

Photointerrupter, Taller type

Absolute maximum ratings ($T_a=25^\circ\text{C}$)

Parameter	Symbol	Limits	Unit
Forward current	I_F	50	mA
Reverse voltage	V_R	5	V
Power dissipation	P_D	80	mW
Collector-emitter voltage	V_{CEO}	30	V
Emitter-collector voltage	V_{ECO}	4.5	V
Collector current	I_C	30	mA
Collector power dissipation	P_C	80	mW
Operating temperature	T_{OPR}	-25 to +85	°C
Storage temperature	T_{STG}	-30 to +85	°C
Soldering temperature	T_{SOL}	260 / 3 * °C / s	

* 1.6mm from the body bottom.



Applications

Reel count sensor for VCR
DVD

Features

- 1) Tall package (Optical axis 20.75mm).
- 2) Small package due to the double-layer mold.
- 3) PPS package for heat resistance.

Electrical and optical characteristics ($T_a=25^\circ\text{C}$)

Input characteristics	Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions	
	Forward voltage	V_F	—	1.3	1.6	V	$I_F=50\text{mA}$	
	Reverse current	I_R	—	—	10	μA	$V_R=5\text{V}$	
	Dark current	I_{CEO}	—	—	0.5	μA	$V_{CE}=10\text{V}$	
	Peak sensitivity wavelength	λ_P	—	800	—	nm	—	
Transfer characteristics	Collector current	I_C	0.2	0.7	2.0	mA	$V_{CE}=5\text{V}$, $I_F=20\text{mA}$	
	Collector-emitter saturation voltage	$V_{CE(sat)}$	—	—	0.4	V	$I_F=20\text{mA}$, $I_C=0.1\text{mA}$	
	Rise time	t_r	—	10	—	μs	$V_{CC}=5\text{V}$, $I_F=20\text{mA}$, $R_L=100\Omega$	
	Fall time	t_f	—	10	—	μs		
Infrared light emitting diode	Cut-off frequency	f_c	—	1	—	MHz	$I_F=50\text{mA}$	
	Peak light emitting wavelength	λ_P	—	950	—	nm	* Non-coherent Infrared light emitting diode used.	
Photo transistor	Response time	$t_r \cdot t_f$	—	10	—	μs	$V_{CC}=5\text{V}$, $I_C=1\text{mA}$, $R_L=100\Omega$	* This product is not designed to be protected against electromagnetic wave.
	Maximum sensitivity wavelength	λ_P	—	800	—	nm	—	

Electrical and optical characteristics curves

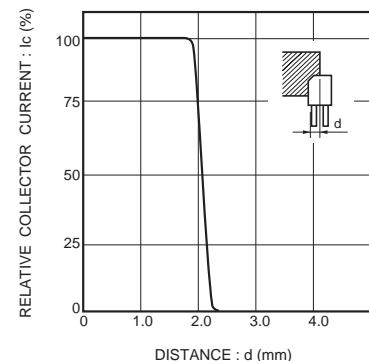


Fig.1 Relative output vs. distance (I)

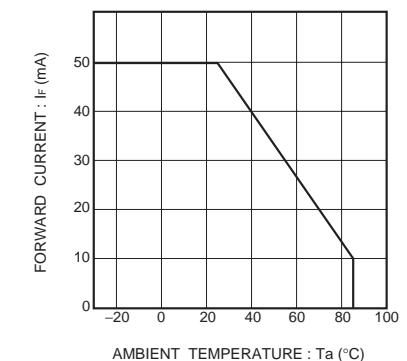


Fig.2 Forward current falloff

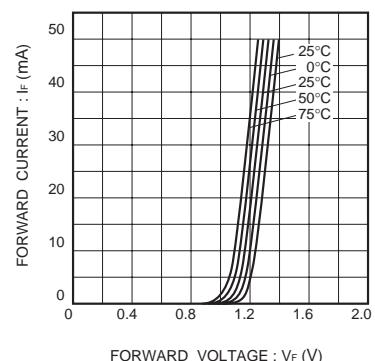


Fig.3 Forward current vs. forward voltage

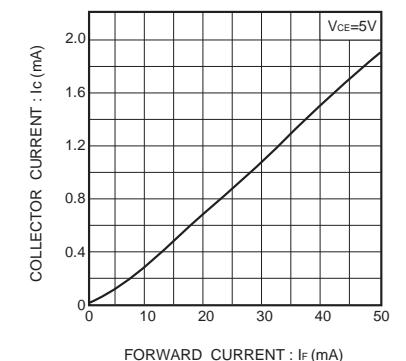


Fig.7 Collector current vs. forward current

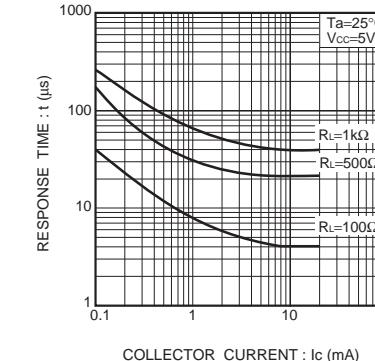


Fig.8 Response time vs. collector current

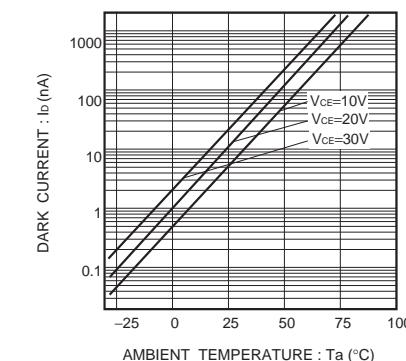


Fig.9 Dark current vs. ambient temperature

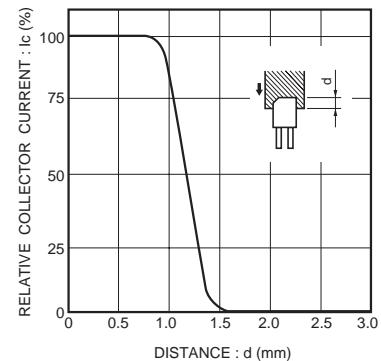


Fig.4 Relative output vs. distance (II)

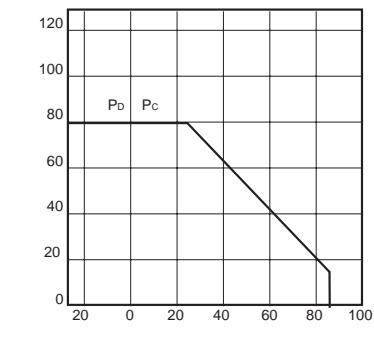


Fig.5 Relative output vs. ambient temperature

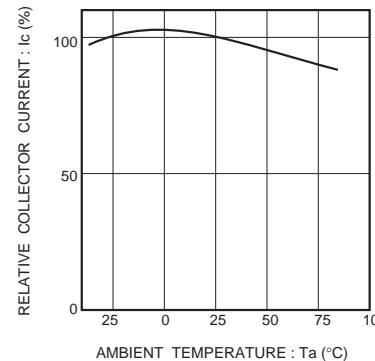


Fig.10 Output characteristics

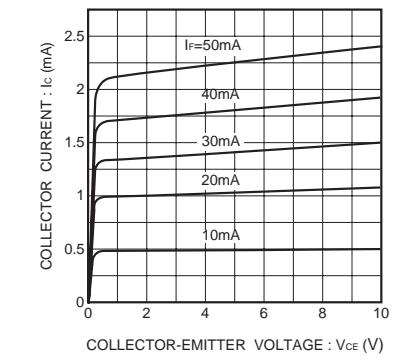
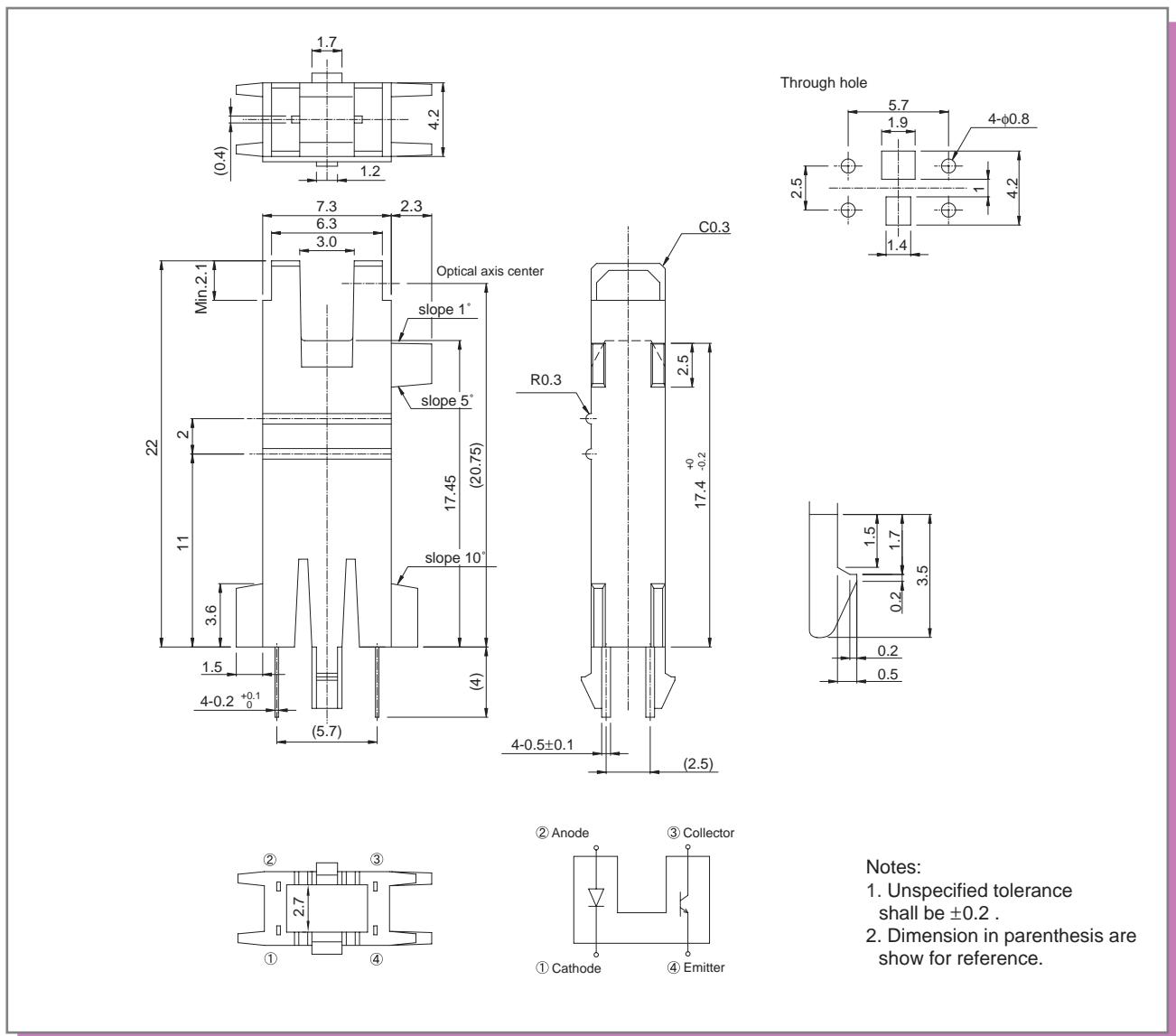


Fig.11 Response time measurement circuit

External dimensions (Unit : mm)



Appendix

Notes

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ООО "ЛайфЭлектроникс"

"LifeElectronics" LLC

ИНН 7805602321 КПП 780501001 Р/С 40702810122510004610 ФАКБ "АБСОЛЮТ БАНК" (ЗАО) в г.Санкт-Петербурге К/С 30101810900000000703 БИК 044030703

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- Комплексную поставку.
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- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

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- Техническую поддержку проекта.
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Тел: +7 (812) 336 43 04 (многоканальный)
Email: org@lifeelectronics.ru