

# 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

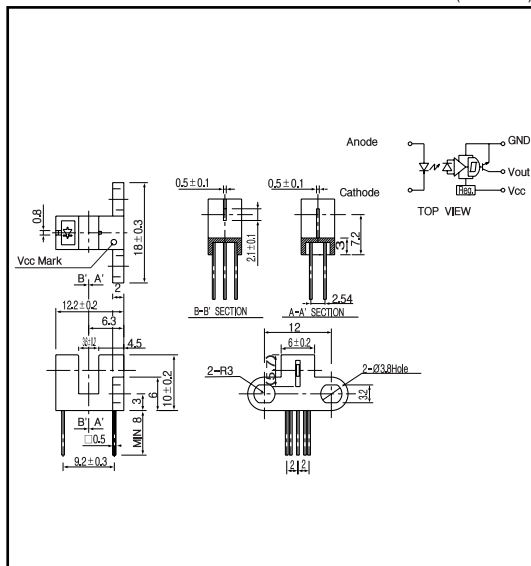
- Built - in amplifier
- Open collector output

### APPLICATIONS

- Floppy disk drives
- Copiers
- Facsimiles

### DIMENSIONS

(Unit : mm)



### MAXIMUM RATINGS

(Ta=25 )

Item	Symbol	Rating	Unit	
Input	Power dissipation	P <sub>b</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.*1		T <sub>sol.</sub>	260	

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

### ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25 )

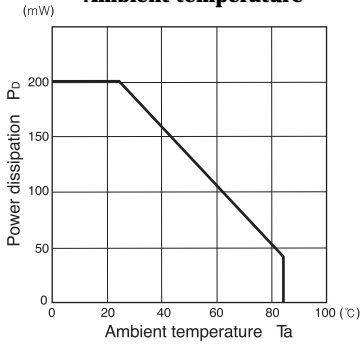
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.	
Input	Forward voltage	V <sub>f</sub>		1.2	1.4	V	
	Reverse current	I <sub>r</sub>	V <sub>r</sub> =5V		10	μA	
	Peak wavelength	p		940		nm	
Output	Operating supply voltage range	V <sub>cc</sub>	4.5		16.5	V	
	Low level output voltage	V <sub>OL</sub>	I <sub>OL</sub> =16mA, V <sub>cc</sub> =5V, f=0	0.3	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	10	mA	
	High level supply current	I <sub>CCH</sub>	V <sub>cc</sub> =5V, f=10mA	3	10	mA	
Transmission	L <sub>f</sub> H threshold input current	I <sub>FLH</sub>	V <sub>cc</sub> =5V	5	12	mA	
	Hysteresis	I <sub>FHL</sub> /I <sub>FLH</sub>	V <sub>cc</sub> =5V	0.50	0.80	0.95	-
	L <sub>f</sub> H propagation time <sup>-3</sup>	t <sub>PLH</sub>	V <sub>cc</sub> =5V, f=18mA	1	5	μsec.	
	H <sub>f</sub> L propagation time <sup>-3</sup>	t <sub>PHL</sub>	R <sub>L</sub> =3.3K	3	15	μsec.	

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

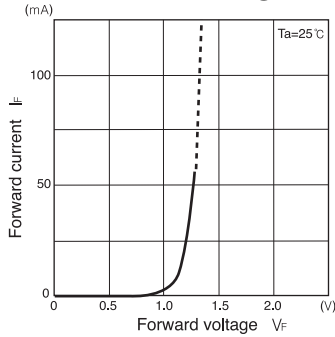
# Photointerrupters(Transmissive)

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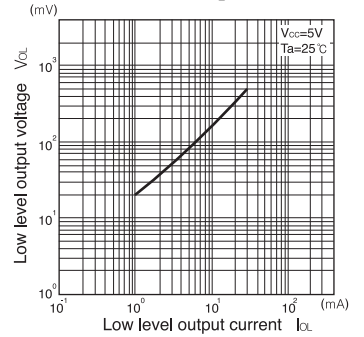
**Power dissipation Vs. Ambient temperature**



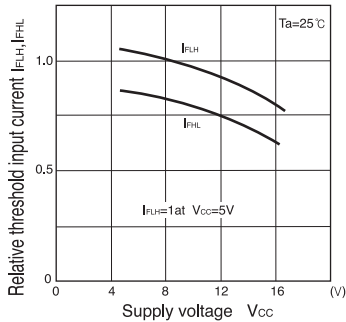
**Forward current Vs. Forward voltage**



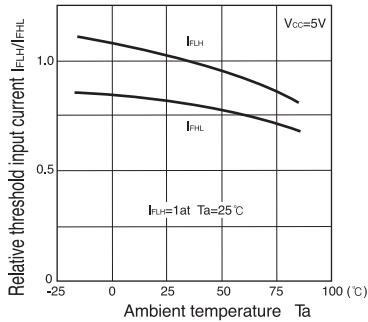
**Low level output voltage Vs. Low level output current**



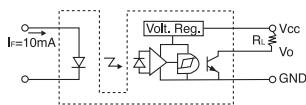
**Relative threshold input current Vs. Supply voltage**



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



Measurement of high level output voltage



Measurement of propagation time

