



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

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Photointerrupter, Ultraminiature type



Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Forward current	I_F	50	mA
Reverse voltage	V_R	5	V
Power dissipation	P_D	80	mW
Collector-emitter voltage	V_{CE0}	30	V
Emitter-collector voltage	V_{ECO}	4.5	V
Collector current	I_C	30	mA
Collector power dissipation	P_C	80	mW
Operating temperature	T_{opr}	-25 to +85	°C
Storage temperature	T_{stg}	-30 to +85	°C
Soldering temperature	T_{sol}	260/5	°C/sec

Applications

- DSC(Digital steal camera)
- DVC(Digital video camera)
- Digital handy phone

Features

- 1) Ultra-small.
- 2) Gap 1.2mm.

Electrical and optical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	V_F	-	1.3	1.6	V	$I_F=50mA$
Reverse current	I_R	-	-	10	μA	$V_R=5V$
Dark current	I_{CE0}	-	-	0.5	μA	$V_{CE}=10V$
Peak sensitivity wavelength	λ_P	-	800	-	nm	-
Collector current	I_C	0.45	1.8	4.95	mA	$V_{CE}=5V, I_F=20mA$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	0.4	V	$I_F=20mA, I_C=0.1mA$
Response time	Rise time	t_r	10	-	μs	$V_{CC}=5V, I_F=20mA, R_L=100\Omega$
	Fall time	t_f	10	-	μs	
Cut-off frequency	f_c	-	1	-	MHz	$I_F=50mA$ * Non-coherent Infrared light emitting diode used.
Peak light emitting wavelength	λ_P	-	950	-	nm	-
Response time	$t_r \cdot t_f$	-	10	-	μs	$V_{CC}=5V, I_C=1mA, R_L=100\Omega$ * This product is not designed to be protected against electromagnetic wave.
Maximum sensitivity wavelength	λ_P	-	800	-	nm	-

Electrical and optical characteristics curves

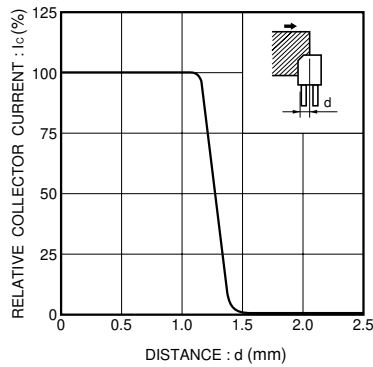


Fig.1 Relative output current vs. distance (I)

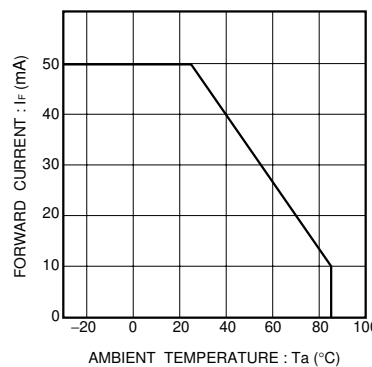


Fig.2 Forward current falloff

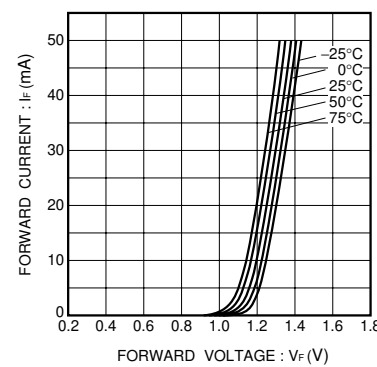


Fig.3 Forward current vs. forward voltage

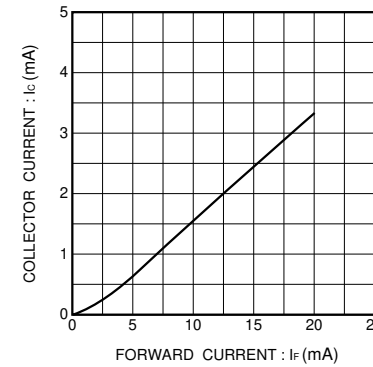


Fig.7 Collector current vs. forward current

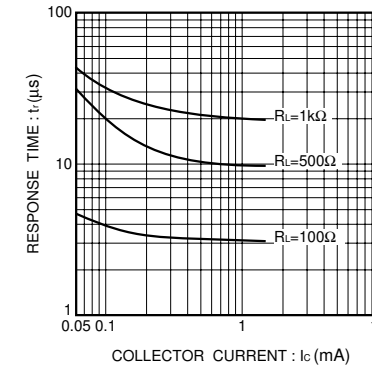


Fig.8 Response time vs. collector current

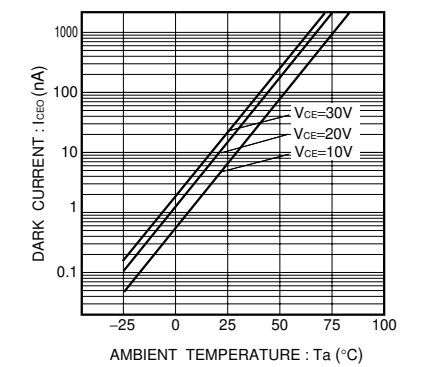


Fig.9 Dark current vs. ambient temperature

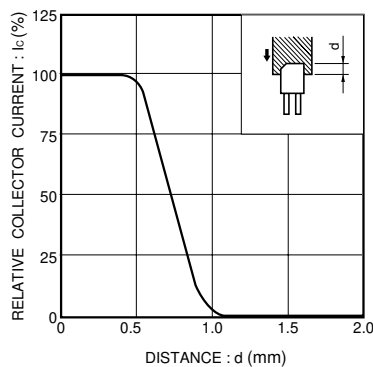


Fig.4 Relative output current vs. distance (II)

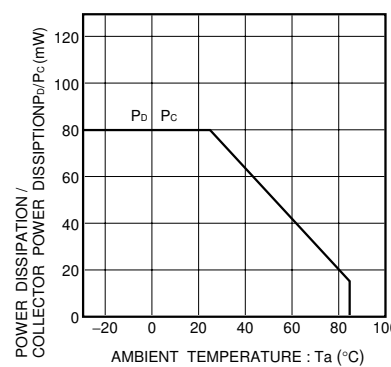


Fig.5 Power dissipation / collector power dissipation vs. ambient temperature

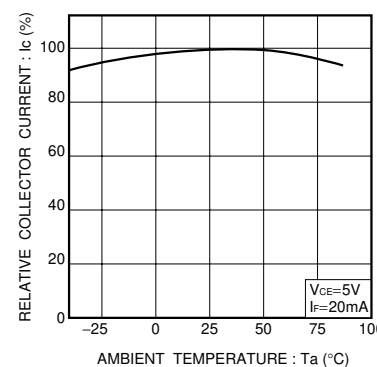


Fig.6 Relative output vs. ambient temperature

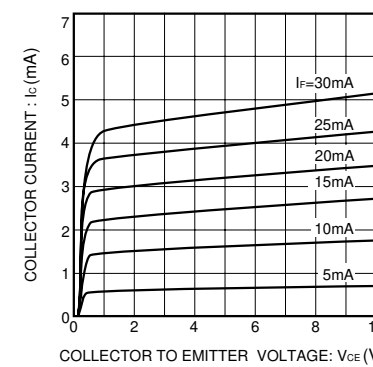


Fig.10 Output characteristics

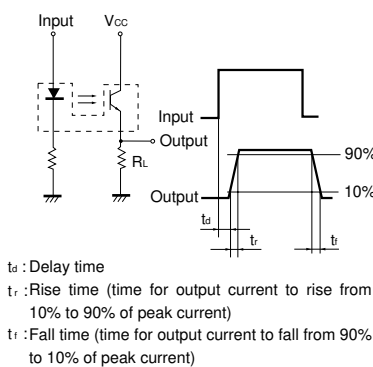
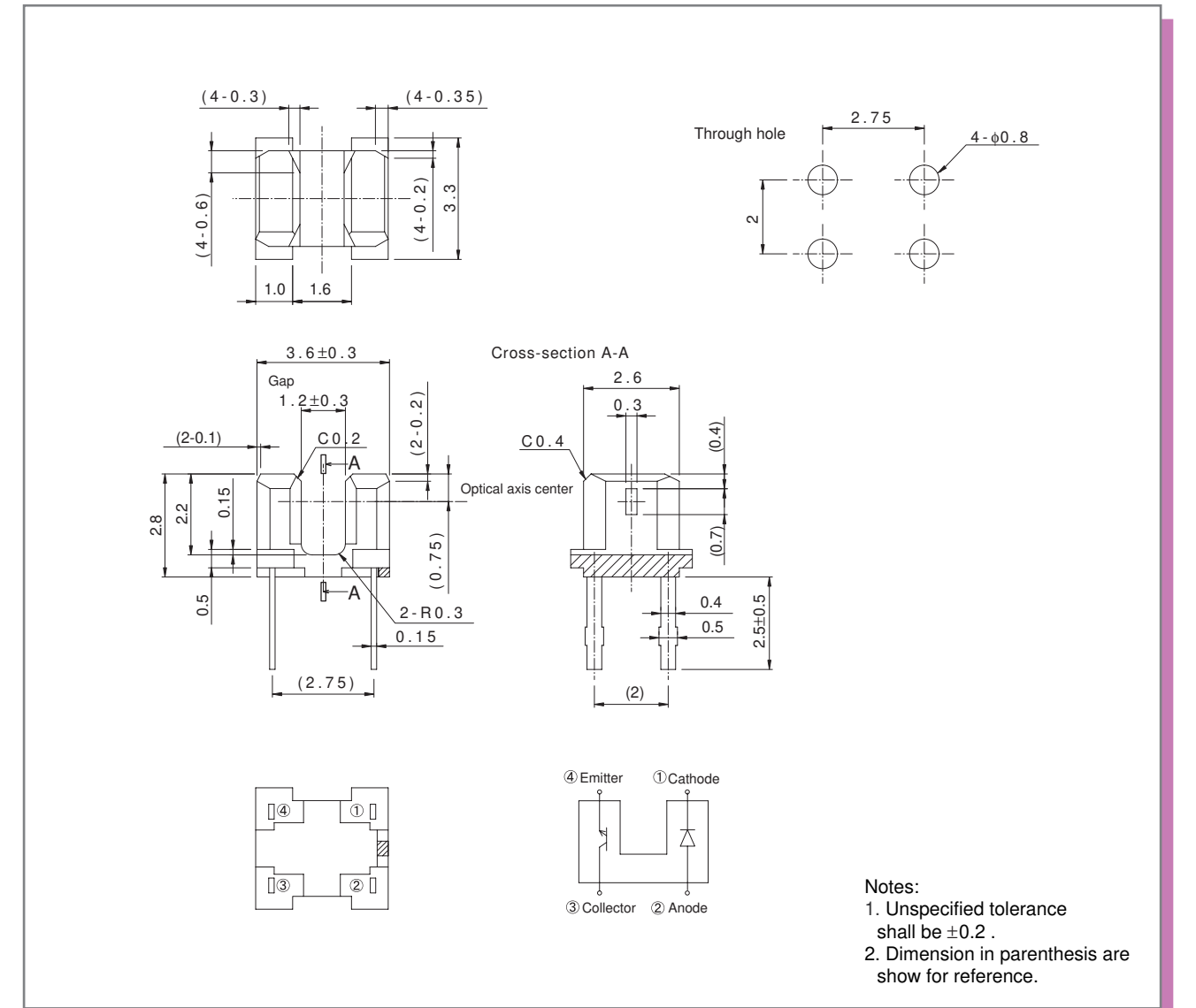


Fig.11 Response time measurement circuit

External dimensions (Unit : mm)



- Notes:
1. Unspecified tolerance shall be ± 0.2 .
 2. Dimension in parenthesis show for reference.

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