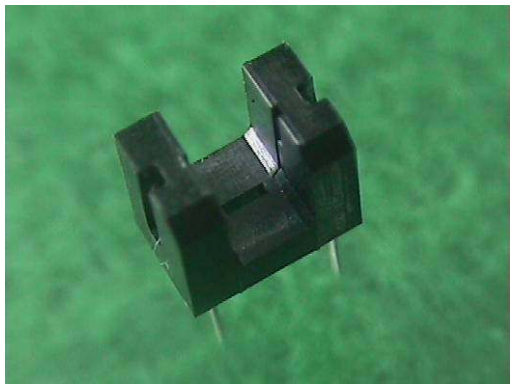
Ciel Light

RoHS

Photo Interrupters

CLI-233



Description

The CLI-233 is photo-interrupter high-performance standard type, combine high-output GaAs IRED with high sensitive photo-transistor.

Fetures

- PWB direct mount type
- GAP ; 3.0mm
- With the installation positioning boss
- Compact

Applications

- VTR
- Cassette mecha
- Car stereo
- Printers

Absolute Maximum Ratings

(Ta= 25°C)

Parameter		Symbol	Rating	Unit
Input	Power dissipation	P_O	75	mW
	Reverse voltage	V_R	5	V
	Forward current	I_F	50	mA
	Pulse forward current (tw = 100μs, T = 10ms)	I_{FP}	0.5	A
Output	Collector Power dissipation	P_C	75	mW
	Collector current	I_C	20	mA
	C-E voltage	V_{CEO}	30	V
	E-C voltage	V_{ECO}	5	V
Operating temp.		T_{OPR}	-20 85	°C
Storage temp.		T_{STG}	-30 100	°C
Soldering temp.*1		Tsol	260	°C

*1. For MAX. 5 seconds at the position of 2mm from the package

Electro-Optical Characteristics

(Ta= 25°C)

Parameter		Symbol	Conditions	Min	Typ	Max	Unit
Input	Forward voltage	V_F	I_F= 20mA	-	1.2	1.4	V
	Reverse current	I_R	V_R= 5V	-	-	10	μA
	Peak wavelength	λ_P	I_F= 20mA	-	940	-	nm
Output	Collector dark current	I_{CEO}	V_{CE}= 10V	-	1	100	μA
Light current		I_C	V_{CE}= 5V, I_F= 20mA (Nonshaging)	0.3	-	5	mA
Transmission leakage current		I_{CEOD}	V_{CE}= 5V, I_F= 20mA (Shaging)		0.5	10	μA
C-E saturation voltage		V_{CE}(sat)	I_F= 30mA, I_C= 0.1mA	-	0.15	0.4	V
Switching Speeds	Rise time	tr	V_{CC}= 5V, I_C= 0.1mA R_L= 1kΩ	-	50	-	μs
	Fall time	tf		-	50	-	μs

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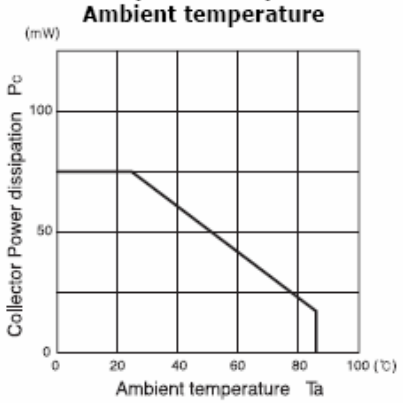
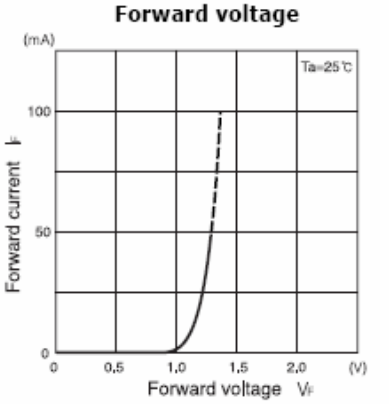
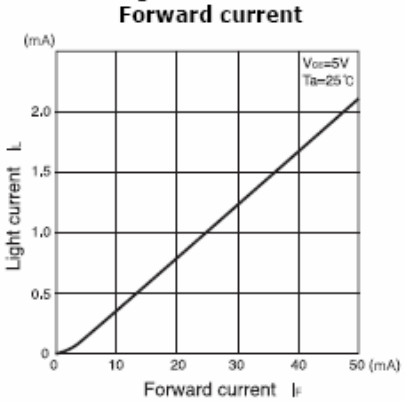
Collector power dissipation Vs. Ambient temperature



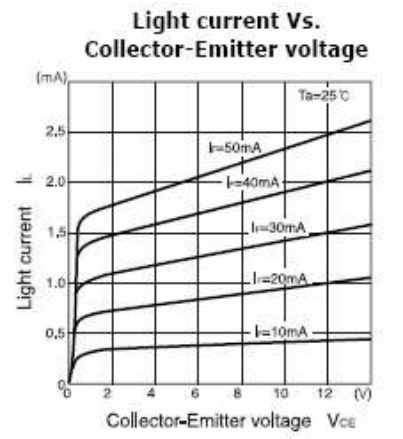
Forward current Vs. Forward voltage



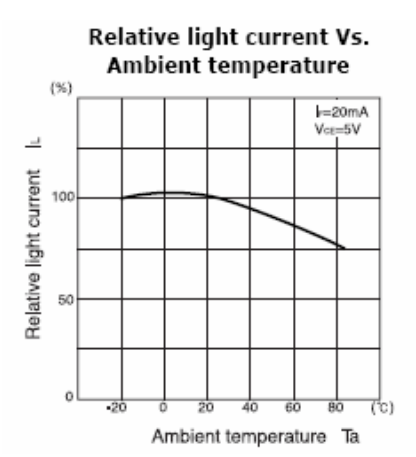
Light current Vs. Forward current



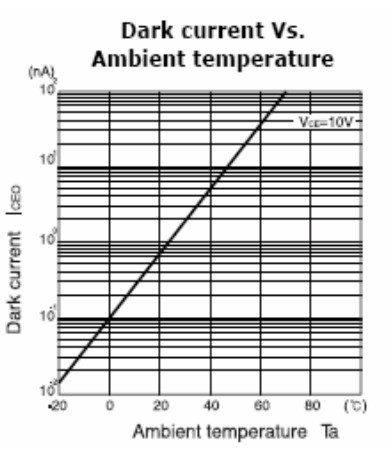
Light current Vs. Collector-Emitter voltage



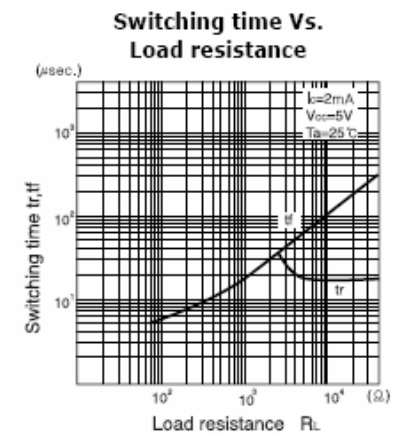
Relative light current Vs. Ambient temperature



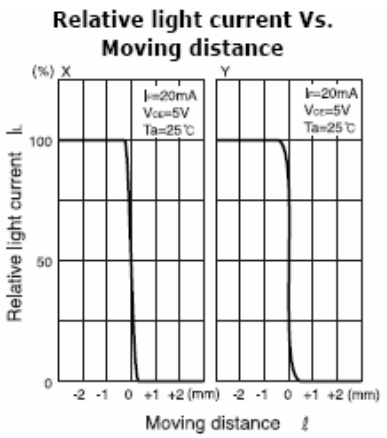
Dark current Vs. Ambient temperature



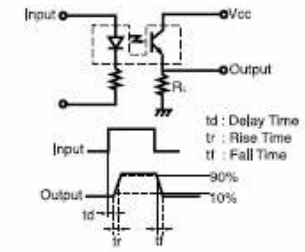
Switching time Vs. Load resistance



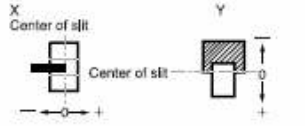
Relative light current Vs. Moving distance



Switching time measurement circuit



Method of measuring position detection characteristic



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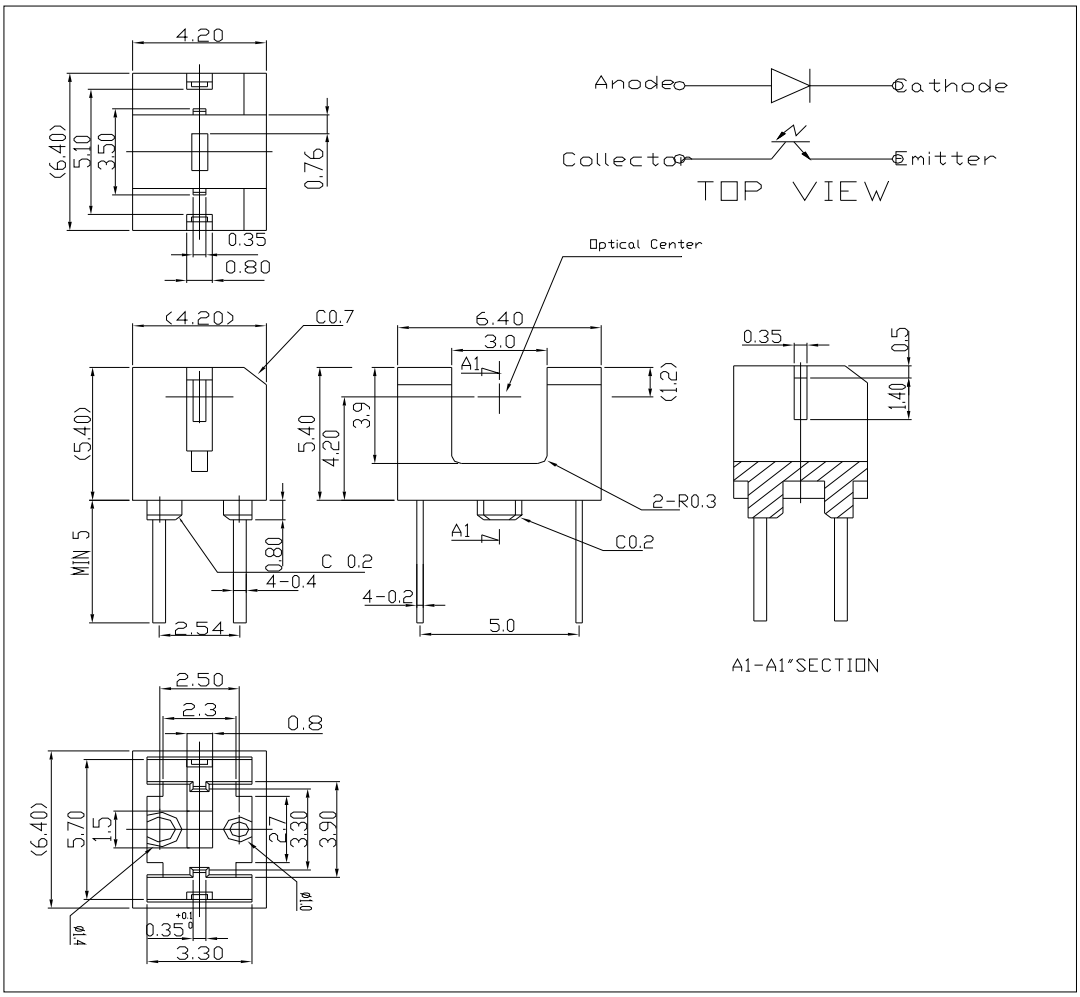
DIMEMSIONS

(Unit : mm)



RANK TABLE

A RANK	0.3 ~ 0.6 mA
B RANK	0.61 ~ 0.8 mA
C RANK	0.81 ~ 1.1 mA
D RANK	1.11 ~ 1.5 mA
E RANK	1.51 ~ 5.0 mA