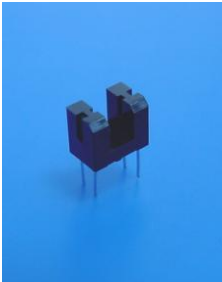


Opto Interrupter ITR20403



Features

- Fast response time
- High sensitivity
- Thin and small package
- Pb free
- This product itself will remain within RoHS compliant version
- Compliance with EU REACH
- Compliance Halogen Free (Br < 900ppm, Cl < 900ppm, Br+ Cl < 1500ppm)

Description

- The ITR20403 consists of an infrared emitting diode and a silicon phototransistor encased in a black thermo-plastic housing.
- The advantage of the device is the small package.
- Phototransistor receives radiation from the IR LED only, and avoids the noise from ambient light.

Applications

- Camera
- Copier
- Scanner
- Non-contact Switching

Device Selection Guide

Device No.	Chip Material	Lens Color
IR	GaAlAs	Water clear
PT	Silicon	Black

Absolute Maximum Ratings (Ta=25°C)

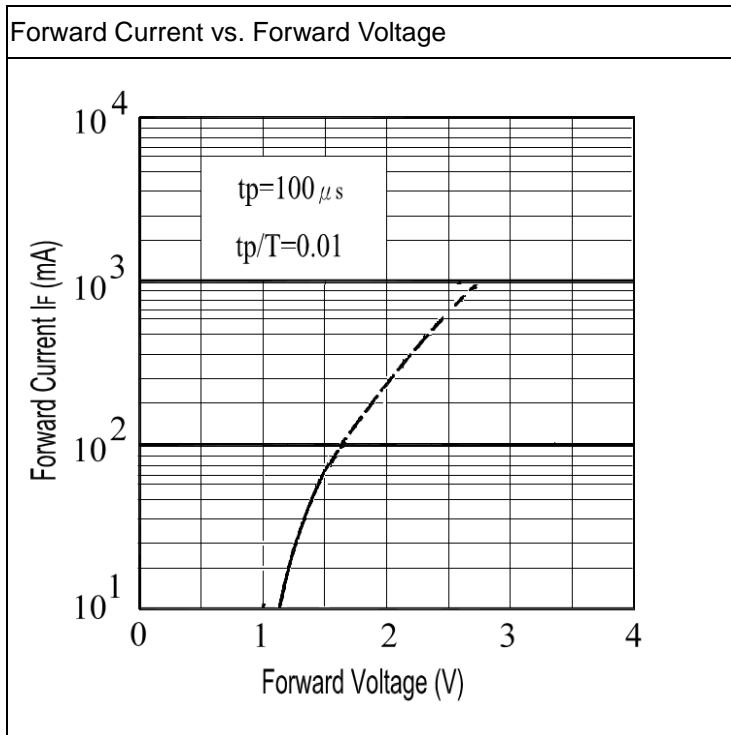
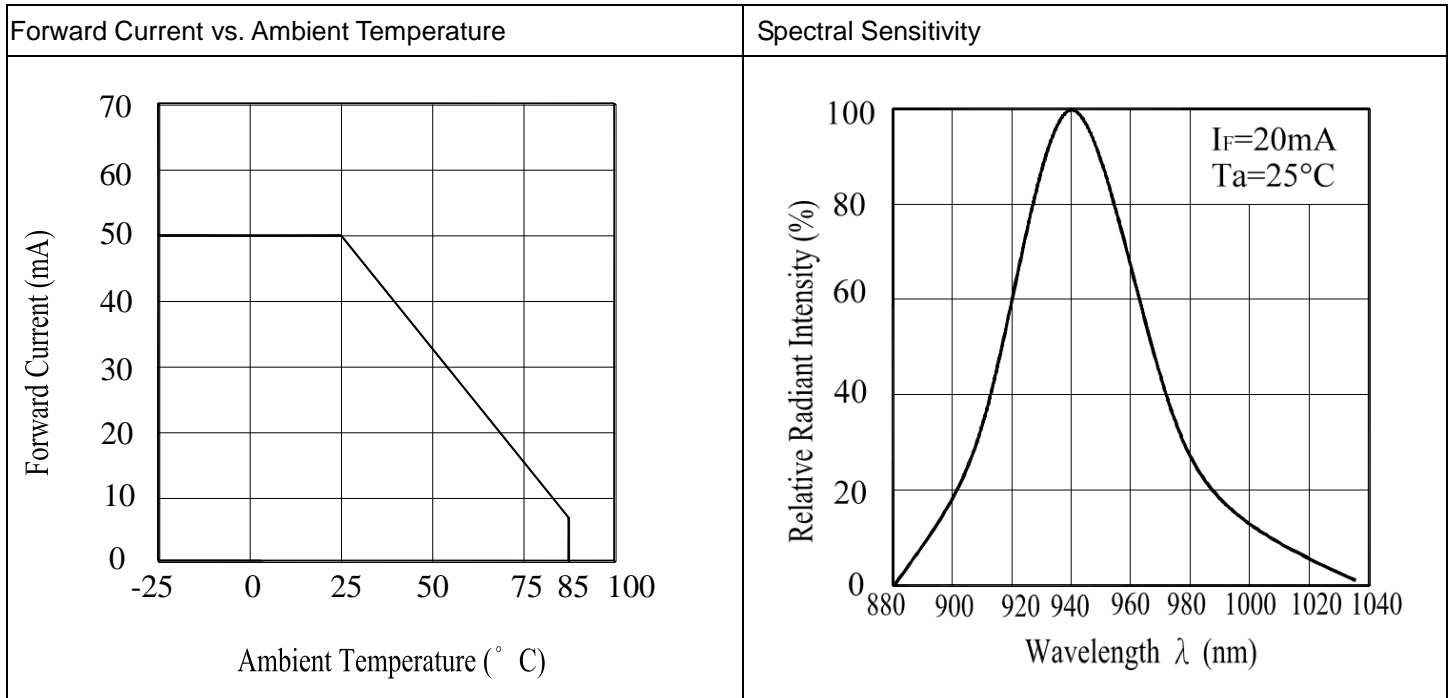
Parameter		Symbol	Ratings	Units
Input	Power Dissipation at (or below) 25°C Free Air Temperature	Pd	75	mW
	Reverse Voltage	V _R	5	V
	Continuous Forward Current	I _F	50	mA
Output	Power Dissipation at (or below) 25°C Free Air Temperature	Pd	75	mW
	Collector Current	I _C	20	mA
	Collector-Emitter Voltage	BV _{CEO}	30	V
	Emitter-Collector Voltage	BV _{ECO}	5	V
Operating Temperature		Topr	-25~+80	°C
Storage Temperature		Tstg	-40~+85	°C
Lead Soldering Temperature *1		Tsol	260	°C

Notes: *1. Soldering time ≤ 5 seconds. (1/16 inch from body)

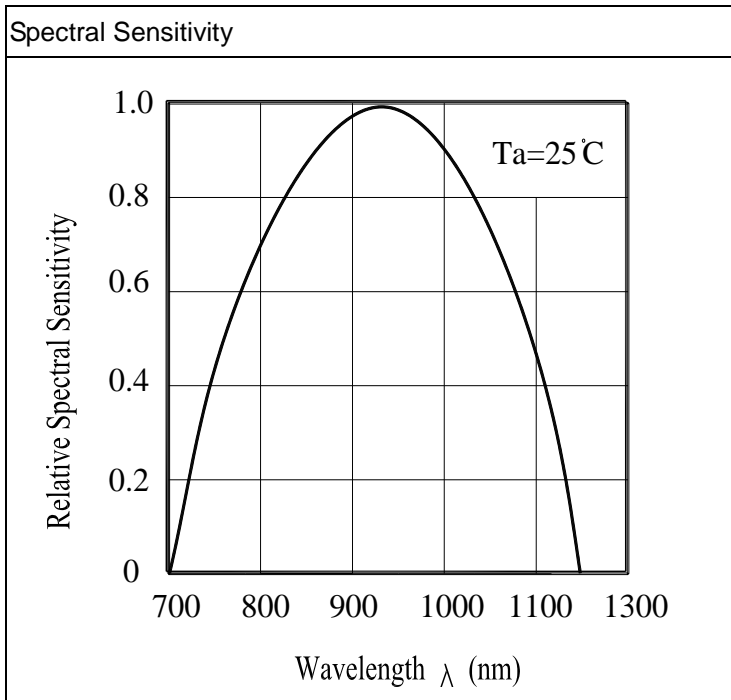
Electro-Optical Characteristics (Ta=25°C)

Parameter		Conditions	Symbol	Min.	Typ.	Max.	Unit
Input	Forward Voltage	$I_F=20\text{mA}$	V_F	---	1.23	1.6	V
	Reverse Current	$V_R=5\text{V}$	I_R	---	---	10	μA
	Peak Wavelength	$I_F=20\text{mA}$	λ_P	---	940	---	nm
Output	Collector Dark Current	$V_{CE}=20\text{V}$ $E_e=0\text{mW/cm}^2$	I_{CEO}	---	---	100	nA
	Collector-Emitter Saturation Voltage	$I_C=2\text{mA}$ $E_e=1\text{mW/cm}^2$	$V_{CE(sat)}$	---	---	0.4	V
Transfer Characteristics	On State Collector Current	$V_{CE}=5\text{V}$ $I_F=20\text{mA}$	$I_{C(on)}$	0.2	---	5.0	mA
	Rise time	$V_{CE}=5\text{V}$ $I_C=1\text{mA}$ $R_L=1\text{K}\Omega$	t_r	---	15	---	μsec
	Fall time		t_f	---	15	---	μsec

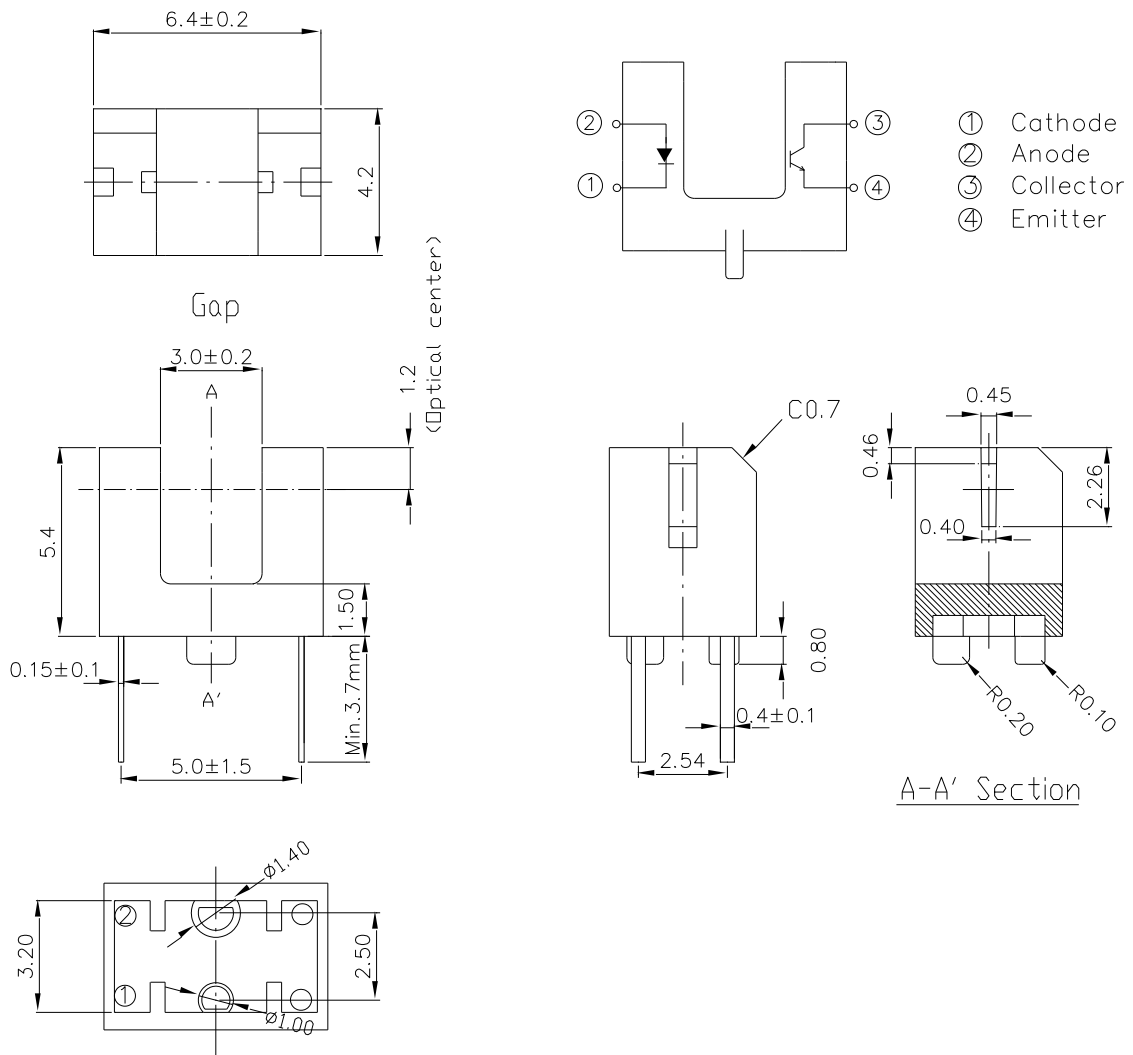
Typical Electrical/Optical/Characteristics Curves for IR



Typical Electrical/Optical/Characteristics Curves for PT



Package Dimension

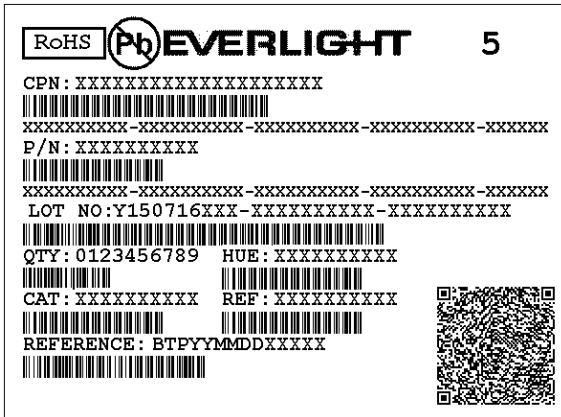


Notes: 1. All dimensions are in millimeters
 2. Tolerances unless dimensions $\pm 0.25 \text{ mm}$

Packing Quantity Specification

120 pcs/Tube, 96 Tubes/Box
2 Boxes/Carton

Label Form Specification



- CPN: Customer Part Number
- P/N: Part Number
- QTY: Packing Quantity
- REF: Reference
- LOT No: Lot Number

Application Restrictions

1. Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.
2. The graphs shown in this datasheet are representing typical data only and do not show guaranteed values.
3. When using this product, please observe the absolute maximum ratings and the instructions for use outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
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5. This product is not intended to be used for military, aircraft, automotive, medical, life sustaining or life saving applications or any other application which can result in human injury or death. Please contact authorized Everlight sales agent for special application request.