## Photointerrupter, Ultraminiature SMD type

## Absolute maximum ratings (Ta=25°C)

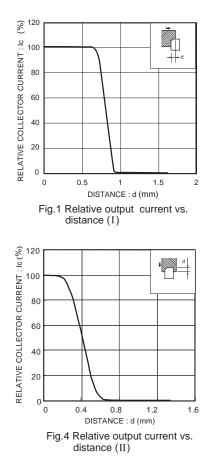
	Parameter	Symbol	Limits	Unit
ED)	Forward current	lF	30	mA
Input (LED)	Reverse voltage	VR	5	V
lnpu	Power dissipation	PD	80	mW
	Collector-emitter voltage	Vceo	30	V
Output (photo- transistor)	Emitter-collector voltage	Veco	4.5	V
Outpohot	Collector current	lc	30	mA
0 H	Collector power dissipation	Pc	80	mW
Operating temperature		Topr	-25 to +85	°C
	Storage temperature	Tstg	-30 to +85	°C

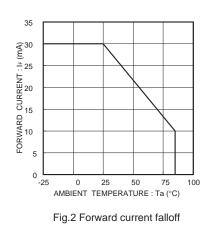
Electrical and optical characteristics (Ta=25°C)



Parameter			Symbol	Min.	Тур.	Max.	Unit	Conditions
Input charac- teristics	Forward voltage		VF	1.2	1.35	1.5	V	IF=5mA
	Reverse current		IR	-	-	10	μΑ	Vr=5V
Output charac- teristics	Dark current		ICEO	-	-	0.1	μΑ	Vce=10V
	Peak sensitivity wavelength		λp	-	800	-	nm	_
	Collector current		Ic1	5.0	-	25	mA	Vce=5V, IF=20mA
Transfer characteristics			Ic2	1.0	-	5	mA	Vce=5V, IF=5mA
	Collector-emitter saturation voltage		VCE(sat)	-	-	0.4	V	IF=20mA, Ic=0.1mA
	Response time	Rise time	tr	-	10	-	μs	Vcc=5V, I⊧=20mA, R∟=100Ω
		Fall time	tf	-	10	-	μs	VCC=5V, IF=20IIIA, RL=10002
red ter e	Cut-off frequency		fc	-	1	-	MHz	Ir=5mA * Non-coherent Infrared light emitting diode used.
Infrared light emitter diode	Peak light emitting wavelength		λρ	-	850	-	nm	
Photo transistor	Response time		tr•tf	_	10	_	μs	$\begin{array}{l} V_{cc}{=}5V, \ lc{=}1mA, \ R_{L}{=}100\Omega \\ {*} \ This \ product \ is \ not \ designed \ to \ be \ protected \ against \ electromagnetic \ wave. \end{array}$
	Maximum sensitivity wavelength		λP	-	800	-	nm	_

## Electrical and optical characteristics curves





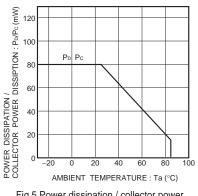
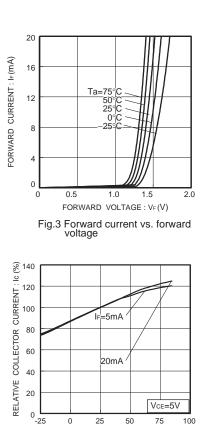


Fig.5 Power dissipation / collector power dissipation vs. ambient temperature





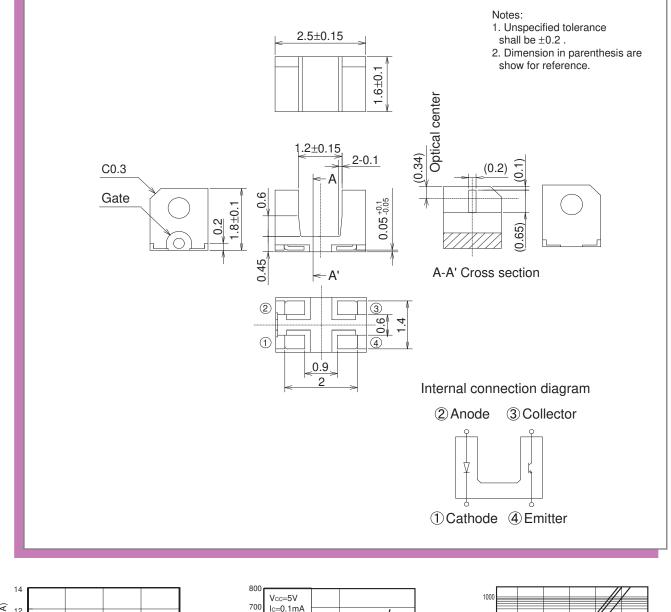
50

75

100

25

0



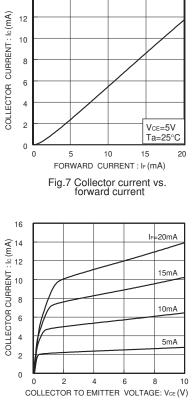
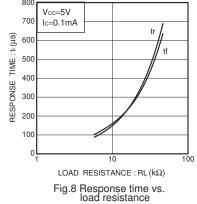
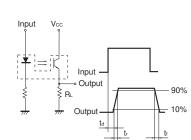
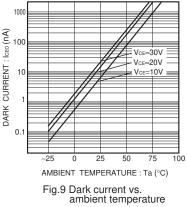


Fig.10 Output characteristics







 $t_{\,\rm r}$  :Rise time (time for output current to rise from

 $t_{\rm f}$  :Fall time (time for output current to fall from 90%

10% to 90% of peak current)

to 10% of peak current)

td : Delay time

	copying or reproduction of this document, in part or in whole, is permitted without the sent of ROHM Co.,Ltd.
The	content specified herein is subject to change for improvement without notice.
"Pro	content specified herein is for the purpose of introducing ROHM's products (hereinafte oducts"). If you wish to use any such Product, please be sure to refer to the specifications ch can be obtained from ROHM upon request.
illus	mples of application circuits, circuit constants and any other information contained herein trate the standard usage and operations of the Products. The peripheral conditions mus aken into account when designing circuits for mass production.
Hov	at care was taken in ensuring the accuracy of the information specified in this document vever, should you incur any damage arising from any inaccuracy or misprint of sucl rmation, ROHM shall bear no responsibility for such damage.
exa imp othe	technical information specified herein is intended only to show the typical functions of and mples of application circuits for the Products. ROHM does not grant you, explicitly o licitly, any license to use or exercise intellectual property or other rights held by ROHM and er parties. ROHM shall bear no responsibility whatsoever for any dispute arising from the of such technical information.
equ	Products specified in this document are intended to be used with general-use electronic ipment or devices (such as audio visual equipment, office-automation equipment, commution devices, electronic appliances and amusement devices).
The	Products specified in this document are not designed to be radiation tolerant.
	le ROHM always makes efforts to enhance the quality and reliability of its Products, a duct may fail or malfunction for a variety of reasons.
aga failu sha	ase be sure to implement in your equipment using the Products safety measures to guard inst the possibility of physical injury, fire or any other damage caused in the event of the ire of any Product, such as derating, redundancy, fire control and fail-safe designs. ROHN Il bear no responsibility whatsoever for your use of any Product outside of the prescribed pe or not in accordance with the instruction manual.
syst may inst con of t	Products are not designed or manufactured to be used with any equipment, device or tem which requires an extremely high level of reliability the failure or malfunction of which result in a direct threat to human life or create a risk of human injury (such as a medica rument, transportation equipment, aerospace machinery, nuclear-reactor controller, fuel- troller or other safety device). ROHM shall bear no responsibility in any way for use of any he Products for the above special purposes. If a Product is intended to be used for an h special purpose, please contact a ROHM sales representative before purchasing.
be o	bu intend to export or ship overseas any Product or technology specified herein that ma controlled under the Foreign Exchange and the Foreign Trade Law, you will be required to ain a license or permit under the Law.



Thank you for your accessing to ROHM product informations. More detail product informations and catalogs are available, please contact us.

## ROHM Customer Support System

http://www.rohm.com/contact/