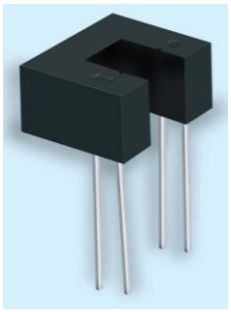
EVERLIGHT AMERICAS

DATASHEET

Technical Data Sheet
Opto Interrupter
EAITRDA2



Features

- Fast response time
- High analytic
- High sensitivity
- Cut-off visible wavelength λP=940nm
- Pb Free
- This product itself will remain within RoHS compliant version.

Description

The **EAITRDA2** consist of an infrared emitting diode and an NPN silicon phototransistor, encased side-by-side on converging optical axis in a black thermoplastic housing,
The phototransistor receives radiation from the IRED only .This is the normal situation.
But when an object is in between , phototransistor could not receives the radiation.
For additional component information , please refer to IR928-6C-F and PT928-6C-F

Applications

- Mouse Copier
- Switch Scanner
- Floppy disk driver
- Non-contact Switching
- For Direct Board

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Device Selection Guide

Device No.	Chip Material	LENS COLOR
IR	GaAlAs	Water clear
PT	Silicon	Water clear

Absolute Maximum Ratings (Ta=25℃)

Parameter		Symbol	Ratings	Unit
Input	Power Dissipation at(or below) 25℃ Free Air Temperature	Pd	75	mW
	Reverse Voltage	V_R	5	V
	Forward Current	I_F	50	mA
	Peak Forward Current (*1) Pulse width ≦100μs, Duty cycle=1%	I_{FP}	1	A
Output	Collector Power Dissipation	P_C	75	mW
	Collector Current	I_C	20	mA
	Collector-Emitter Voltage	B V_{CEO}	30	V
	Emitter-Collector Voltage	B V_{ECO}	5	V
Operating Temperature		Topr	-25~+85	℃
Storage Temperature		Tstg	-40~+100	℃
Lead Soldering Temperature (*2) (1/16 inch form body for 5 seconds)		Tsol	260	℃

Notes: (＊1) tw=100 μsec. , T=10 msec. (＊2) t=5 Sec

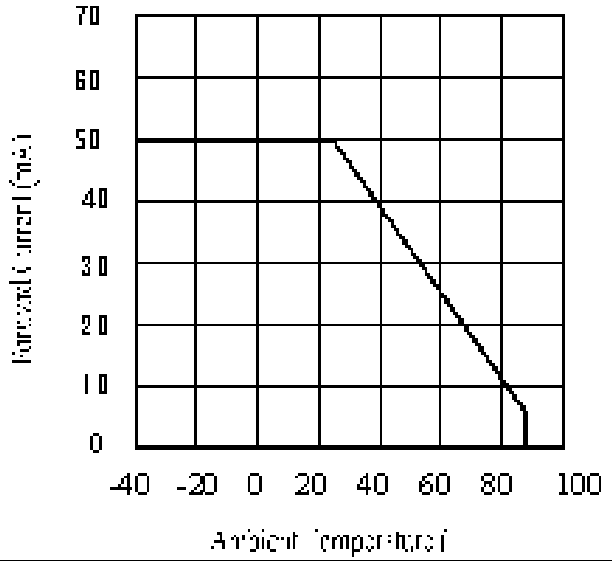
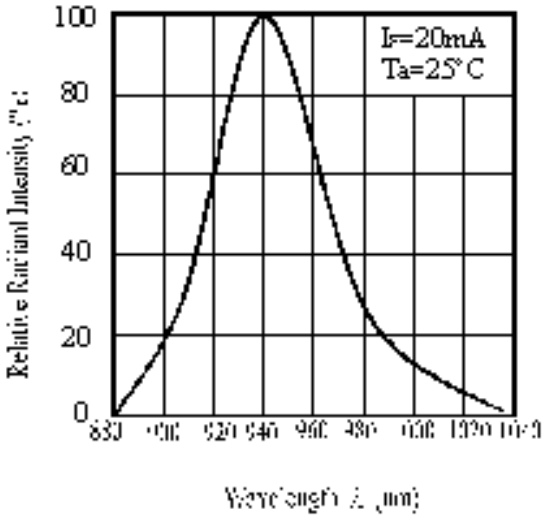
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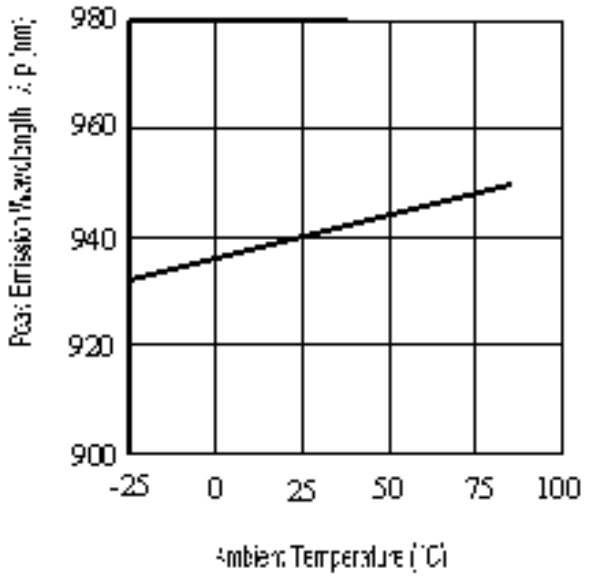
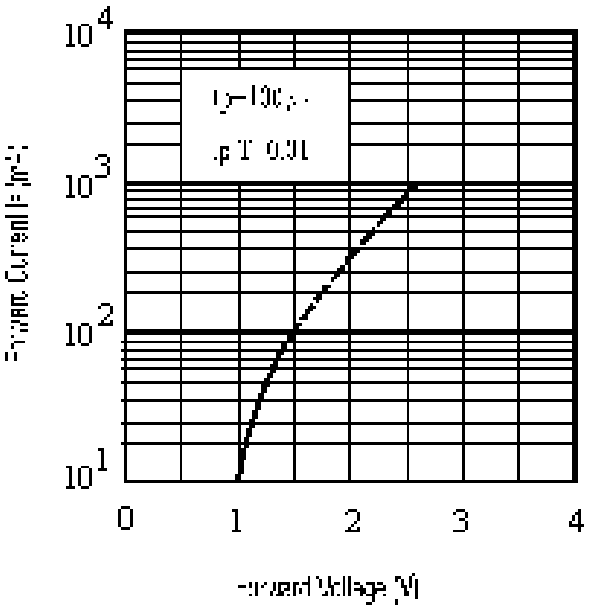
Electro-Optical Characteristics (Ta=25℃)

Parameter		Symbol	Min.	Typ.	Max.	Unit	Condition
Input	Forward Voltage	V_F	-	1.2	1.5	V	I_F=20mA
	Reverse Current	I_R	-	-	10	μA	V_R=5V
	Peak Wavelength	λ_P	-	940	-	nm	I_F=20mA
Output	Dark Current	I_{CEO}	-	-	100	nA	V_{CE}=20V,Ee=0mW/cm^2
	C-E Saturation Voltage	$V_{CE(sat)}$	-	0.15	0.4	V	I_C=2mA,Ee=1mW/cm
Collector Current(＊3)		$I_{C(ON)}$	0.5	-	-	mA	V_{CE}=5V,I_F=20mA
		$Ic_{(OFF)}$	---	---	20	μ A	
Response Time	Rise Time	t_R	-	15	-	μs	V_{CE}=5V, I_C=1mA, R_L=1KΩ
	Fall Time	t_F	-	15	-	μs	

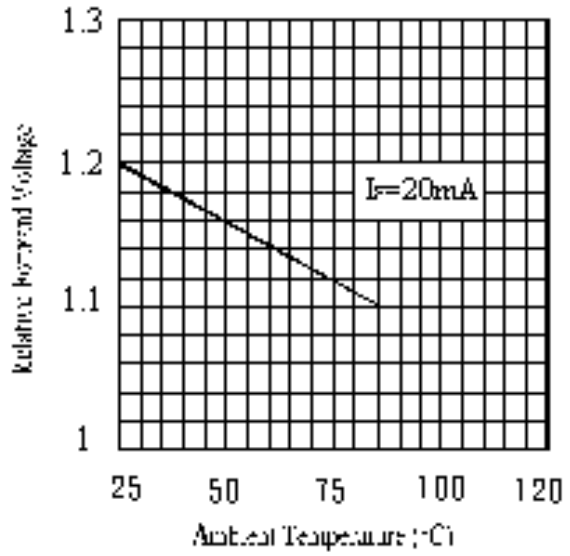
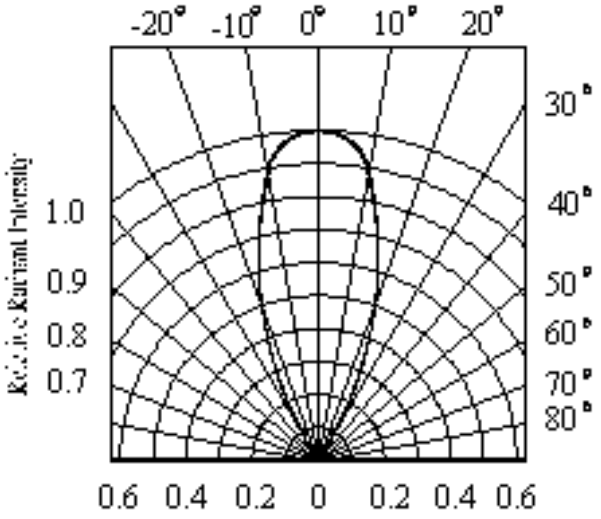
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Typical Electrical/Optical/Characteristics Curves for IR

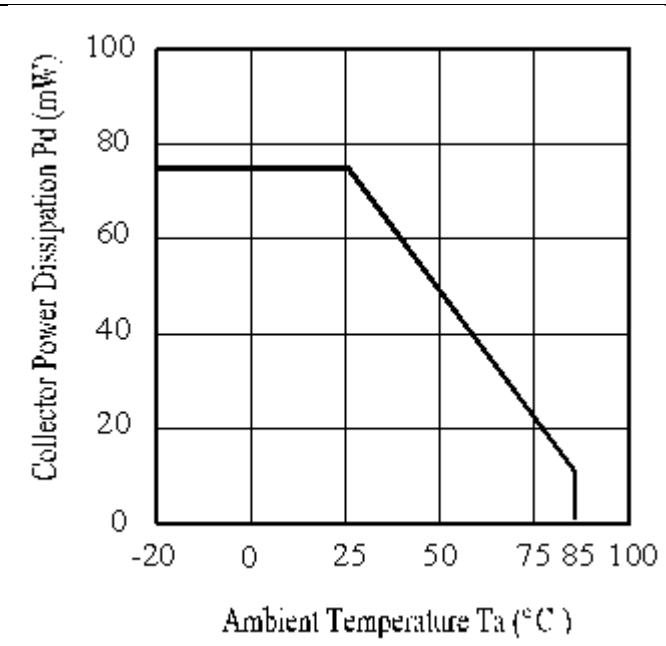
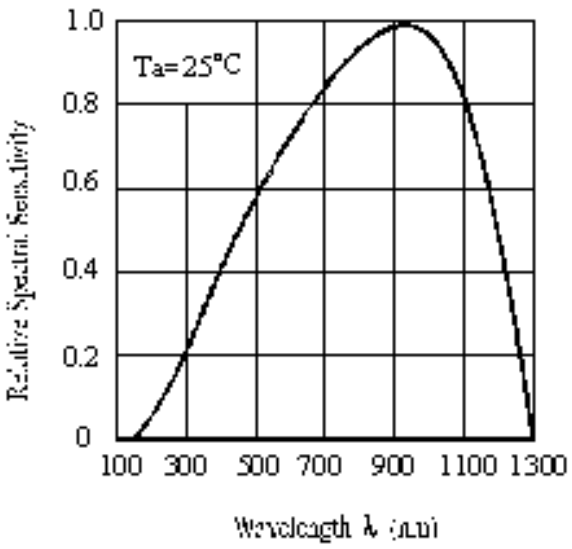
Forward Current vs. Ambient Temperature	Spectral Distribution
	

Peak Emission Wavelength vs. Ambient Temperature	Forward Current vs. Forward Voltage
	

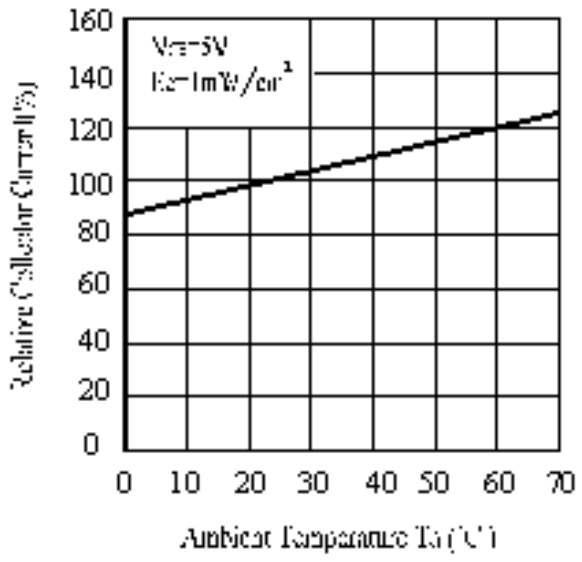
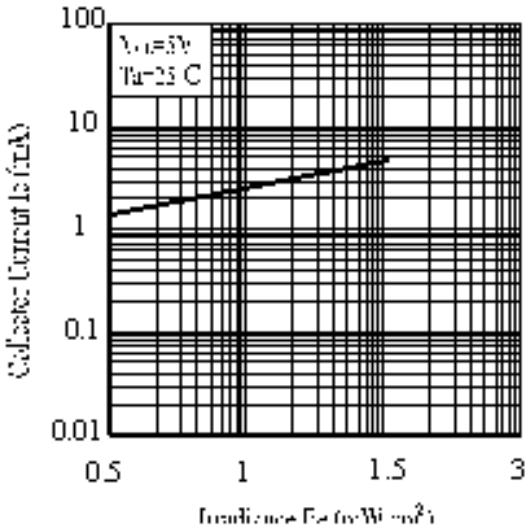
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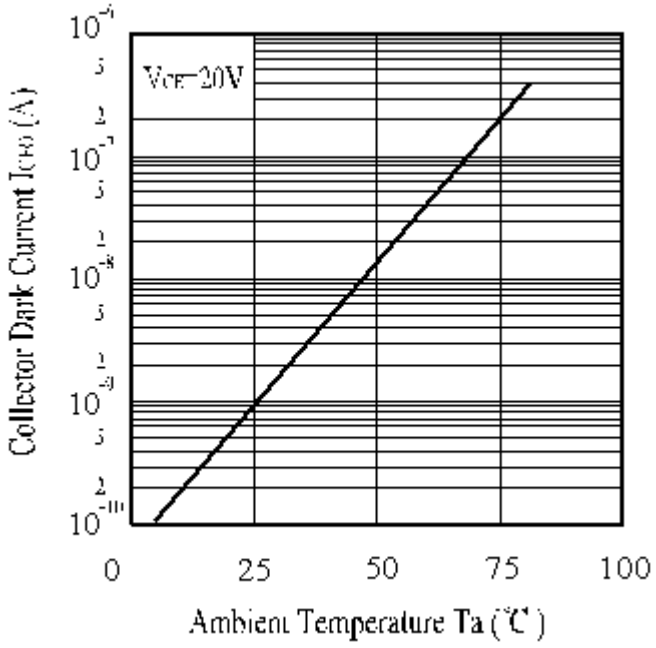
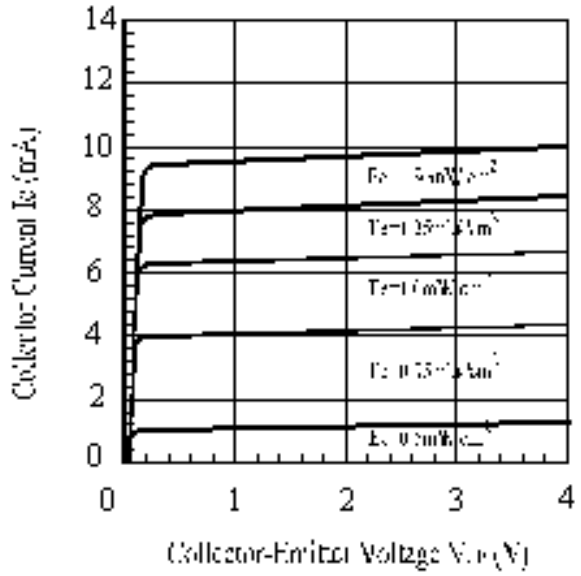
Forward Current vs Ambient Temperature(˚C)	Relative Radiant Intensity vs. Angular Displacement
	

Typical Electro/Optical/Characteristics Curves for PT

Collector Power Dissipation vs. Ambient Temperature	Spectral Distribution
	

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Relative Collector Current vs. Ambient Temperature	Collector Current vs. Irradiance
	

Collector Dark Current vs. Ambient Temperature	Collector Current vs. Collector-Emitter Voltage
	

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Reliability Test Item And Condition

The reliability of products shall be satisfied with items listed below.
Confidence level：90%
LTPD：10%

NO.	Item	Test Condition	Test Hours/ Cycle	Sample Size	Failure Judgement Criteria	Ac/Re
1	**Solder Heat**	TEMP : 260℃ ± 5 ℃	10 sec	22 PCs		0/1
2	**Temperature Cycle**	H : +100℃ 15 mins 5 min L : -40℃ 15 min	300 cycle	22 PCs	Ic(on)≦L×0.8	0/1
3	**Thermal Shock**	H : +100℃ 5 min 10 sec L : -10℃ 5 min	300 cycle	22 PCs	L :Lower specification limit	0/1
4	**High Temperature Storage**	TEMP. : +100℃	1000 hrs	22 PCs		0/1
5	**Low Temperature Storage**	TEMP. : -40℃	1000 hrs	22 PCs		0/1
6	**DC Operating Life**	V_{CE}=5V I_F=20mA	1000 hrs	22 PCs		0/1
7	**High Temperature / High Humidity**	85℃ / 85% R.H.	1000 hrs	22 PCs		0/1

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Package Dimension

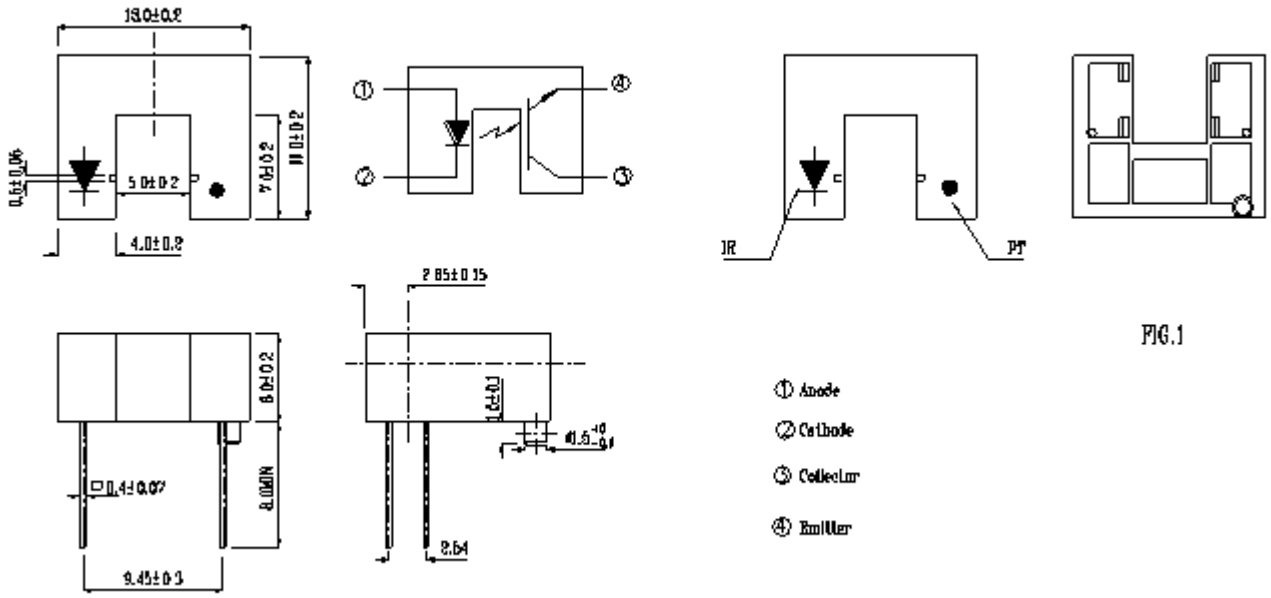


FIG.1

Notes:

1.All dimensions are in millimeters

2.Tolerances unless dimensions ±0.2mm

3.Lead spacing is measured where the lead emerge from the package

4.Above specification may be changed without notice. EVERLIGHT Americas will reserve authority on material change for above specification

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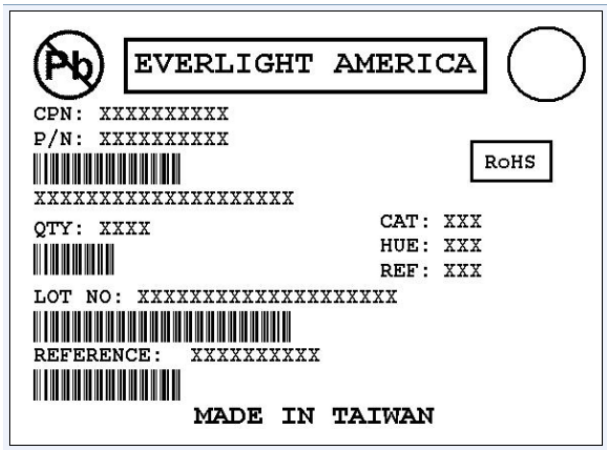
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Packing Quantity Specification

1. 80PCS/1Plate,5Plates/1Boxe
2. 10Boxes/1Carton

Label Form Specification



- CPN: Customer's Product Number
- P/N: Product Number
- QTY: Packing Quantity
- CAT: Luminous Intensity Rank
- HUE: Dom. Wavelength Rank
- REF: Forward Voltage Rank
- LOT No: Lot Number
- X: Month
- Reference: Identify Label Number

Notes

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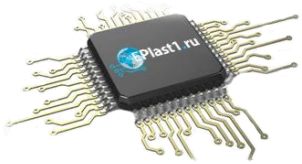
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- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
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- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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