

LG - 205

The LG - 205 photointerrupter combine high output GaAs IRED with photo IC.

The sensor makes possible easy development of objectdetecting systems with high performance, high reliability and small equipment size.

FEATURES

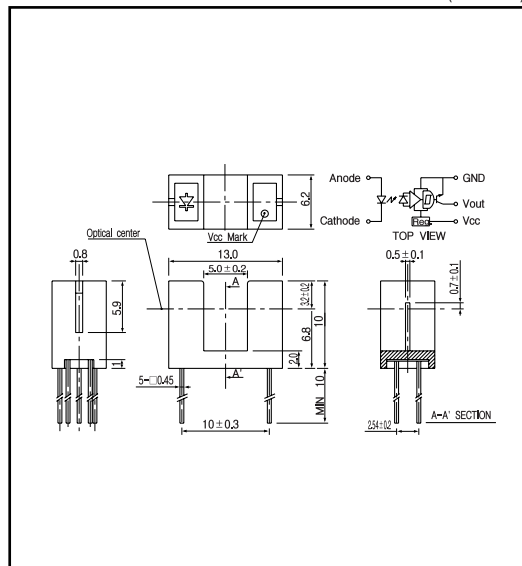
- Built - in amplifier
- Open collector output

APPLICATIONS

- Floppy disk drives
- Copiers
- Facsimiles

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25)

Item	Symbol	Rating	Unit
Input	Power dissipation	P _o	100
	Reverse voltage	V _R	5
	Forward current	I _F	60
Output	Supply voltage	V _{CC}	17
	Low level output current	I _{OL}	30
	Power dissipation	P	200
	Operating temp.	Topr.	- 20 ~ + 85
Storage temp.	Tstg.	- 30 ~ + 85	
Soldering temp.*1	Tsol.	260	

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

ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25)

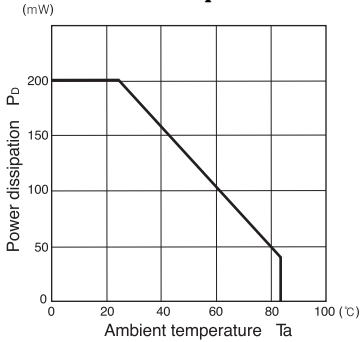
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Input	Forward voltage	V _F		1.2	1.4	V
	Reverse current	I _R	V _R = 5V		10	μA
	Peak wavelength	p		940		nm
Output	Operating supply voltage range	V _{CC}	4.5		16.5	V
	Low level output voltage	V _{OL}	I _{OL} = 16mA, V _{CC} = 5V, F = 0	0.3	0.4	V
	High level output voltage*2	V _{OH}	I _F = 12mA, V _{CC} = 5V, R _L = 10K	4.5		V
	Low level supply current	I _{CC(L)}	V _{CC} = 5V, F = 0		3	mA
	High level supply current	I _{CC(H)}	V _{CC} = 5V, F = 12mA		3	mA
Trans - mission	L _F H threshold input current	I _{FLH}	V _{CC} = 5V	5	12	mA
	Hysteresis	I _{FHL} /I _{FLH}	V _{CC} = 5V	0.5	0.80	0.95
	L _F H propagation time*3	t _{PLH}	V _{CC} = 5V, F = 18mA		1	5
	H _F L propagation time*3	t _{PHL}	R _L = 3.3K		3	15

*2,*3. refer to measurement diagram as right side.

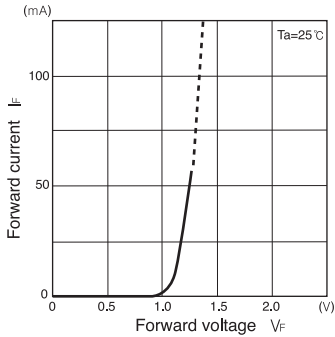
Photointerrupters(Transmissive)

LG - 205

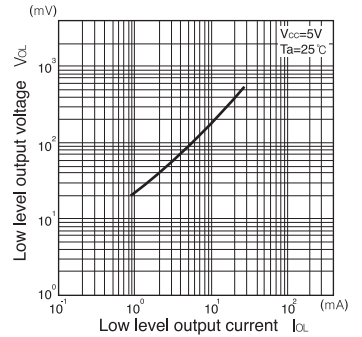
Power dissipation Vs. Ambient temperature



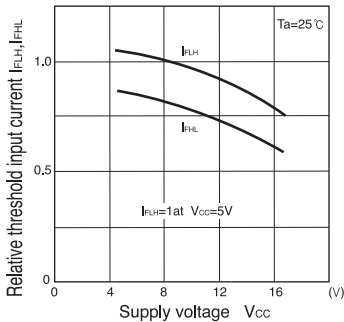
Forward current Vs. Forward voltage



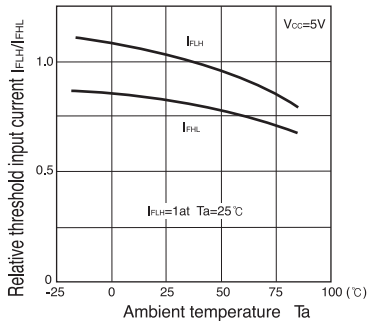
Low level output voltage Vs. Low level output current



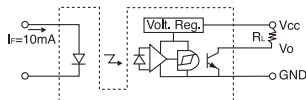
Relative threshold input current Vs. Supply voltage



Relative threshold input current Vs. Ambient temperature



Measurement of high level output voltage



Measurement of propagation time

