

LG - 209

The LG – 209 photointerrupter combine high output GaAs IRED with Photo IC.The sensor makes possible easy development of object detecting systems with highperformance,high reliability and small equipment size.
 LG - 209L : High level output at shielding
 LG - 209D : Low level output at shielding

FEATURES

- PWB direct mount type
- GAP : 2.4mm
- With the installation positioning boss
- Low – boy type(installation height : 5.4mm)

APPLICATIONS

- Printers
- Facsimiles
- Vending machines
- Amusement machines

MAXIMUM RATINGS

(Ta=25)

Item	Symbol	Rating	Unit	
Input	Power dissipation	P _D	100	mW
	Forward current	I _F	60	mA
	Reverse voltage	V _R	5	V
	Pulse forward current ^{*1}	I _{FP}	1	A
Output	Supply voltage	V _{CC}	17	V
	Low level output current	I _{CL}	30	mA
	Power dissipation	P	200	mW
Operating temp. ^{*2}		T _{opr.}	- 20 ~ + 85	
Storage temp. ^{*2}		T _{stg.}	- 30 ~ + 85	
Soldering temp. ^{*3}		T _{sol.}	260	

*1. pulse width : t_w 100 μsec.period : T=10msec.

*2. No icebound or dew

*3. For MAX.5 seconds at the position of 1mm from the package

ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25)

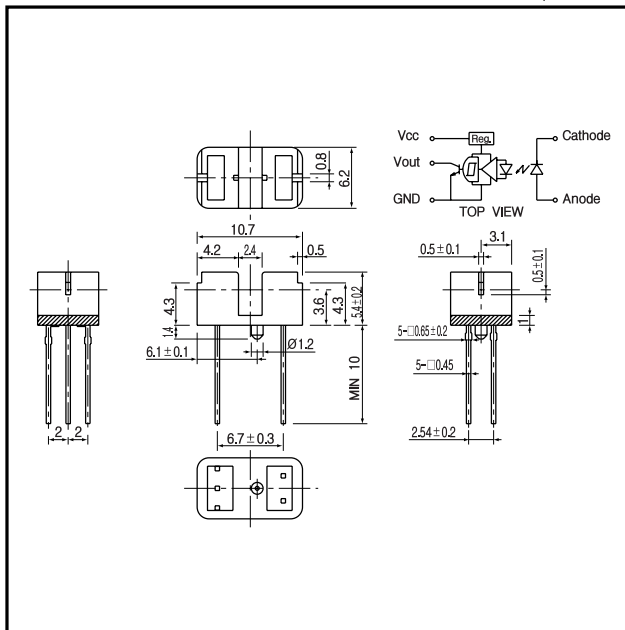
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Input	Forward voltage	I _F =20mA		1.2	1.4	V
	Reverse current	V _R =5V			10	μA
	Peak wavelength	I _F =20mA		940		nm
Input	Operating supply voltage rang		4.5		16.5	V
	Low level output voltage	V _{CC} = 5V, I _F = 0mA, t _L = 16mA		0.3	0.4	V
	High level output voltage	V _{CC} = 5V, I _F = 12mA, R _E = 10k	4.5			V
	Low level supply current	V _{CC} = 5V, I _F = 0mA		3	10	mA
	High level supply current	V _{CC} = 5V, I _F = 20mA		2	10	mA
Transmisson	L H threshold input current ^{*4}	V _{CC} = 5V, R _E = 10k		5	12	mA
	Hysteresis ^{*5}	V _{CC} = 5V, R _E = 10k	0.60	0.83	0.98	-
	L H propagation time	V _{CC} = 5V, I _F = 18mA, R _E = 3.3k		1		μsec.
	H L propagation time			3		μsec.
	Rise time			0.6		μsec.
Fall time			0.02		μsec.	

*4. I_{FHL} represents forward current when output changes from low to high.

*5. I_{FHL} represents forward current when output changes from high to low.

DIMENSIONS

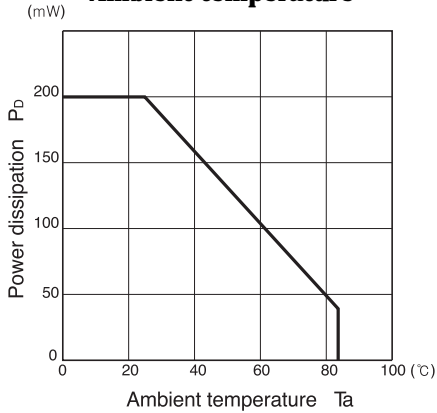
(Unit : mm)



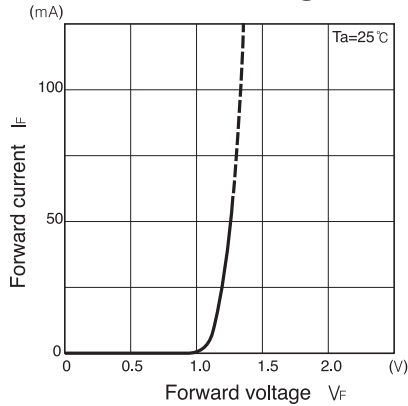
Photointerrupters(Transmissive)

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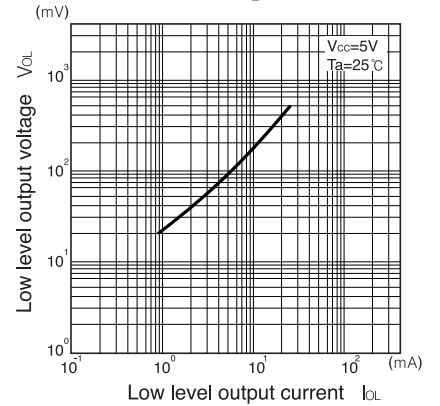
Power dissipation Vs. Ambient temperature



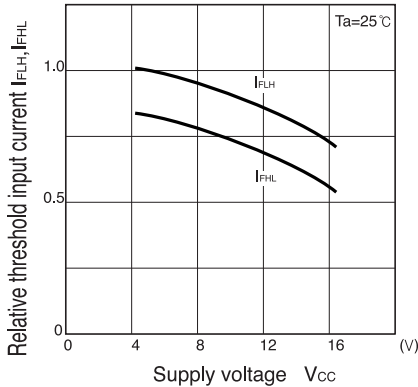
Forward current Vs. Forward voltage



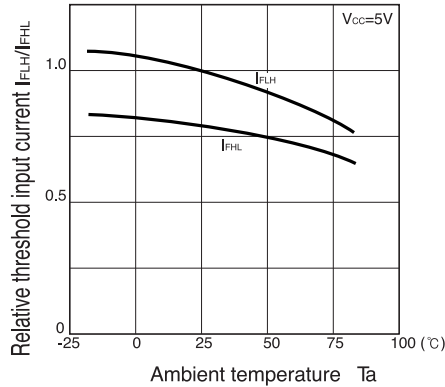
Low level output voltage Vs. Low level output current



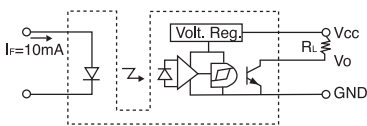
Relative threshold input current Vs. Supply voltage



Relative threshold input current Vs. Ambient temperature



Measurement of high level output voltage



Measurement of propagation time

