

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_{OL}	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 ꝑec.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)

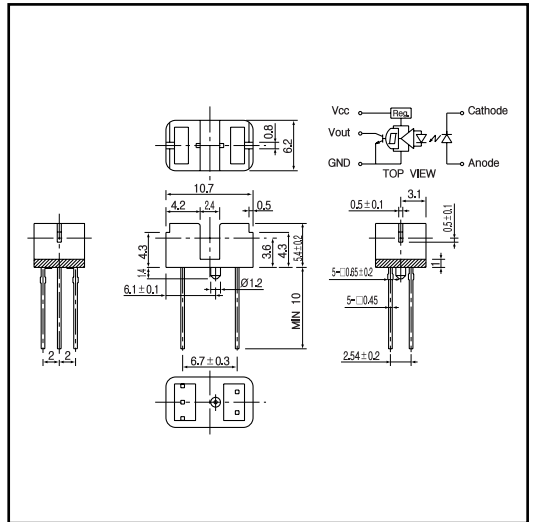
	Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Input	Forward voltage	V_F	$I_F=20mA$		1.2	1.4	V
	Reverse current	I_R	$V_R=5V$			10	μA
	Peak wavelength	λ_p	$I_F=20mA$		940		nm
Input	Operating supply voltage rang	V_{CC}		4.5		16.5	V
	Low level output voltage	V_{OL}	$V_{CC}=5V, I_F=0mA, I_{OL}=16mA$		0.3	0.4	V
	High level output voltage	V_{OH}	$V_{CC}=5V, I_F=12mA, R=10k$	4.5			V
	Low level supply current	I_{CCL}	$V_{CC}=5V, I_F=0mA$		3	10	mA
	High level supply current	I_{CCH}	$V_{CC}=5V, I_F=20mA$		2	10	mA
	Transmission	L H threshold input current ⁴⁾	I_{FHL}	$V_{CC}=5V, R=10k$		5	12
Hysteresis ⁵⁾		I_{FHL}/I_{FLH}	$V_{CC}=5V, R=10k$	0.60	0.83	0.98	-
L H propagation time		t_{PLH}	$V_{CC}=5V, I_F=18mA, R=3.3k$		1		$\mu sec.$
H L propagation time		t_{PHL}			3		$\mu sec.$
Rise time		t_r			0.6		$\mu sec.$
Fall time	t_f			0.02		$\mu sec.$	

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

⁵⁾ I_{PHL} represents forward current when output changes from high to low.

DIMENSIONS

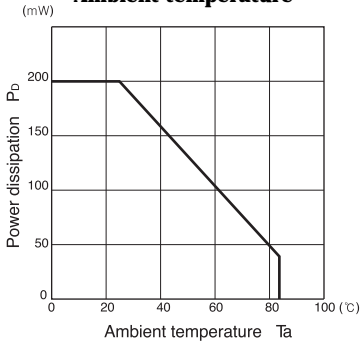
(Unit : mm)



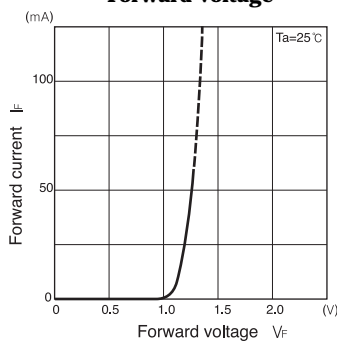
Photointerrupters(Transmissive)

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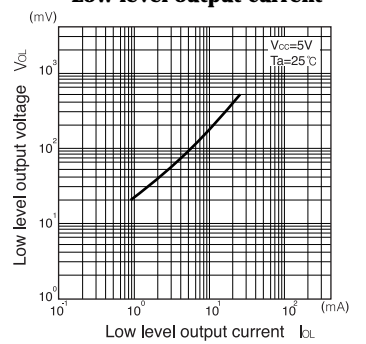
Power dissipation Vs. Ambient temperature



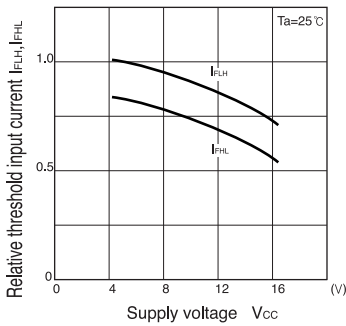
Forward current Vs. Forward voltage



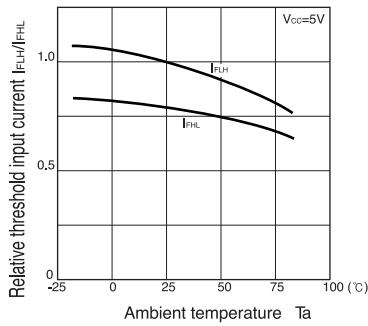
Low level output voltage Vs. Low level output current



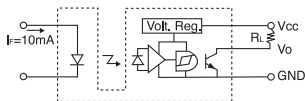
Relative threshold input current Vs. Supply voltage



Relative threshold input current Vs. Ambient temperature



Measurement of high level output voltage



Measurement of propagation time

