



## 广东洲光源红外半导体有限公司

Guangdong ChauLight Infrared Semiconductor Co., Ltd.

### Specification

### 规格书

Customer Name:

客户名称: \_\_\_\_\_

Customer P/N:

客户品号: \_\_\_\_\_

Factory P/N:

公司品号: ZPT-1608B-06-Z4

Part Number:

料号代码: \_\_\_\_\_

Client approval 客户审核			Baiheng approval 审核		
Approval 核准	Audit 确认	Confirmation 制作	Approval 核准	Audit 确认	Confirmation 制作
					周宏
<input type="checkbox"/> Qualified 接受			<input type="checkbox"/> Disqualified 不接受		
			DATE: 日期: 2020-11-23		

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注: 1. 此规格书以中英文方式书写, 若有冲突以中文版本为准文本.

2. 此规格书的最终解释权归广东洲光源红外半导体科技技术有限公司

3. 此规格书的有效期限为两年, 自盖章或签字之日起计算, 期满时双方可以续签协议, 但应采用书面形式



## ZPT-1608B-06-Z4

### 0.6mm Height Flat Top Phototransistor

#### Descriptions

ZPT-1608B-06-Z3 is a phototransistor in miniature SMD package which is molded in a black with flat top view lens.

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

#### Features

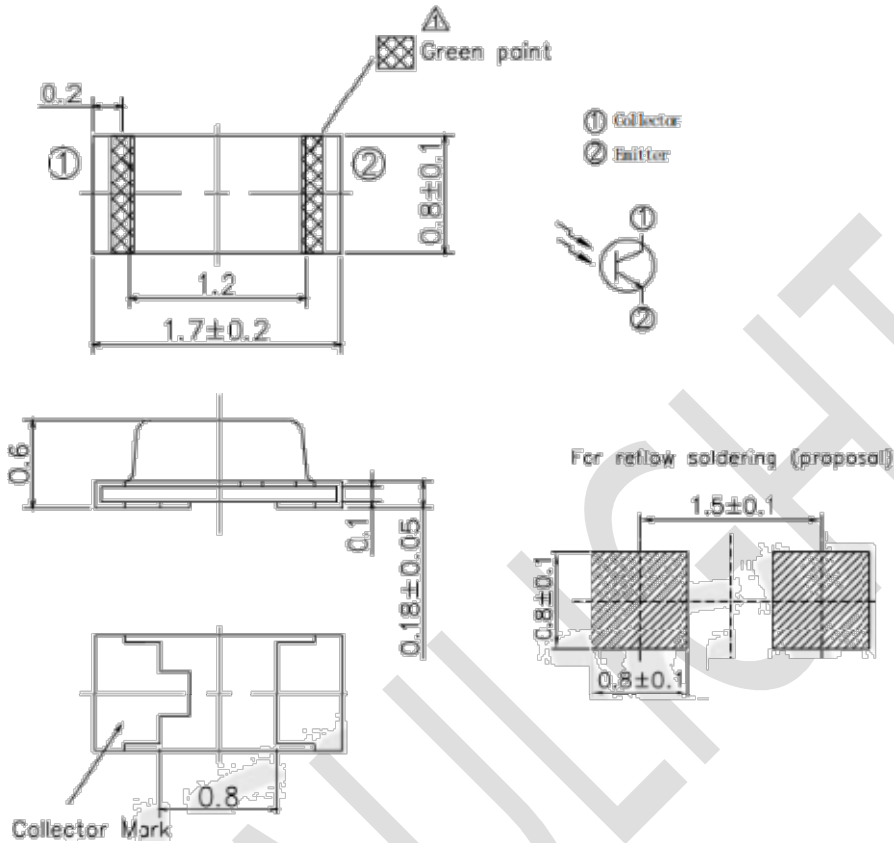
- Fast response time
- High photo sensitivity
- Small junction capacitance
- Pb free
- The product itself will remain within RoHS compliant version
- Compliance with EU REACH

#### Applications

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



## Package Dimensions



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

## Rank

Parameter	Symbol	Condition	Min.	Max.	Unit
A1	$I_{C(ON)}$	VCE=5V Ee=1mW/c m <sup>2</sup>	0.27	0.66	mA
A2	$I_{C(ON)}$	VCE=5V Ee=1mW/c m <sup>2</sup>	0.54	1.00	mA



## Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Units
Collector-Emitter Voltage	V <sub>CEO</sub>	30	V
Emitter-Collector-Voltage	V <sub>ECO</sub>	5	V
Collector Current	I <sub>C</sub>	20	mA
Operating Temperature	T <sub>opr</sub>	-40 ~ +85	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +100	°C
Soldering Temperature *1	T <sub>sol</sub>	260	°C
Power Dissipation at(or below) 25°C Free Air Temperature	P <sub>d</sub>	75	mW

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

## Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Rang Of Spectral Bandwidth	λ <sub>0.5</sub>	---	730	---	1100	nm
Wavelength Of Peak Sensitivity	λ <sub>P</sub>	---	---	940	---	nm
Collector-Emitter Breakdown Voltage	BV <sub>CEO</sub>	I <sub>C</sub> =100μA E <sub>e</sub> =0mW/cm <sup>2</sup>	30	---	---	V
Emitter-Collector Breakdown Voltage	BV <sub>ECO</sub>	I <sub>E</sub> =100μA E <sub>e</sub> =0mW/cm <sup>2</sup>	5	---	---	V
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =2mA E <sub>e</sub> =1mW/cm <sup>2</sup>	---	---	0.4	V
Collector Dark Current	I <sub>CEO</sub>	V <sub>CE</sub> =20V E <sub>e</sub> =0mW/cm <sup>2</sup>	---	---	100	nA
On State Collector Current	I <sub>C(ON)</sub>	V <sub>CE</sub> =5V E <sub>e</sub> =1mW/cm <sup>2</sup>	0.27	0.65		mA



## Typical Electro-Optical Characteristics Curves

Fig.2 Spectral Sensitivity

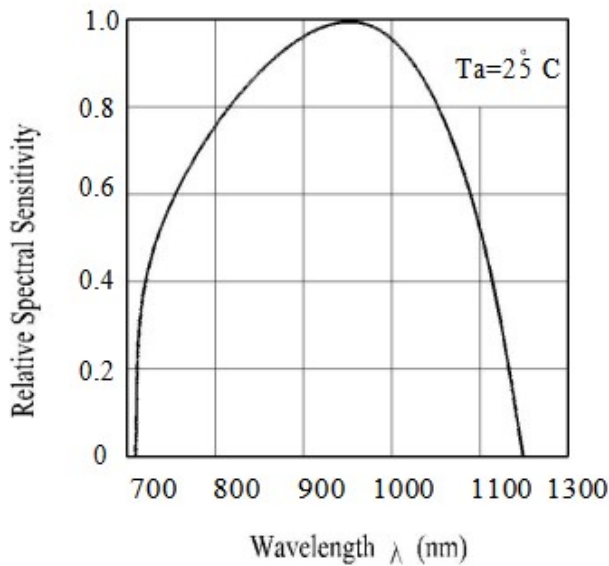


Fig.4 Collector Current vs. Irradiance

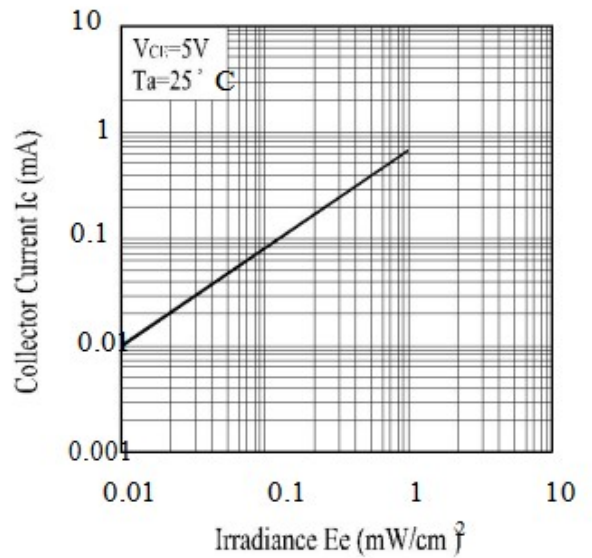
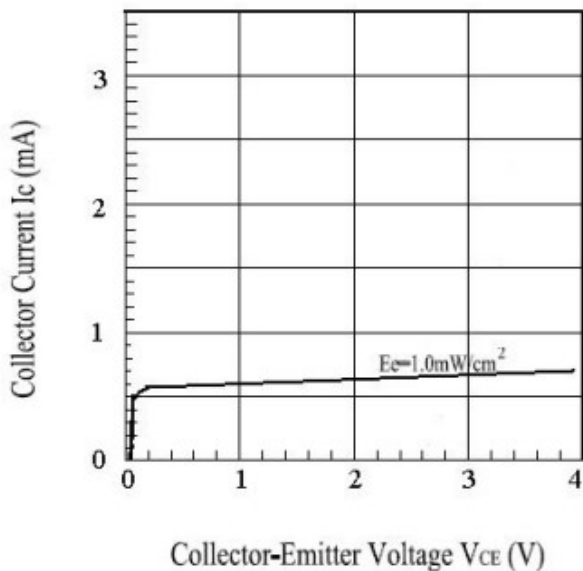
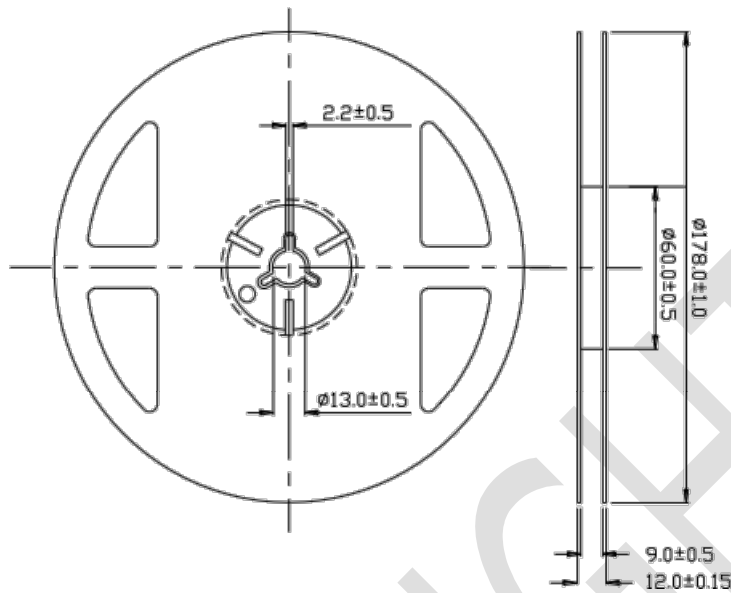


Fig.3 Collector Current vs. Collector-Emitter Voltage



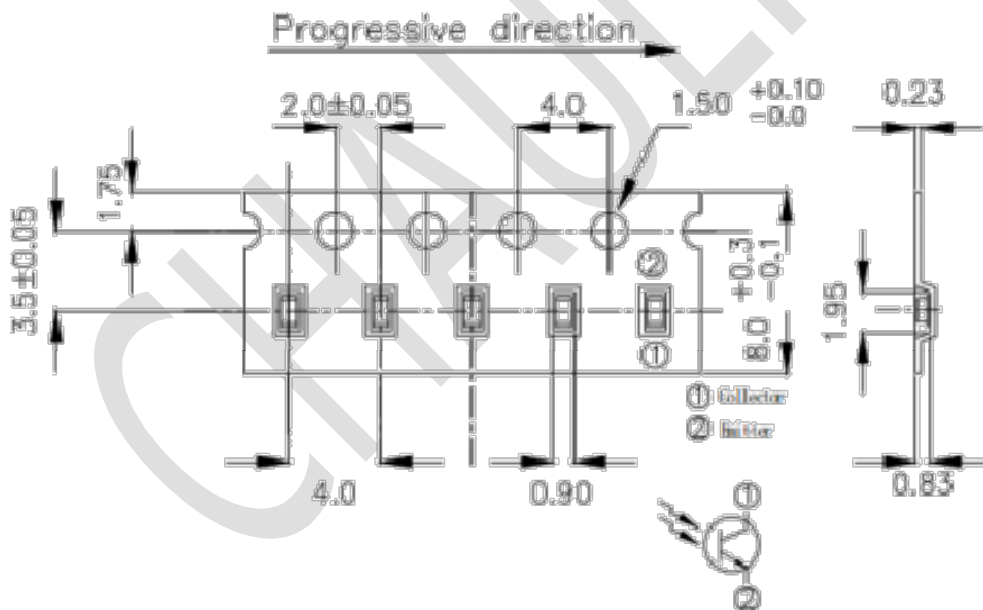


## Package Dimensions



**Note:** The tolerances unless mentioned are  $\pm 0.1$ mm, Unit: mm

Carrier Tape Dimensions: (Loaded Quantity: 4000pcs/reel)



Note: The tolerances unless mentioned are  $\pm 0.1$ mm, Unit: mm