

SIC209D

Photo Interrupter

SIC209D is Transmission type photointerrupter combined high power GaAs IRED with Photo-IC. Being suitable for highly accurate position detecting, it is great help in developing an object detecting system of high performance and high reliability.

Features

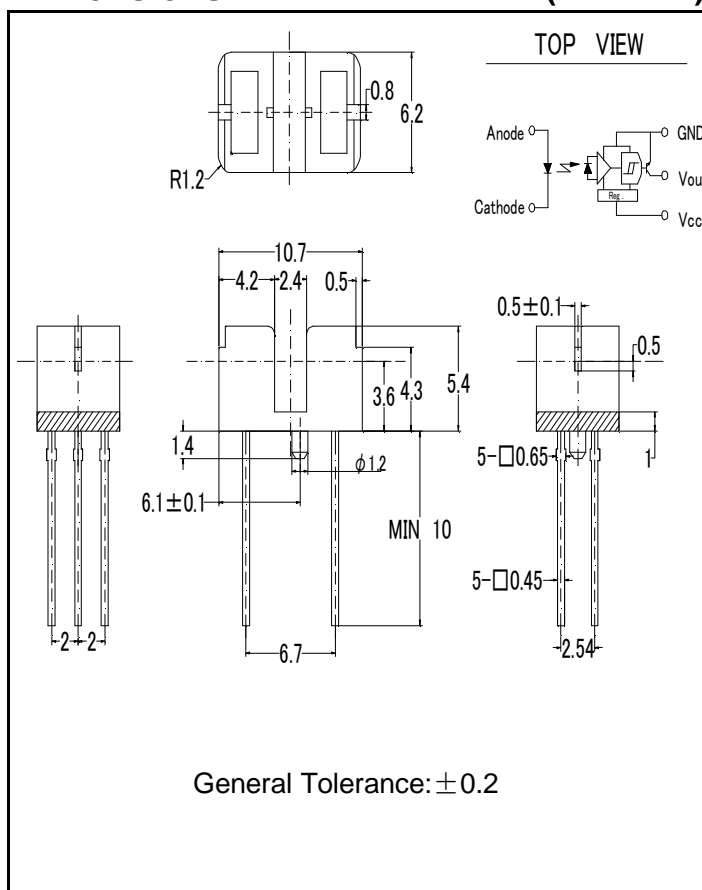
- PCB direct mount type
- GAP:2.4mm
- With the installation positioning boss
- Low-boy type (installation height: 5.4mm)

Application

- Printers
- Facsimiles
- Vending machines
- Amusement machines

Dimensions

(Unit: mm)



Maximum Ratings

(Ta=25°C)

Item		Symbol	Ratings	Unit
Input	Power dissipation	P_D	100	mW
	Forward current	I_F	60	mA
	Reverse voltage	V_R	5	V
Output	Supply voltage	V_{CC}	17	V
	Low level output current	I_{OL}	30	mA
	Power dissipation	P_O	200	mW
Operating temperature* 2		Topr.	-20~+85	°C
Storage temperature*2		Tstg.	-30~+85	°C
Soldering temperature * 3		Tsol.	260	°C

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

* 2 No icebound or dew

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

Electro-Optical Characteristics

(Ta=25°C)

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

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

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

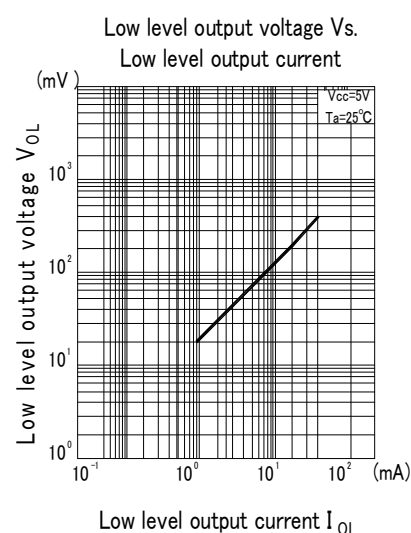
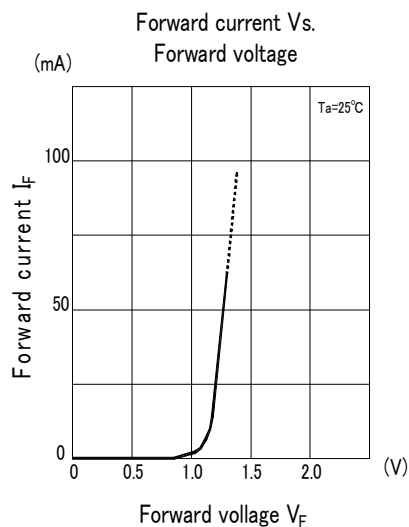
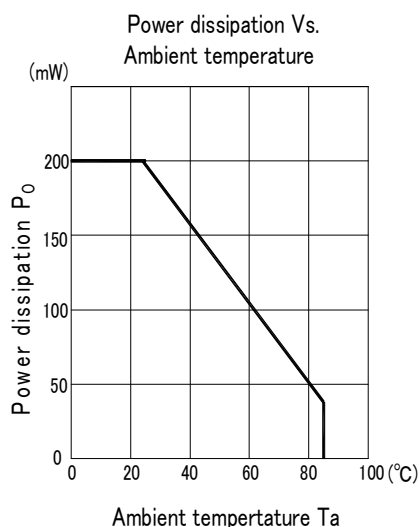
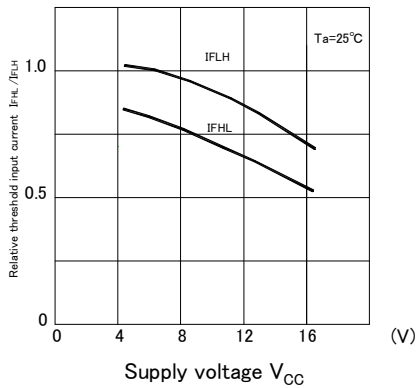


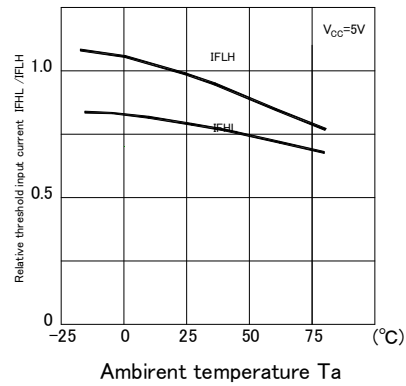
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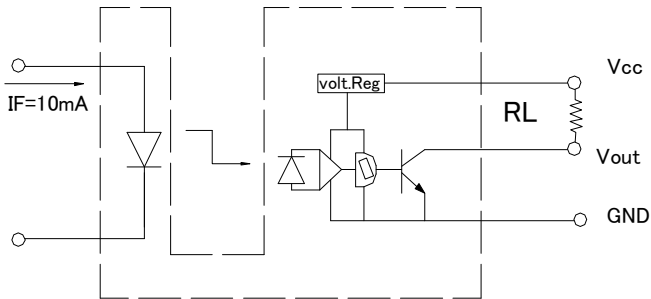
Relative threshold input current Vs.
Supply voltage



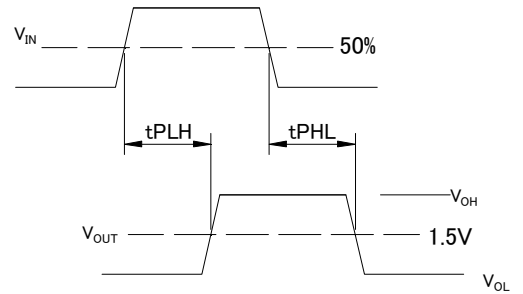
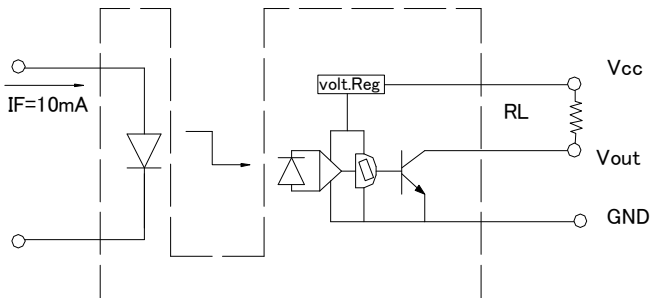
Relative threshold input current Vs.
Ambient temperature



Measurement of high output voltage



Measurement of propagation time



Packing Specification

- 1.Fixed quantity (max 1000pcs) of the products are packed into plastic bag
- 2.Six bags of the products are put into #2 box
- 3.Two #2 boxes are put into #3 box(max 12000pcs)
- 4.Packing slip is pasted on #3 box

