

ITR1203DT50A/TB

Features

- Fast response time
- High analytic
- High sensitivity
- Pb free
- This product itself will remain within RoHS compliant version

Description

- The ITR1203DT50A/TB 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 IR LED only .This is the normal situation.
- But when an object is in between, phototransistor could not receive the radiation.

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 °C)

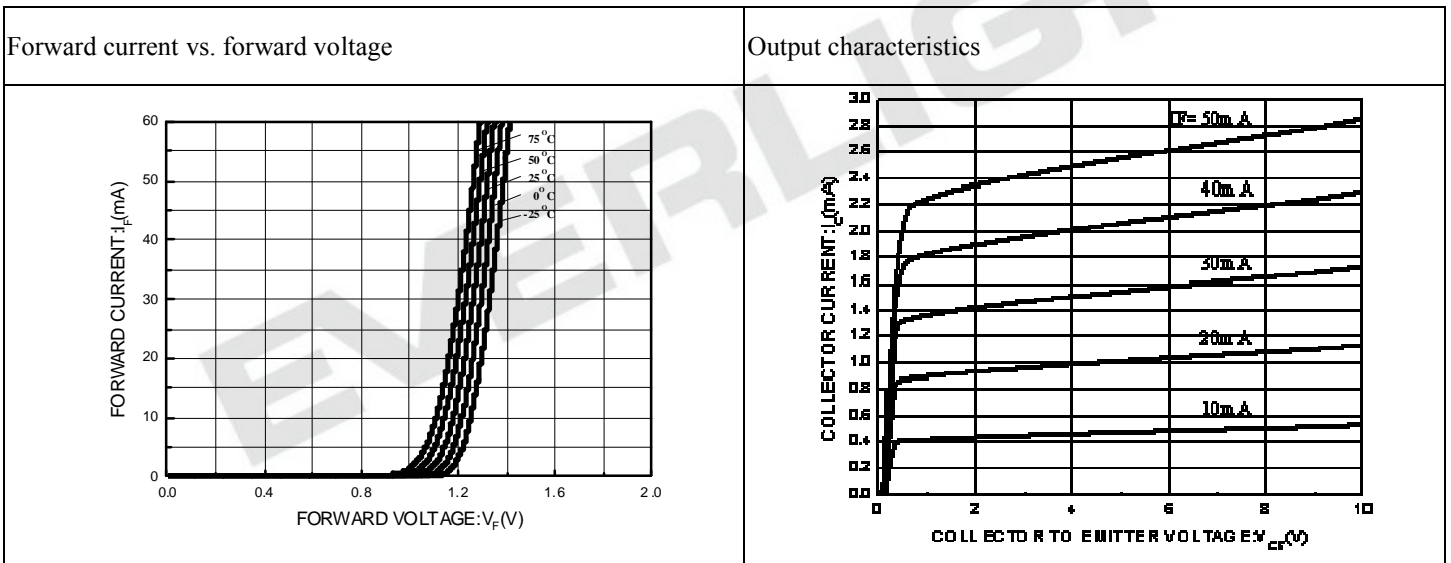
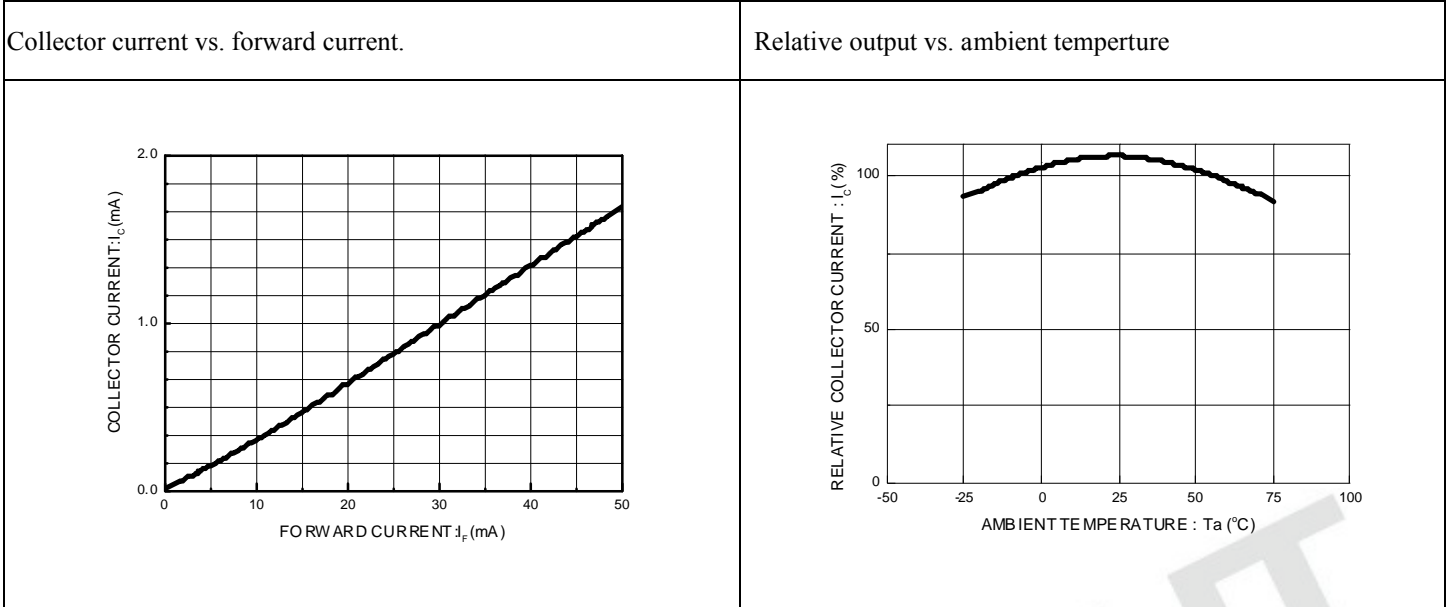
Parameter		Symbol	Ratings	Unit
Input	Power Dissipation at(or below) 25 °C Free Air Temperature	Pd	75	mW
	Reverse Voltage	V _R	5	V
	Forward Current	I _F	30	mA
	Peak Forward Current (*1) Pulse width 100µs, Duty cycle=1%	I _{FP}	1	A
Output	Collector Power Dissipation	P _C	75	mW
	Collector Current	I _C	20	mA
	Collector-Emitter Voltage	B V _{CEO}	35	V
	Emitter-Collector Voltage	B V _{ECO}	5	V
Operating Temperature		T _{opr}	-30~+85	
Storage Temperature		T _{stg}	-40~+100	
Lead Soldering Temperature (*2) (1/16 inch form body for 5 seconds)		T _{sol}	260	

Notes: (*1) $t_w=100 \mu\text{sec.}$, $T=10 \text{ msec.}$ (*2) $t=10 \text{ Sec}$

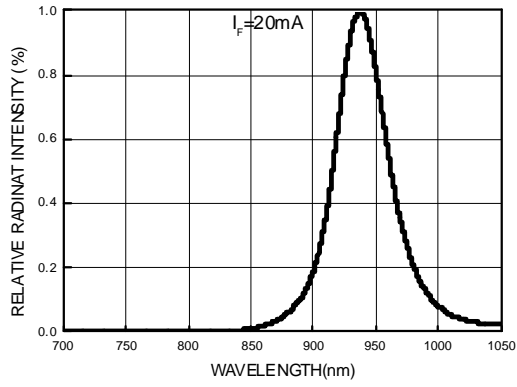
Electro-Optical Characteristics (Ta=25)

Parameter		Symbol	Min.	Typ.	Max.	Unit	Conditions
Input	Forward Voltage	V_F	1.00	1.18	1.4	V	$I_F=10mA$
	Reverse Current	I_R	---	---	10	μA	$V_R=5V$
	Peak Wavelength	λ_p	---	940	---	nm	$I_F=10mA$
Output	Dark C urrent	I_{CEO}	---	---	100	nA	$V_{CE}=25V$
	C-E Saturation Voltage	$V_{CE(sat)}$	---	---	0.4	V	$I_C=0.25mA$ $I_F=20mA$
Transfer Characteristics	Collect Current	$I_C(ON)$	0.25	---	1.0	mA	$V_{CE}=5V$
		$I_C(OFF)$	---	---	20	μA	$I_F=10mA$
	Rise time	t_r	---	15	50	μsec	$V_{CE}=5V$ $I_C=1mA$
	Fall time	t_f	---	15	50	μsec	$R_L=1K\Omega$

Typical Electrical/Optical/Characteristics Curves for ITR

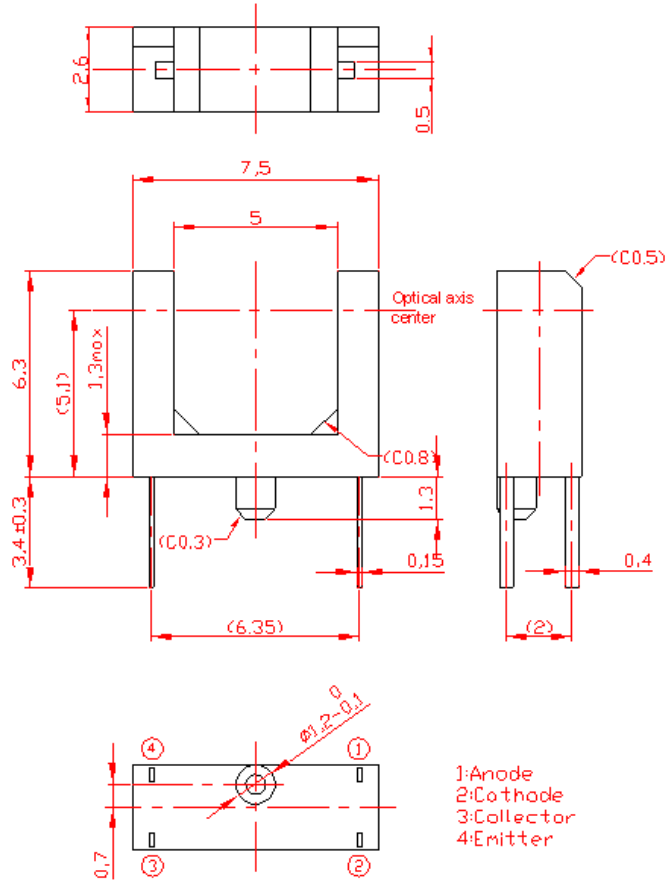


Spectral Distribution



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Package Dimension

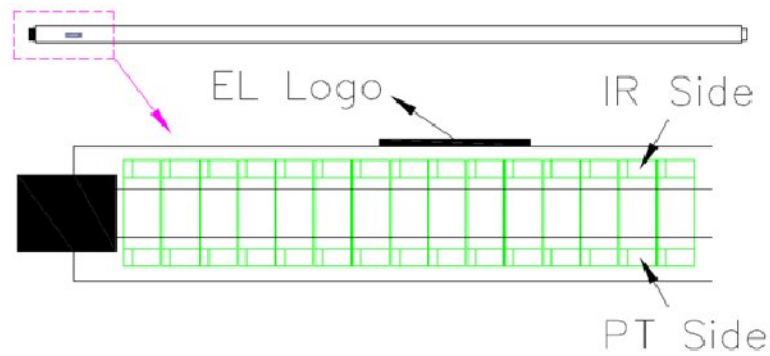


Notes:

- 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 will reserve authority on material change for above specification
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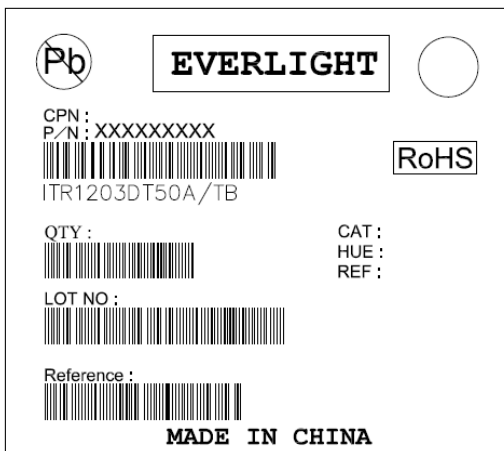
Packing Spec.:



Packing Quantity Specification

1. 180pcs/1 Tube
2. 30Tube(5.4Kpcs)/1 Box
3. 12Boxes(64.8Kpcs)/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

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