



ZPT-2012C-10-Z3

0805 Package Phototransistor

Descriptions

ZPT-2012C-10-Z3 is a phototransistor in miniature SMD package which is molded in a water clear with flat top view lens.

The device is Spectrally matched to visible and infrared emitting diode.

Features

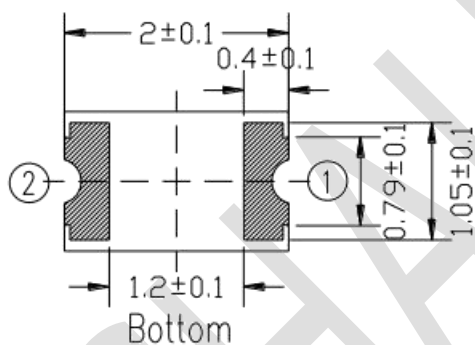
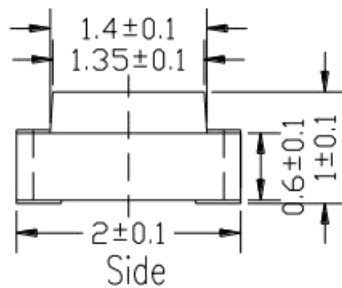
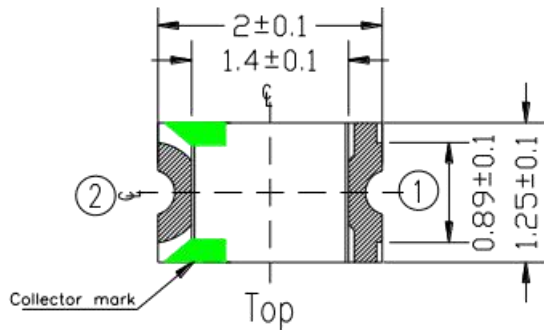
- Fast response time
- High photo sensitivity
- Small junction capacitance
- Pb free
- The product itself will remain within RoHS compliant version.
- Compliance with EU REACH

Applications

- Miniature switch
- Counters and sorter
- Position sensor
- Infrared applied system
- Encoder



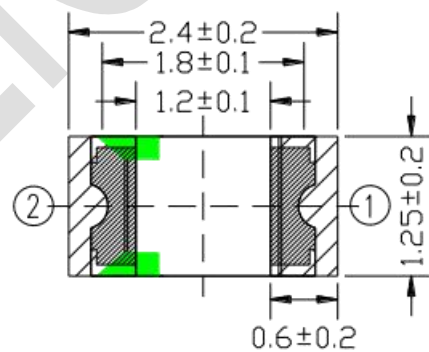
Package Dimensions



- ① Emitter
② Collector



Recommend Soldering Pad



- Notes:**
1. All dimensions are in millimeters
 2. Tolerances unless dimensions ± 0.1 mm
 3. Suggested pad dimension is just for reference only
Please modify the pad dimension based on individual need



Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Units
Collector-Emitter Voltage	V_{CEO}	30	V
Emitter-Collector-Voltage	V_{ECO}	5	V
Collector Current	I_C	20	mA
Operating Temperature	T_{opr}	-25 ~ +85	°C
Storage Temperature	T_{stg}	-40 ~ +85	°C
Soldering Temperature *1	T_{sol}	260	°C
Power Dissipation at(or below) 25°C Free Air Temperature	P_d	75	mW

Notes: *1:Soldering time \leq 5 seconds.

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Rang Of Spectral Bandwidth	$\lambda_{0.5}$	---	400	---	1100	nm
Wavelength Of Peak Sensitivity	λ_p	---	---	940	---	nm
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C=100\mu A$ $E_e=0mW/cm^2$	30	---	---	V
Emitter-Collector Breakdown Voltage	BV_{ECO}	$I_E=100\mu A$ $E_e=0mW/cm^2$	5	---	---	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=2mA$ $E_e=1mW/cm^2$	---	---	0.4	V
Collector Dark Current	I_{CEO}	$V_{CE}=20V$ $E_e=0mW/cm^2$	---	---	100	nA
On State Collector Current	$I_{C(ON)}$	$V_{CE}=5V$ $E_e=1mW/cm^2$	0.3	1.0		mA



Typical Electro-Optical Characteristics Curves

Fig.1 Spectral Sensitivity

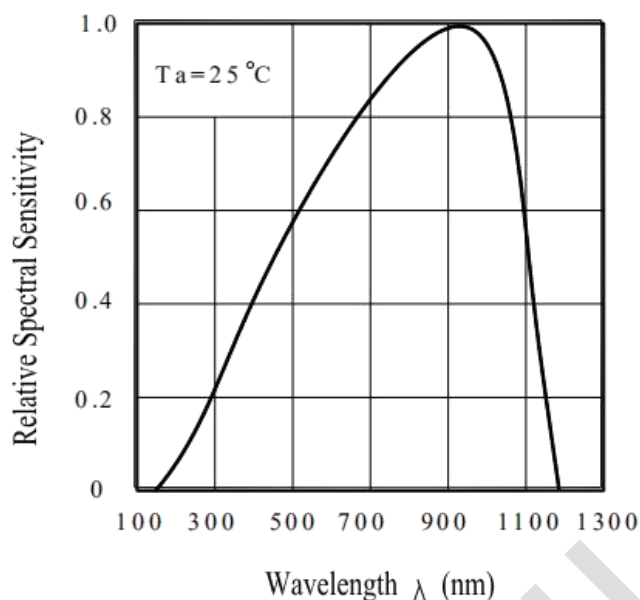


Fig.2 Collector Current vs Irradiance

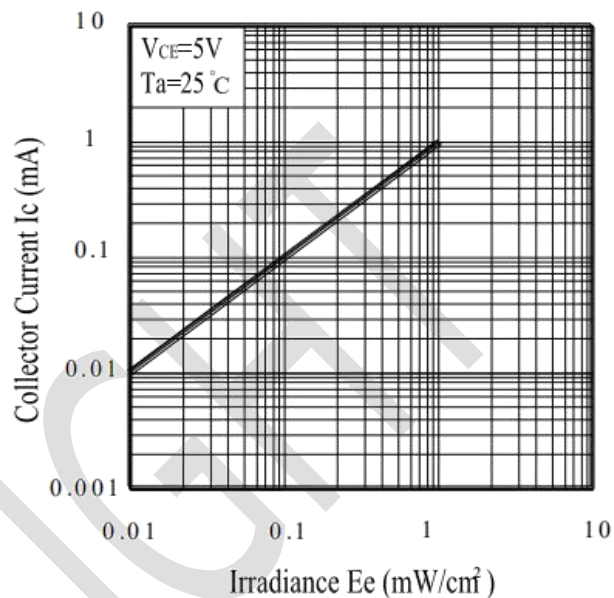
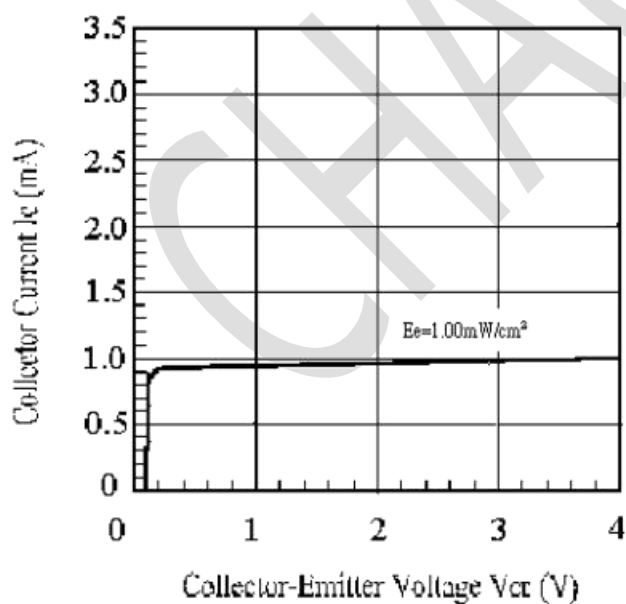
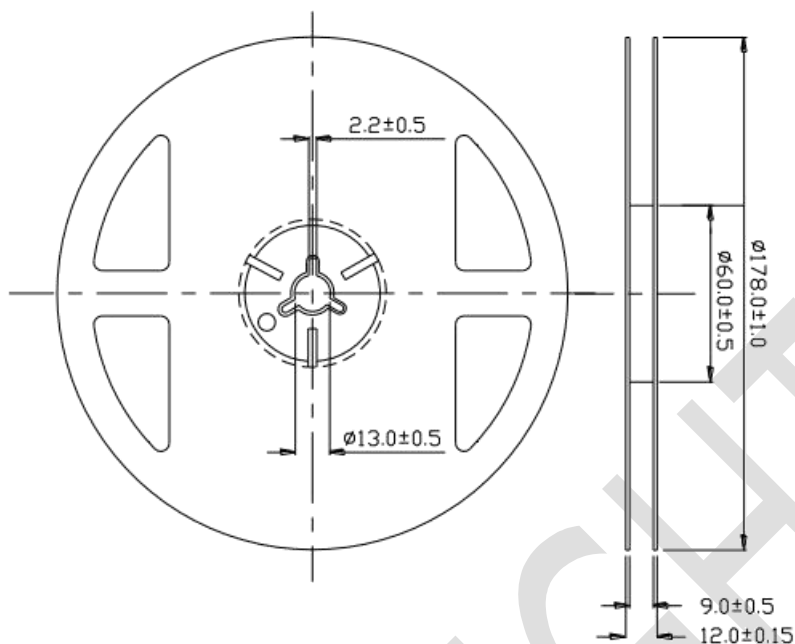


Fig.3 Collector Current vs. Collector-Emitter Voltage



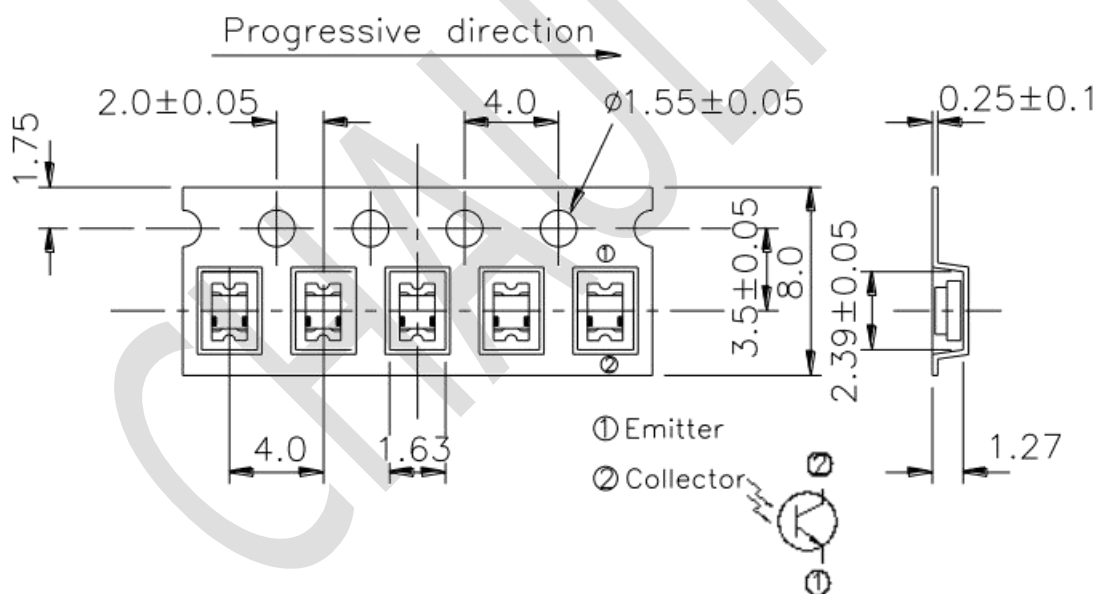


Package Dimensions



Note: The tolerances unless mentioned are ± 0.1 mm, Unit: mm

Carrier Tape Dimensions: (Loaded Quantity: 3000pcs/reel)



Note: The tolerances unless mentioned is ± 0.1 mm, Unit = mm