

Photo IC Photointerrupter

Model No: LBP-122

Description

The LBP-122 series are slotted optical switches designed for multipurpose non contact sensing. They consist of a GaAs LED and a silicon optical IC. Sensor packaged in an injection molded housing and facing each other across a 5mm(.197inch) gap.

Features

- Built-in Schmitt trigger circuit
- Low threshold input current
- Operating supply voltage $V_{cc}=4.5\sim 17V$
- Directly interfaces to TTL and CMOS
- Dark on model (LBP122-A), Light on model (LBP122-B)

Applications

- Copiers, printers, facsimiles
- Optoelectronic switches

Outline Dimensions

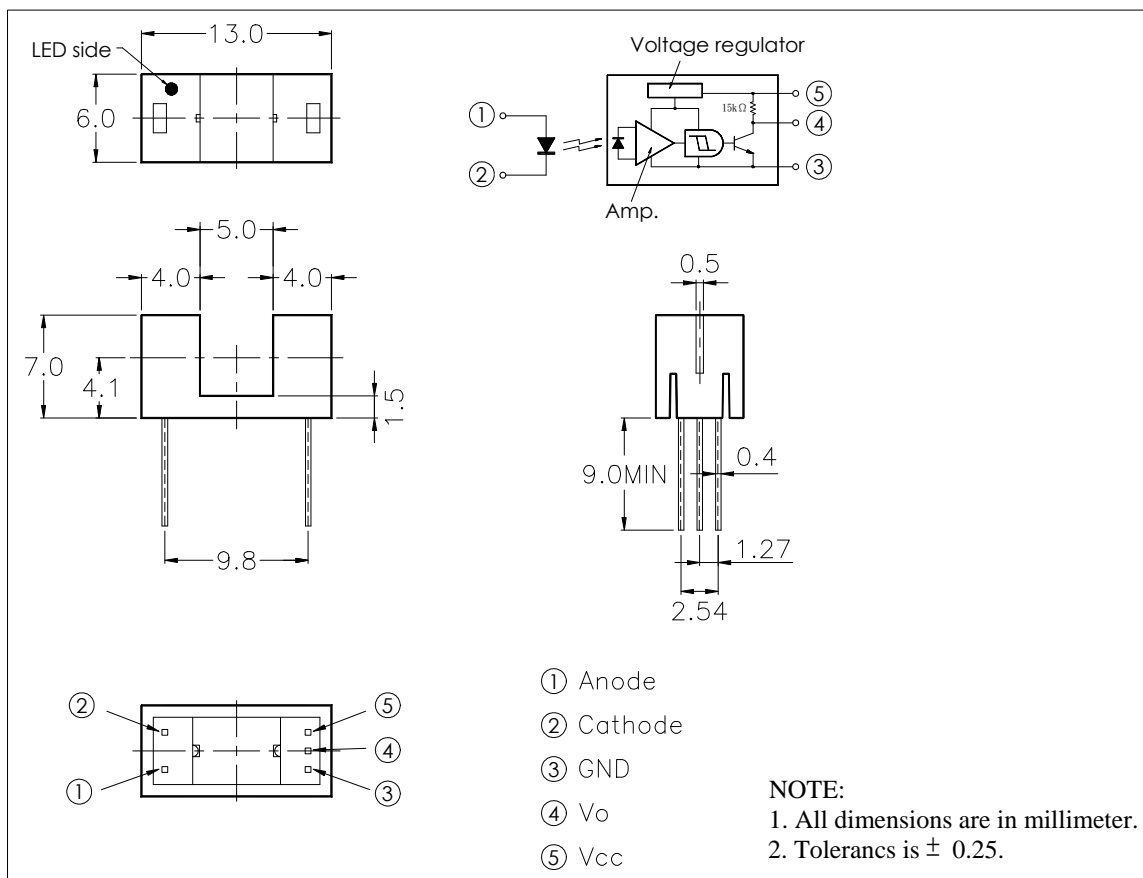


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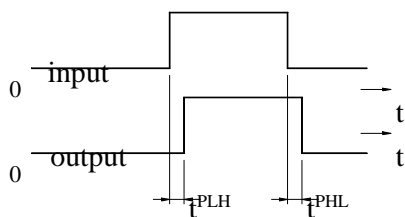
Absolute Maximum Ratings (Ambient Temperature: 25°C)

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	Pulse width ≤ 100 μs, Duty ratio=0.01
	Power dissipation	P	75	mW	
Output	Supply voltage	V _{CC}	17	V	
	Low level output current	I _{OL}	50	mA	
	Power dissipation	P _o	250	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.

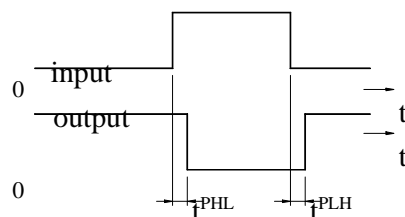
Electrical Specifications (Ambient Temperature: 25°C)

Item		Symbol	MIN.	TYP.	MAX.	Units	Conditions	
Input	Forward voltage	V _F		1.2	1.4	V	I _F =20mA	
	Reverse current	I _R			10	μA	V _R =4V	
Output	Operating supply voltage	V _{CC}	4.5		17	V		
	Low level output voltage	V _{OL}		0.15	0.4	V	I _{OL} =16mA, V _{CC} =5V, I _F =5mA	
	High level output voltage	V _{OH}	4.9			V	V _{CC} =5V, I _F =0	
	Low level supply current	I _{CCL}		2.5	5.0	mA	V _{CC} =5V, I _F =5mA	
	High level supply current	I _{CCH}		1.0	3.0	mA	V _{CC} =5V, I _F =0	
Combination	High-Low threshold input current	I _{FHL}		1.0	5.0	mA	V _{CC} =5V	
	Hysteresis	I _{FLH} / I _{FHL}	0.55	0.75	0.95		V _{CC} =5V	
	High-Low propagation time	t _{PHL}	LBP122-A		5.0	15.0	μs	V _{CC} =5V I _F =5mA R _L =280Ω
			LBP122-B		3.0	9.0		
	Low-High propagation time	t _{PLH}	LBP122-A		3.0	9.0		
			LBP122-B		5.0	15.0		
	Rise Time	t _r		0.1	0.5			
Fall Time	t _f		0.05	0.5				

Note: The follo



(LBP-122-A)



(LBP-122-B)