Photointerrupter

Model No: LBT-121

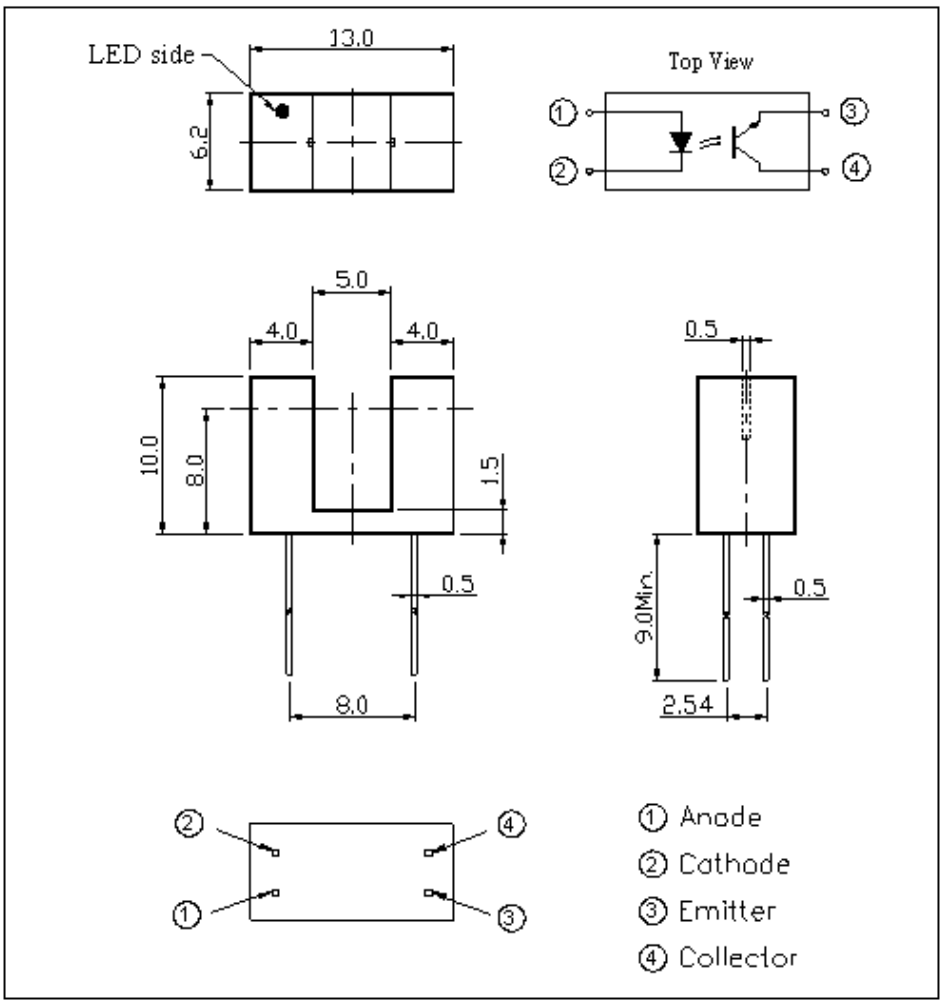
Features

- Compact package based on the double-mold method.
- High resolution (slit width = 0.5mm).
- Gap between emitter and detector is 5.0mm.

Applications

- Floppy disk drives
- Printers
- Cameras

Outline Dimensions (Unit: mm)



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Absolute Maximum Ratings (Ambient Temperature: 25℃)

Item		Symbol	Rating	Units	Note
Input	Forward current	I_F	50	mA	
	Reverse voltage	V_R	5	V	
	Peak forward current	I_{FP}	1	A	Tw=10μ s, t=10ms
	Power dissipation	Pd	75	mW	
Output	Collector current	Ic	50	mA	
	Collector-Emitter voltage	Vceo	30	V	
	Emitter-Collector voltage	Veco	5	V	
	Collector power dissipation	P_c	100	mW	
Storage Temperature		Tstg	-40 to +85	℃	
Operating Temperature		Top	-25 to +85	℃	
Soldering Temperature		Tsol	260	℃	5 seconds max.

Electrical Specifications (Ambient Temperature: 25℃)

Item		Symbol	MIN.	TYP.	MAX.	Units	Conditions
Input	Forward voltage	V_F		1.2	1.4	V	IF=20mA
	Reverse current	I_R			10	μA	VR=5V
	Peak wavelength	λ p		940		nm	
	View angle	2θ 1/2		35		Deg.	IF=20mA
Output	Dark current	Iceo			100	nA	Vce=20V
	C-E saturation voltage	Vce(sat)			0.4	V	Ic=2mA, IB=0.1mA
Light current		Ic(on)	0.5			mA	Vce=5V IF=20mA
Leakage current		ILeak			1	μA	
Speed	Rise Time	tr		5		μs	Vce=5V Ic=1mA RL=1KΩ
	Fall Time	tf		5			

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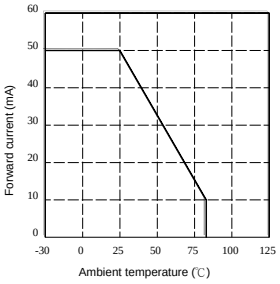
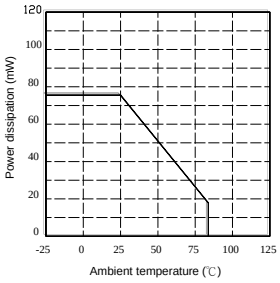
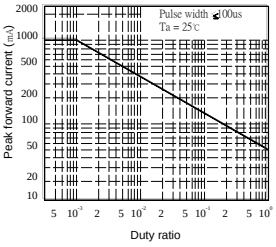
Reference Data

Forward current Vs.
Ambient temperature

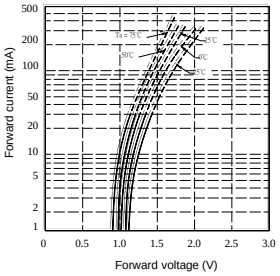




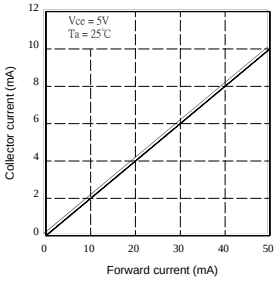
Peak forward current Vs.
Duty ratio



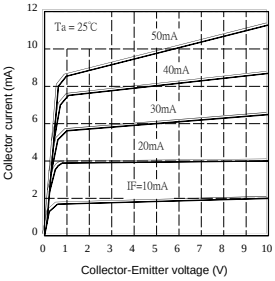
Forward current Vs.
Forward voltage



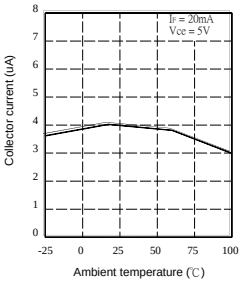
Collector current Vs.
Forward current



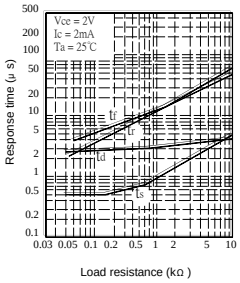
Collector current Vs.
Collector-Emitter voltage



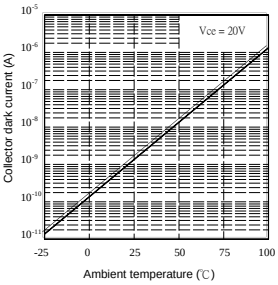
Collector current Vs.
Ambient temperature



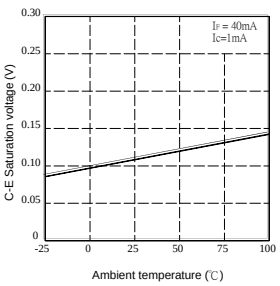
Response time Vs.
Load resistance



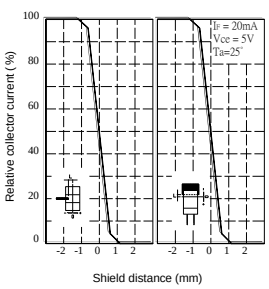
Collector dark current Vs.
Ambient temperature



C-E Saturation voltage Vs.
Ambient temperature



Relative collector current Vs.
Shield distance



Test circuit for resopnse time