

Photointerrupter

Model No: LBT-121

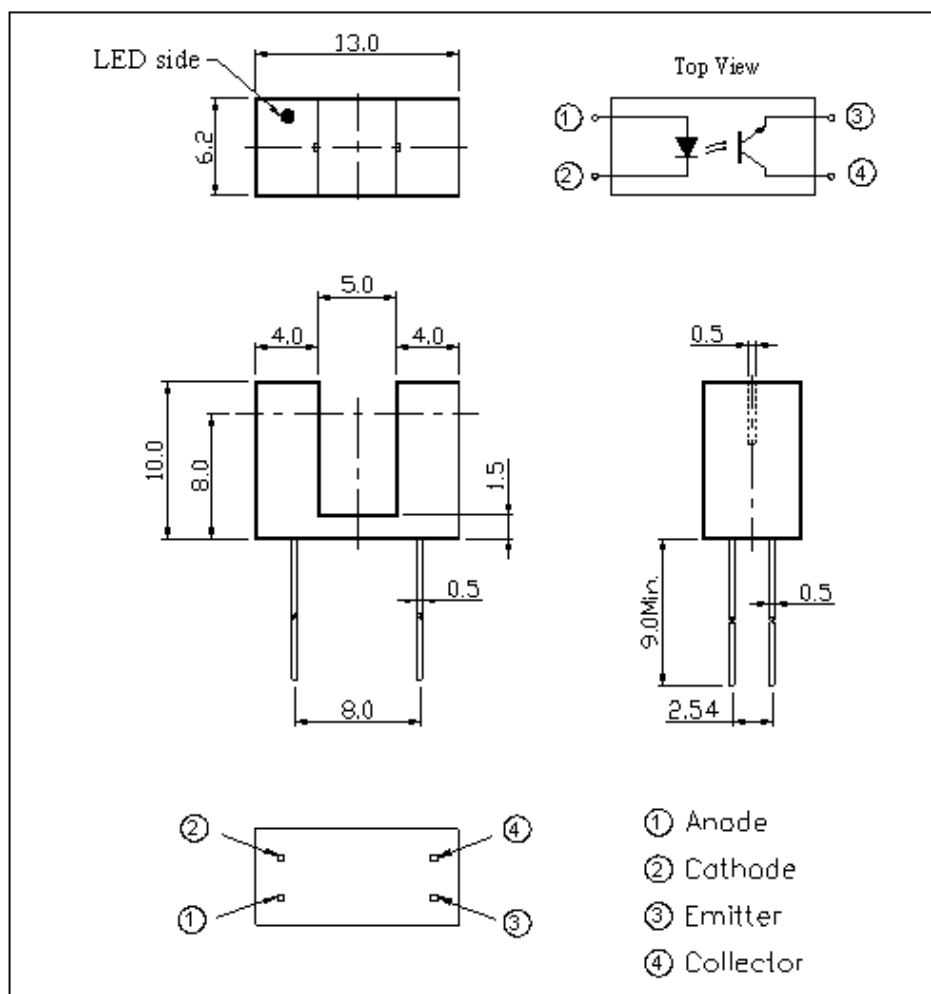
Features

- 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°C)

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	T _w =10 μs, t=10ms
	Power dissipation	P _d	75	mW	
Output	Collector current	I _c	50	mA	
	Collector-Emitter voltage	V _{ceo}	30	V	
	Emitter-Collector voltage	V _{eco}	5	V	
	Collector power dissipation	P _c	100	mW	
Storage Temperature		T _{stg}	-40 to +85	°C	
Operating Temperature		T _{op}	-25 to +85	°C	
Soldering Temperature		T _{sol}	260	°C	5 seconds max.

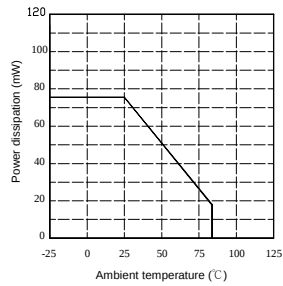
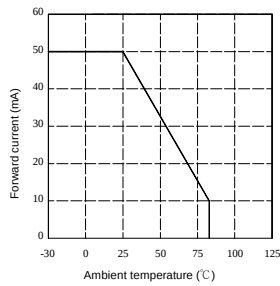
Electrical Specifications (Ambient Temperature: 25°C)

Item		Symbol	MIN.	TYP.	MAX.	Units	Conditions
Input	Forward voltage	V _F		1.2	1.4	V	I _F =20mA
	Reverse current	I _R			10	μA	V _R =5V
	Peak wavelength	λ _p		940		nm	
	View angle	2 θ 1/2		35		Deg.	I _F =20mA
Output	Dark current	I _{ceo}			100	nA	V _{ce} =20V
	C-E saturation voltage	V _{ce(sat)}			0.4	μA	I _c =2mA, I _B =0.1mA
Light current		I _{c(on)}	0.5			mA	V _{ce} =5V I _F =20mA
Leakage current		I _{Leak}			1	μA	
Speed	Rise Time	t _r		5		μs	V _{ce} =5V I _c =1mA R _L =1KΩ
	Fall Time	t _f		5			

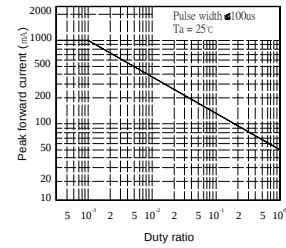
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Reference Data

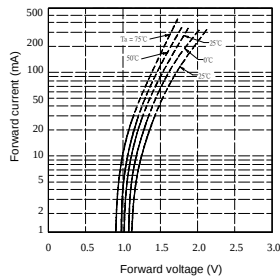
Forward current Vs.
Ambient temperature



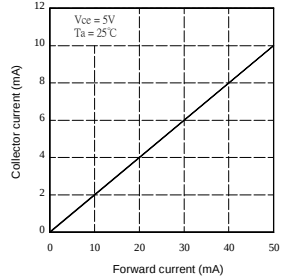
Peak forward current Vs.
Duty ratio



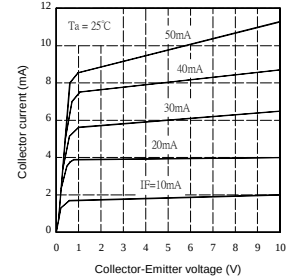
Forward current Vs.
Forward voltage



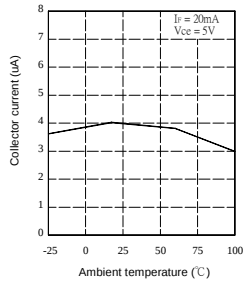
Collector current Vs.
Forward current



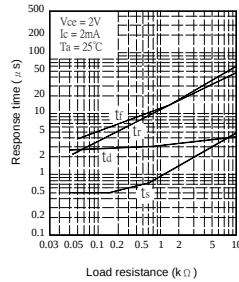
Collector current Vs.
Collector-Emitter voltage



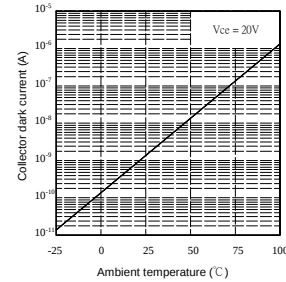
Collector current Vs.
Ambient temperature



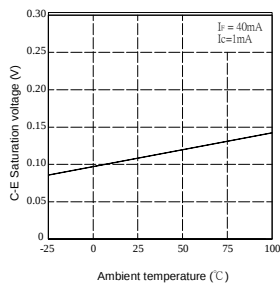
Response time Vs.
Load resistance



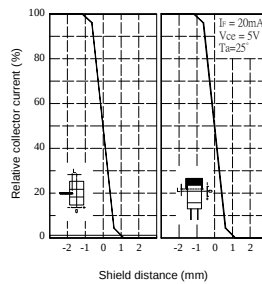
Collector dark current Vs.
Ambient temperature



C-E Saturation voltage Vs.
Ambient temperature



Relative collector current Vs.
Shield distance



Test circuit for response time

