

LG23FFD

The LG23FFD photointerrupter combine high output GaAs IRED with Photo IC. The sensor makes possible easy development of object detecting systems with high performance, high reliability and small equipment size.

FEATURES

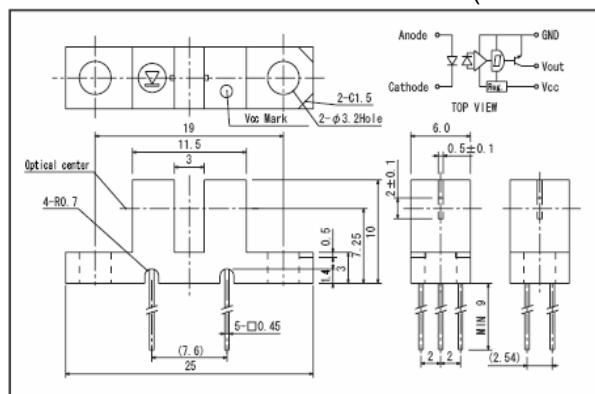
- PWB direct mount type
- GAP : 3.0mm

APPLICATIONS

- Copiers
- Facsimiles
- Auto stampers
- Ticket vending machines

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25°C)

Item	Symbol	Rating	Unit
Input	Power dissipation	P_D	100
	Forward current	I_F	60
	Reverse voltage	V_R	5
	Pulse forward current *1	I_{FP}	1
Output	Supply voltage	V_{CC}	17
	Low level output current	I_{OL}	30
	Power dissipation	P_O	200
Operating temp. *2		$T_{opr.}$	-20 ~ +85
Storage temp. *2		$T_{stg.}$	-30 ~ +85
Soldering temp. *3		$T_{sol.}$	260

*1. Pulse width : $t_w \leq 100 \mu s$, period $T = 10 ms$

*2. No icebound or dew

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

ELECTRO-OPTICAL CHARACTERISTICS

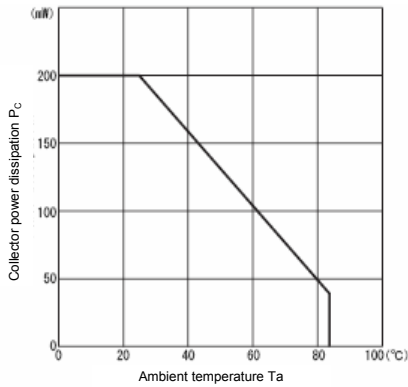
(Ta=25°C)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Input	Forward voltage	$I_F = 20 mA$	-	1.2	1.4	V
	Reverse current	$V_R = 5 V$	-	-	10	μA
	Peak wavelength	$I_F = 20 mA$	-	940	-	nm
Output	Operating supply voltage	-	4.5	-	16.5	V
	Low level output voltage	$V_{CC} = 5 V, I_F = 0 mA, I_{OL} = 16 mA$	-	0.3	0.4	V
	High level output voltage	$V_{CC} = 5 V, I_F = 20 mA, R_L = 10 k\Omega$	4.5	-	-	V
	Low level supply current	$V_{CC} = 5 V, I_F = 0 mA, R_L = 10 k\Omega$	-	3	10	mA
	High level supply current	$V_{CC} = 5 V, I_F = 20 mA, R_L = 10 k\Omega$	-	3	10	mA
Trans- mission	L→H threshold input current *4	$V_{CC} = 5 V, R_L = 10 k\Omega$	-	5	12	mA
	Hysteresis *5	$V_{CC} = 5 V, R_L = 10 k\Omega$	0.50	0.80	0.95	-
	L→H propagation time	$V_{CC} = 5 V, I_F = 18 mA, R_L = 3.3 k\Omega$	-	1	-	μs
	H→L propagation time		-	3	-	μs
	Rise time		-	0.6	-	μs
	Fall time		-	0.02	-	μs

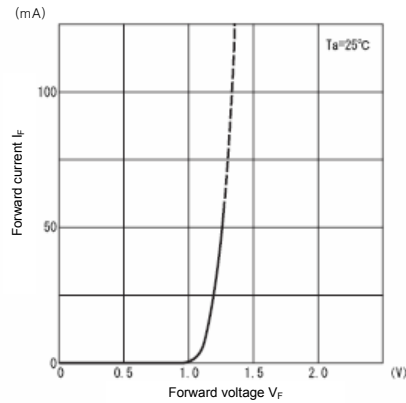
*4. I_{FLH} represents forward current when output changes from low to high.*5. I_{FHL} represents forward current when output changes from high to low.

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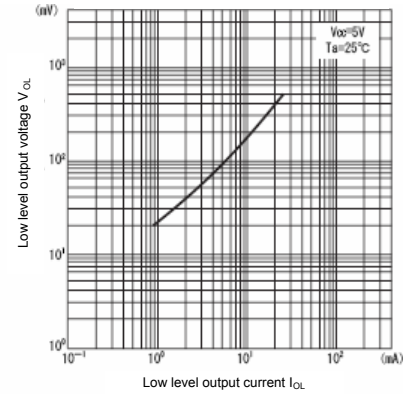
Collector power dissipation Vs.
Ambient temperature



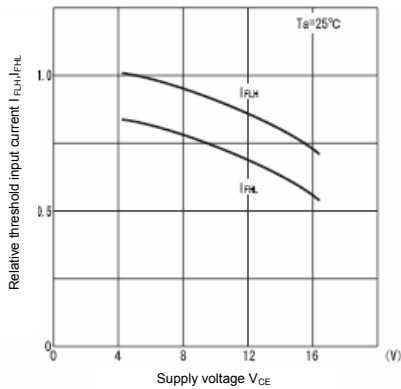
Forward current Vs.
Forward voltage



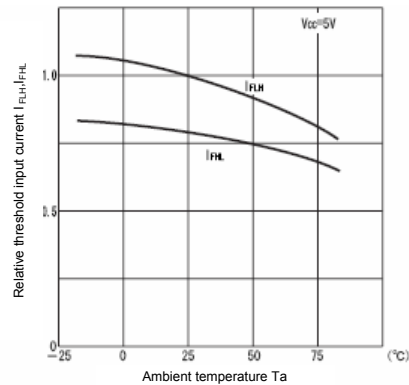
Low level output voltage Vs.
Low level output current



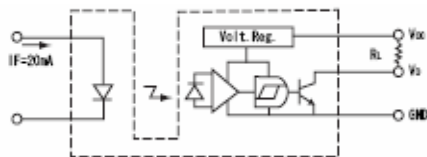
Relative threshold input current
Vs. Supply voltage



Relative threshold input current
Vs. Ambient temperature



Measurement of high level output voltage



Measurement of propagation time

