

# Subminiature Photointerrupter

## Model No: LBT-141

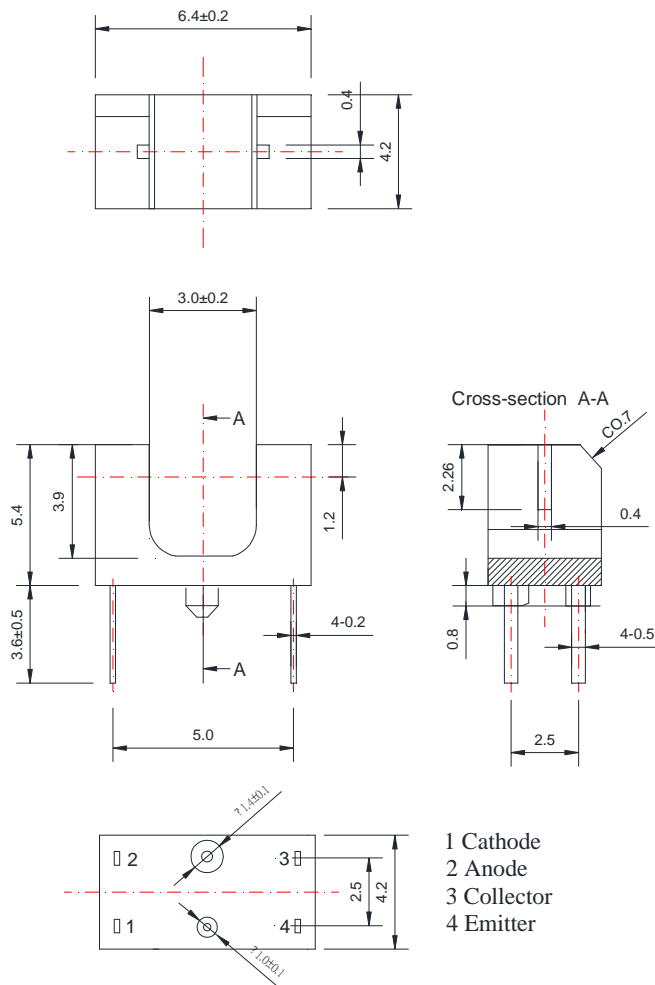
### Features

- Compact package based on the double-mold method.
- High sensitivity.
- Gap between emitter and detector is 3.0mm.
- Thin and small package

### Applications

- Floppy disk drives
- Printers / Copier / Scanner
- Camera / VCR
- Non-contact Switching

### Outline Dimensions (Unit: mm)



Notes: 1. All dimensions are in millimeters  
 2. Tolerances unless dimensions  $\pm 0.2$  mm

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Absolute Maximum Ratings (Ambient Temperature: 25°C)

Item		Symbol	Rating	Units	Note
Input	Forward current	IF	50	mA	
	Reverse voltage	VR	5	V	
	Power dissipation	PD	80	mW	
Output	Collector-emitter voltage	Vceo	30	V	
	Emitter-collector voltage	Veco	4.5	V	
	Collector current	Ic	30	mA	
	Collector power dissipation	PC	80	mW	
Storage Temperature		Tstg	-40 to +85	°C	
Operating Temperature		Top	-30 to +85	°C	
Soldering Temperature		Tsol	260	°C	10 seconds max.

Electrical Specifications (Ambient Temperature: 25°C)

Item		Symbol	Min.	Typ.	Max.	Units	Conditions
Input	Forward voltage	VF		1.3	1.6	V	IF=50mA
	Peak forward voltage	VFM		3	4	V	IFM=0.5A
	Reverse current	IR			10	μA	VR=5V
Output	Collector dark current	Iceo			0.5	μA	Vce=10V
	Collector-emitter breakdown voltage	BVceo	30			V	Ice=50μA
	Emitter-collector breakdown voltage	BVeco	4.5			V	Iec=50μA
Combination	Collector current	Ic	0.2	1.0		mA	Vce=5V, IF=20mA
	Collector-emitter saturation voltage	Vce(sat)			0.4	V	IF=20mA, Ic=0.1A
	Response time	Tr/tf		10		μs	IF=5mA, Vcc=5V, RL=100Ω
Infrared light emitter diode	Cut-off frequency	fc		1		MHz	IF=50mA
	Peak light emitting wavelength	λP		950		nm	
Photo transistor	Response time	Tr/tf		10		μs	Vcc=5V, Ic=1mA, RL=100Ω
	Maximum sensitivity wavelength	λP		800		nm	

# Subminiature Photointerrupter Reference Data

