

Subminiature Photointerrupter

Model No: LBT-124

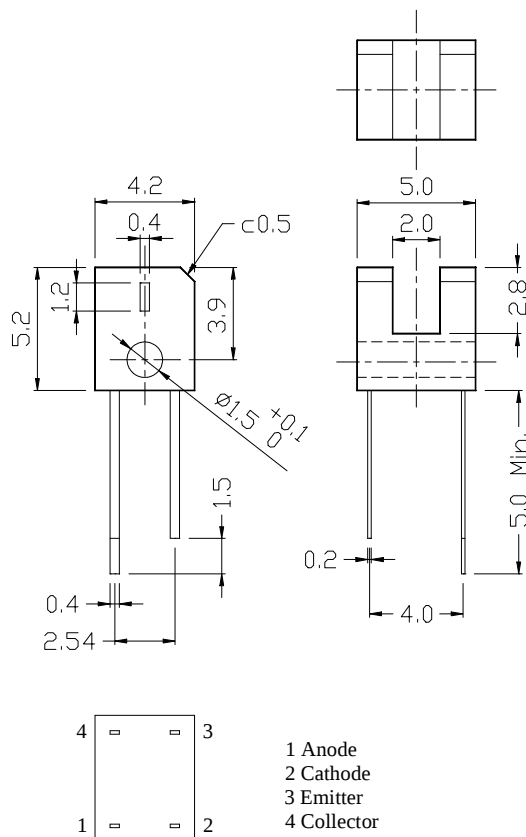
Features

- Compact package based on the double-mold method.
- High resolution (slit width = 0.4mm).
- Gap between emitter and detector is 2.0mm.

Applications

- Floppy disk drives
- Printers
- Cameras

Outline Dimensions (Unit: mm)



Subminiature Photointerrupter

Model No: LBT-124

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	
	Power dissipation	P _D	75	mW	
Output	Collector-emitter voltage	V _{ceo}	30	V	
	Emitter-collector voltage	V _{eco}	4.5	mA	
	Collector power dissipation	P _C	80	mW	
Storage Temperature		T _{stg}	-40 to +100	°C	
Operating Temperature		T _{op}	-25 to +85	°C	
Soldering Temperature		T _{sol}	260	°C	10 seconds max.

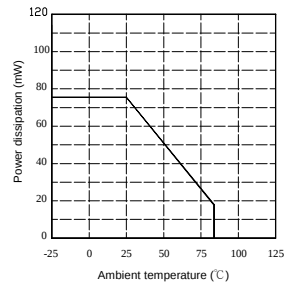
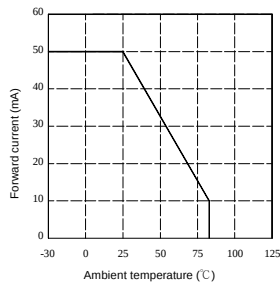
Electrical Specifications (Ambient Temperature: 25°C)

Item		Symbol	Min.	Typ.	Max.	Units	Conditions
Input	Forward voltage	V _F		1.2	1.4	V	I _F =20mA
	Peak forward voltage	V _{FM}		3	4	V	I _{FM} =0.5A
	Reverse current	I _R			10	μA	V _R =5V
Output	Collector dark current	I _{ceo}			0.5	μA	V _{ce} =10V
	Collector-emitter breakdown voltage	BV _{ceo}	30			V	I _{ce} =50μA
	Emitter-collector breakdown voltage	BV _{eco}	4.5			V	I _{ec} =50μA
Combination	Collector current	I _c	0.5			mA	V _{ce} =5V, I _F =20mA
	Collector-emitter saturation voltage	V _{ce(sat)}			0.4	V	I _F =20mA, I _c =0.3A
	Response time	T _r /t _f		10		μs	I _F =5mA, V _{cc} =5V, R _L =100Ω

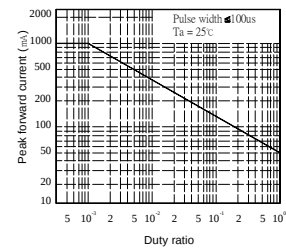
Subminiature Photointerrupter

Reference Data

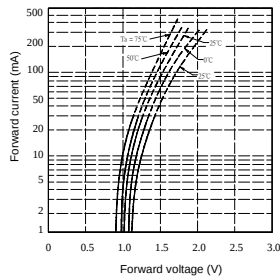
Forward current Vs.
Ambient temperature



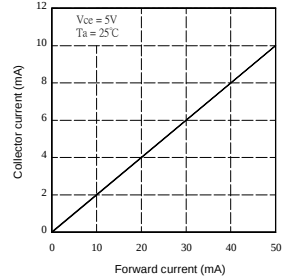
Peak forward current Vs.
Duty ratio



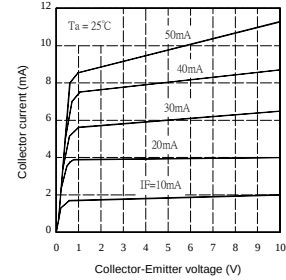
Forward current Vs.
Forward voltage



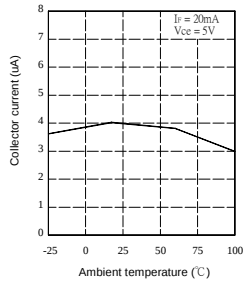
Collector current Vs.
Forward current



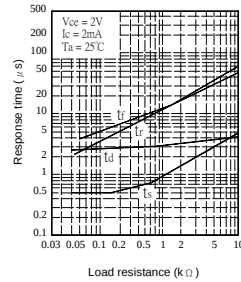
Collector current Vs.
Collector-Emitter voltage



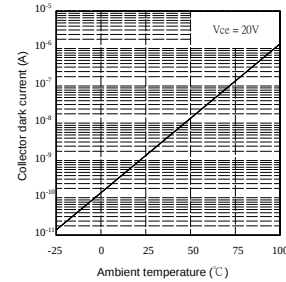
Collector current Vs.
Ambient temperature



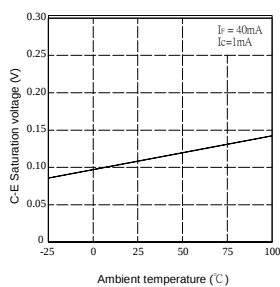
Response time Vs.
Load resistance



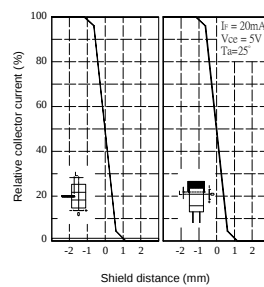
Collector dark current Vs.
Ambient temperature



C-E Saturation voltage Vs.
Ambient temperature



Relative collector current Vs.
Shield distance



Test circuit for response time

