

# LG - 214

The LG - 214 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

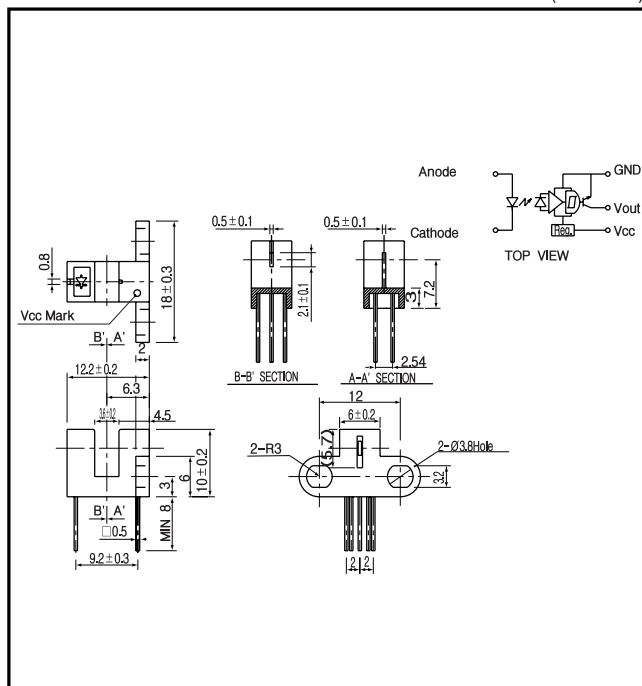
- Built - in amplifier
- Open collector output

### APPLICATIONS

- Floppy disk drives
- Copiers
- Facsimiles

### DIMENSIONS

(Unit : mm)



### MAXIMUM RATINGS

(Ta=25 )

Item	Symbol	Rating	Unit	
Input	Power dissipation	P <sub>D</sub>	100	mW
	Reverse voltage	V <sub>R</sub>	5	V
	Forward current	I <sub>F</sub>	60	mA
Output	Supply voltage	V <sub>CC</sub>	17	V
	Low level output current	I <sub>OL</sub>	30	mA
	Power dissipation	P	200	mW
Operating temp.		T <sub>opr.</sub>	- 20 ~ +85	
Storage temp.		T <sub>stg.</sub>	- 30 ~ +85	
Soldering temp. <sup>*1</sup>		T <sub>sol.</sub>	260	

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

### ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25 )

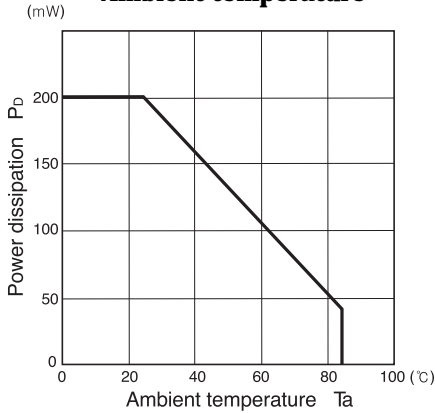
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Input	Forward voltage	V <sub>F</sub>		1.2	1.4	V
	Reverse current	I <sub>R</sub>	V <sub>R</sub> =5V		10	μA
	Peak wavelength	λ			940	nm
Output	Operating supply voltage range	V <sub>CC</sub>	4.5		16.5	V
	Low level output voltage	V <sub>OL</sub>	I <sub>OL</sub> =16mA, V <sub>CC</sub> =5V, f=0		0.4	V
	High level output voltage <sup>*2</sup>	V <sub>OH</sub>	I <sub>F</sub> =10mA, V <sub>CC</sub> =5V, R <sub>L</sub> =10K	4.5		V
	Low level supply current	I <sub>CCL</sub>	V <sub>CC</sub> =5V, f=0		3	mA
	High level supply current	I <sub>CCH</sub>	V <sub>CC</sub> =5V, f=10mA		3	mA
Trans- mission	L <sub>H</sub> H threshold input current	I <sub>FLH</sub>	V <sub>CC</sub> =5V		12	mA
	Hysteresis	I <sub>FHL</sub> /I <sub>FLH</sub>	V <sub>CC</sub> =5V	0.50	0.80	-
	L <sub>H</sub> H propagation time <sup>*3</sup>	t <sub>PLH</sub>	V <sub>CC</sub> =5V, f=18mA		1	μsec.
	H <sub>L</sub> L propagation time <sup>*3</sup>	t <sub>PHL</sub>	R <sub>L</sub> =3.3K		3	μsec.

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

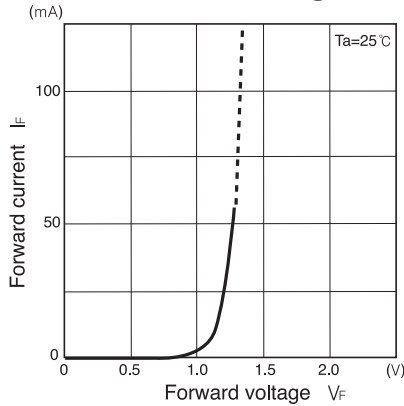
# Photointerrupters(Transmissive)

## LG - 214

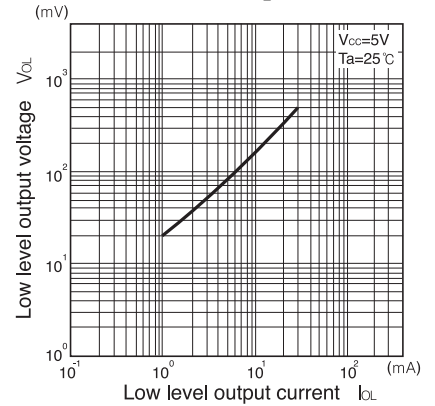
**Power dissipation Vs. Ambient temperature**



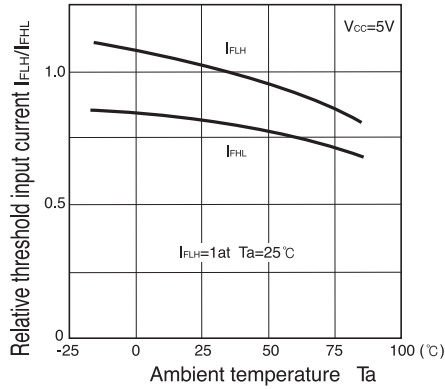
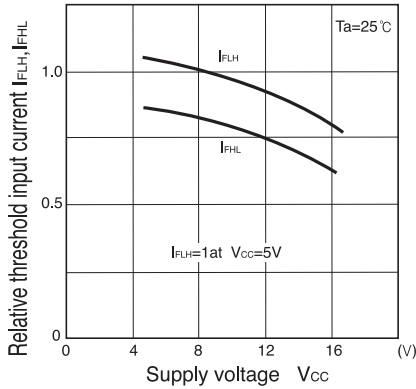
**Forward current Vs. Forward voltage**



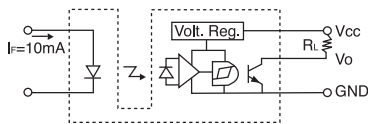
**Low level output voltage Vs. Low level output current**



**Relative threshold input current Vs. Supply voltage**      **Relative threshold input current Vs. Ambient temperature**



Measurement of high level output voltage



Measurement of propagation time

