



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.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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### Absolute maximum ratings (Ta=25°C)

Parameter		Symbol	Limits	Unit
Input (LED)	Forward current	$I_F$	50	mA
	Reverse voltage	$V_R$	5	V
	Power dissipation	$P_D$	80	mW
Output (photo-transistor)	Collector-emitter voltage	$V_{CEO}$	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

### Applications

Optical control equipment  
Facsimiles  
Printers

### Features

- 1) Compact with a 4mm gap.
- 2) High precision position detection (slit width of 0.5mm).
- 3) Minimal influence from stray light.
- 4) Low collector-emitter voltage.

### Electrical and optical characteristics (Ta=25°C)

Parameter		Symbol	Min.	Typ.	Max.	Unit	Conditions
Input characteristics	Forward voltage	$V_F$	-	1.3	1.6	V	$I_F=50\text{mA}$
	Reverse current	$I_R$	-	-	10	$\mu\text{A}$	$V_R=5\text{V}$
Output characteristics	Dark current	$I_{CEO}$	-	-	0.5	$\mu\text{A}$	$V_{CE}=10\text{V}$
	Peak sensitivity wavelength	$\lambda_P$	-	800	-	nm	-
Transfer characteristics	Collector current	$I_C$	0.2	0.55	-	mA	$V_{CE}=5\text{V}, I_F=20\text{mA}$
	Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	0.4	V	$I_F=20\text{mA}, I_C=0.1\text{mA}$
	Response time	$t_{r+tf}$	-	10	-	$\mu\text{s}$	$V_{CC}=5\text{V}, I_F=20\text{mA}, R_L=100\Omega$
Infrared light emitter diode	Cut-off frequency	$f_c$	-	1	-	MHz	$I_F=50\text{mA}$ * Non-coherent Infrared light emitting diode used.
	Peak light emitting wavelength	$\lambda_P$	-	950	-	nm	-
Photo transistor	Response time	$t_{r+tf}$	-	10	-	$\mu\text{s}$	$V_{CC}=5\text{V}, I_C=1\text{mA}, R_L=100\Omega$ * This product is not designed to be protected against electromagnetic wave.
	Maximum sensitivity wavelength	$\lambda_P$	-	800	-	nm	-

### Electrical and optical characteristics curves

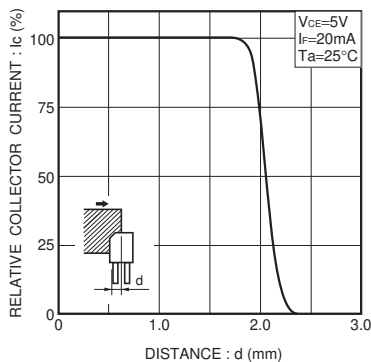


Fig.1 Relative output current vs. distance (I)

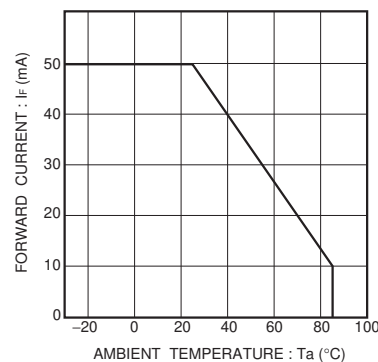


Fig.2 Forward current falloff

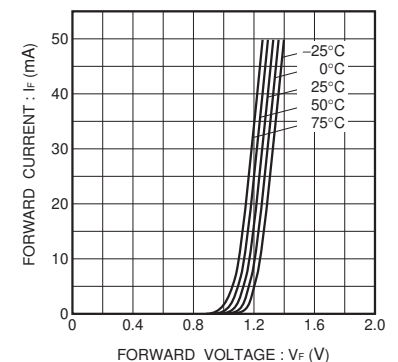


Fig.3 Forward current vs. forward voltage

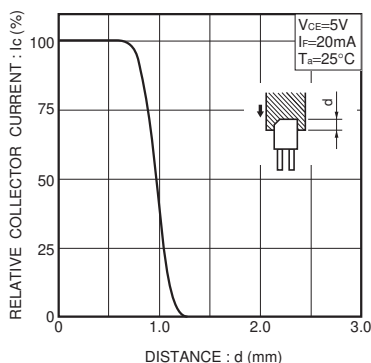


Fig.4 Relative output current vs. distance (II)

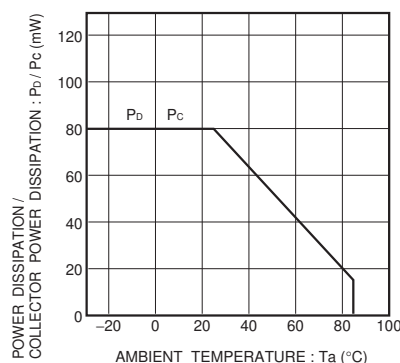


Fig.5 Power dissipation / collector power dissipation vs. ambient temperature

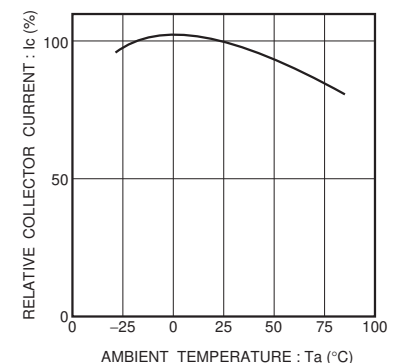


Fig.6 Relative output vs. ambient temperature



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