



BRIGHT LED ELECTRONICS CORP.

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Revision: 1.0



Commodity: Photo Interrupter

Device Number : BPI-3C1-05

Sheet Date	1	2	3	4	5	6			Contents
2001.12.20	1.0	1.0	1.0	1.0	1.0	1.0			Initial Released
2002.01.08	1.0	1.0	1.1	1.0	1.0	1.1			1. Packaging Dimensions: Lead Distance: 9.12mm~3.5mm 2. Packaging Bag Dimensions

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BRIGHT LED ELECTRONICS

Photo Interrupter Specification

Device Number : BPI-3C1-05
 Absolute Maximum Rating (Ta=25)

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Item		Symbol	Rating	Unit
Input	Power Dissipation	Pd	75	mW
	Reverse Voltage	V _R	5	V
	Forward Current	I _F	50	mA
	Peak Forward Current (*1)	I _{FP}	1	A
Output	Collector Power Dissipation	P _C	100	mW
	Collector Current	I _C	40	mA
	C-E Voltage	V _{CEO}	30	V
	E-C Voltage	V _{ECO}	5	V
Operating Temperature		Topr	-25 ~ +85	
Storage Temperature		Tstg	-40 ~ +100	
Soldering Temperature (*2)		Tsol	260	

(*1) tw=100 uSec., T=10 mSec.

(*2) t=5 Sec

Electrical Optical Characteristics (Ta=25)

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Input	Forward Voltage	V _F	I _F =20mA	—	1.2	1.5	V
	Reverse Current	I _R	V _R =5V	—	—	10	μ A
	Peak Wavelength	ρ	I _F =10mA		940		nm
Output	Dark Current	I _D	V _{CE} =10V	—	—	100	nA
	C-E Saturation Voltage	V _{CE(sat)}	I _C =0.25mA I _F =10mA	—	—	0.4	V
Light Current		I _L	V _{CE} =5V I _F =10mA	0.5	—	10	mA
Speed	Rise Time	Tr	I _{FP} =20mA V _{CE} =5V	—	15	—	μ sec
	Fall Time	Tf	R _L =1000	—	20	—	μ sec

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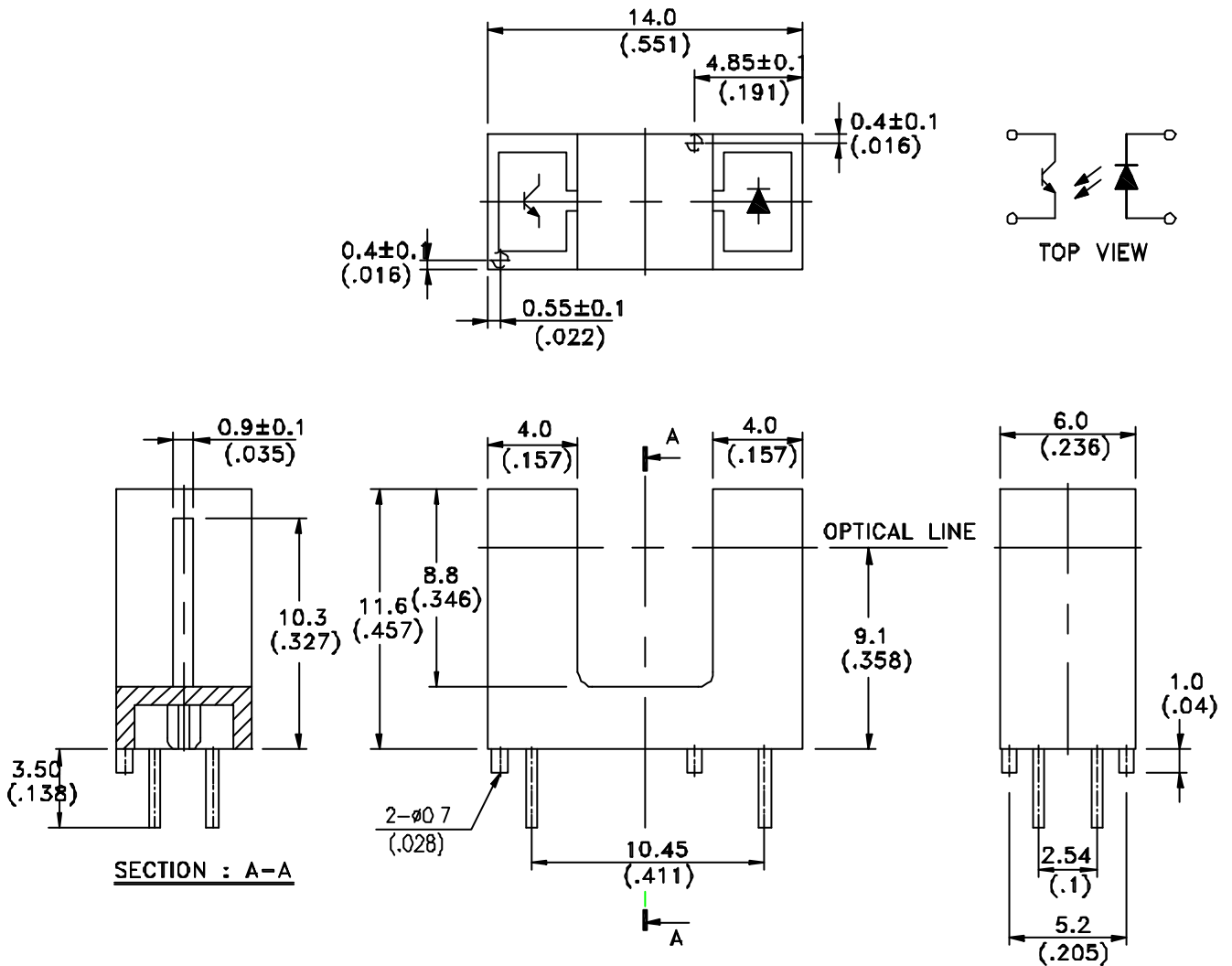
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Package Dimensions :



Notes:

1. All dimensions are in millimeters.
2. Tolerance is ± 0.25 mm unless otherwise specified.
3. Lead spacing is measured where the leads emerge from the package.
4. Specifications are subject to change without notice.

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Typical Electrical / Optical Characteristics Curves (Ta=25 °C)

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Fig.1 Power Dissipation vs. Ambient Temperature

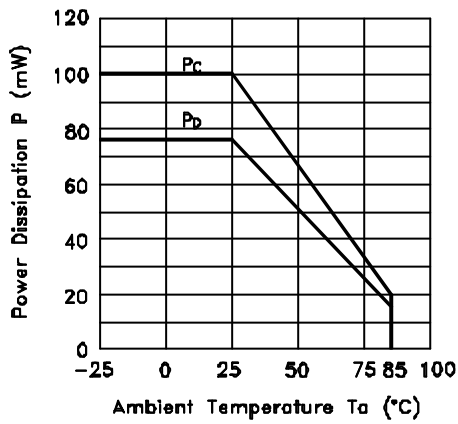


Fig.2 Forward Current vs. Forward Voltage

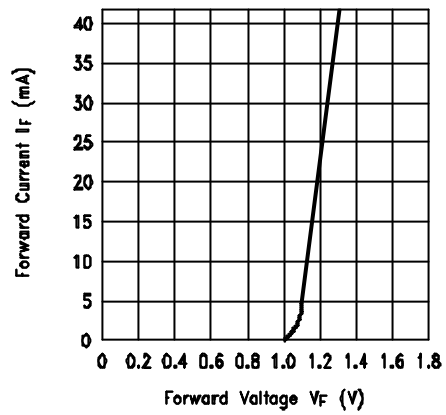


Fig.3 Collector Current vs. Collector-emitter Voltage

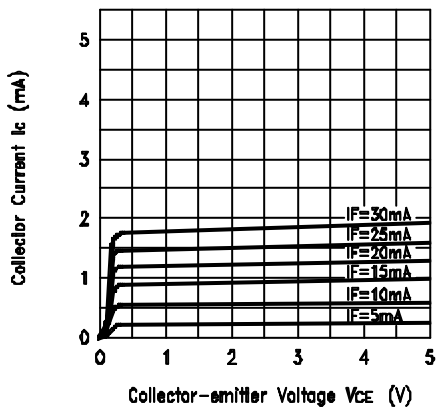
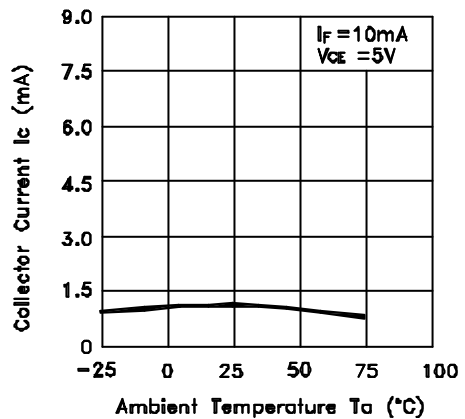


Fig.4 Collector Current vs. Ambient Temperature



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Typical Electric / Optical Characteristics Curves (Ta=25 °C)

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Fig.5 Collector-emitter Saturation Voltage vs. Ambient Temperature

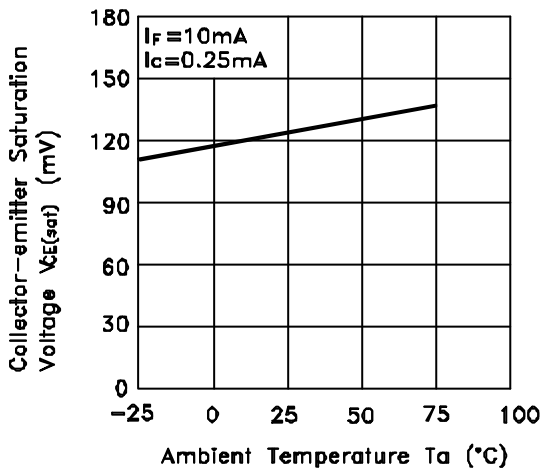
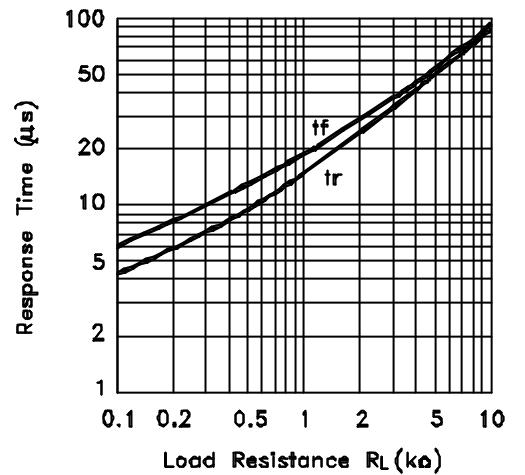
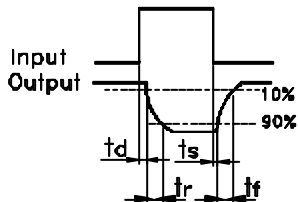
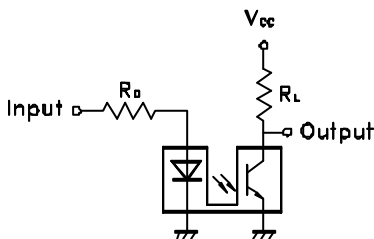


Fig.6 Response Time vs. Load Resistance



Test Circuit for Response Time

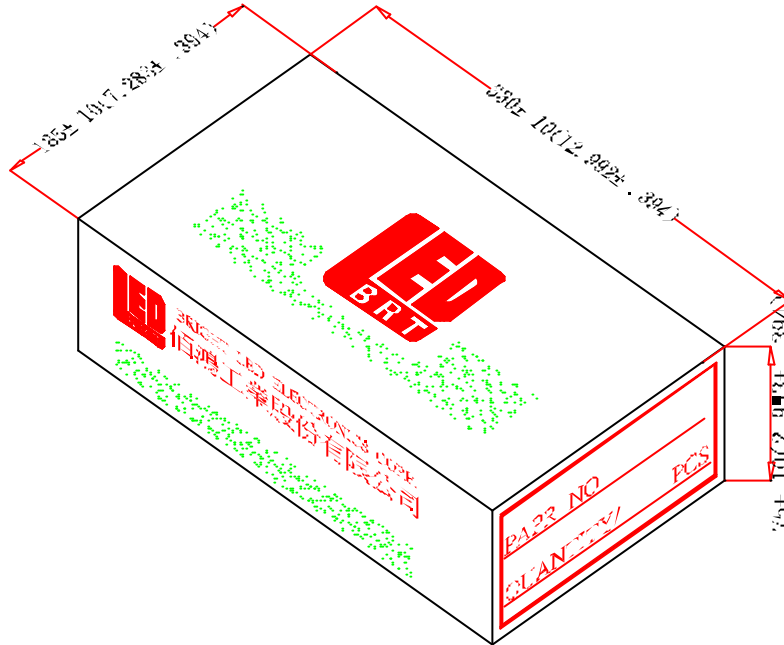


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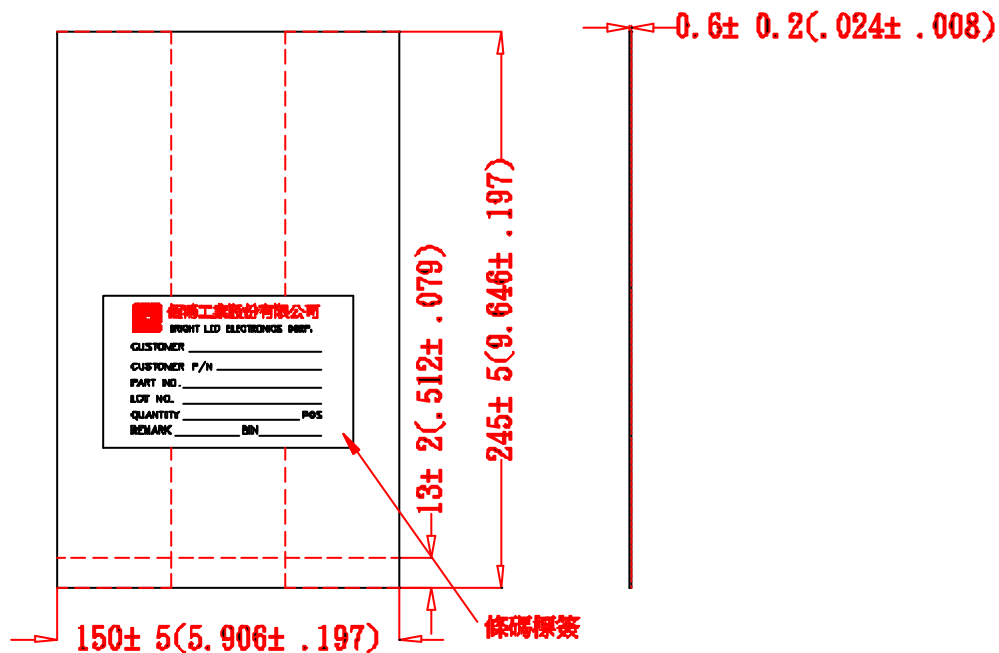
Packaging Dimensions

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Packaging Box Dimensions



Packaging Bag Dimensions



Notes:

1. 250PCS PER BAG, 1KPCS PER BOX.
2. All Dimensions are in millimeters (inches).
3. Specifications are subject to change without notice.