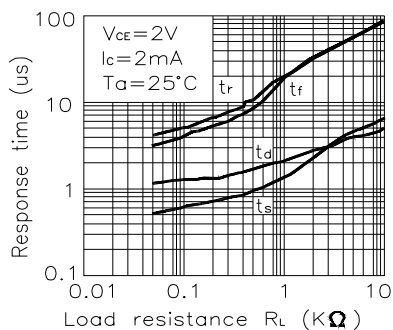
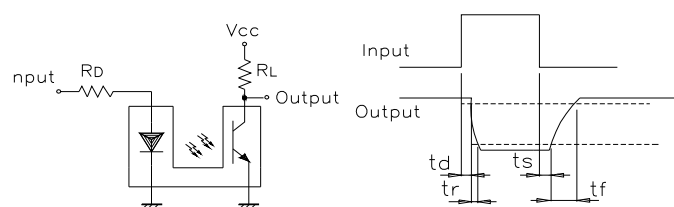


Fig.8 Response Time vs Load Resistance

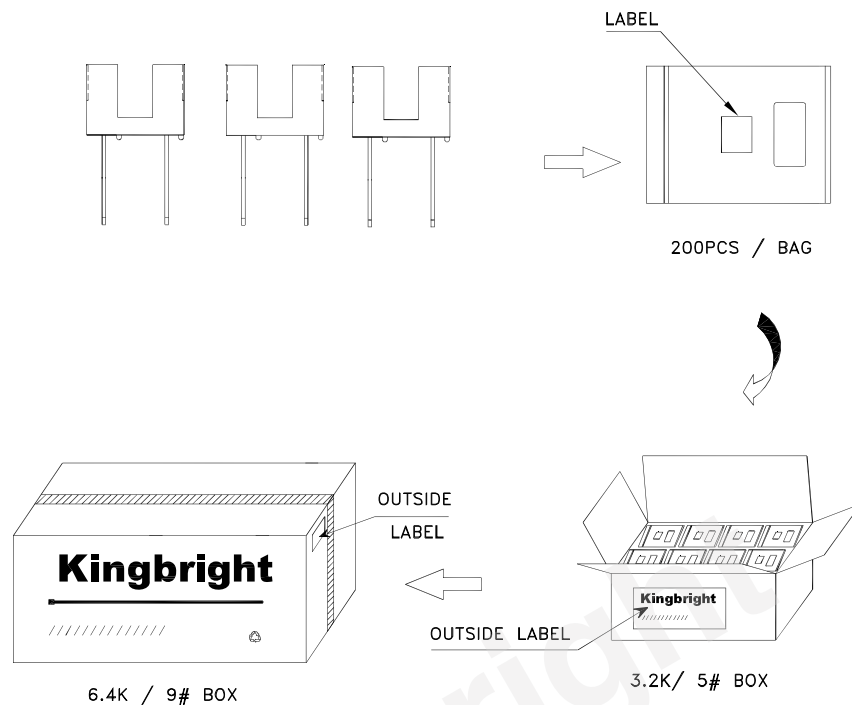



Test Circuit for Response Time



PACKING & LABEL SPECIFICATIONS

KTIR0611S



Kingbright	
P/NO: KTIRxxx	
QTY: 200 pcs	Q.C. Q C XX XX XXXX PASSED
S/N: XXXX	
CODE: XXX	
LOT NO:	
 XXXXXXXXXXXXXXXXXXXXXXXXXXXX	
RoHS Compliant	

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