



# Technical Data Sheet

## 1.5mm Side Looking Phototransistor

**PT908-7C**

### Features

- Fast response time
- High sensitivity
- Small junction capacitance
- Pb free

### Descriptions

PT908-7C is a phototransistor in miniature package which is molded in a water clear plastic with spherical top view lens. The device is spectrally matched to infrared emitting diode.

### Applications

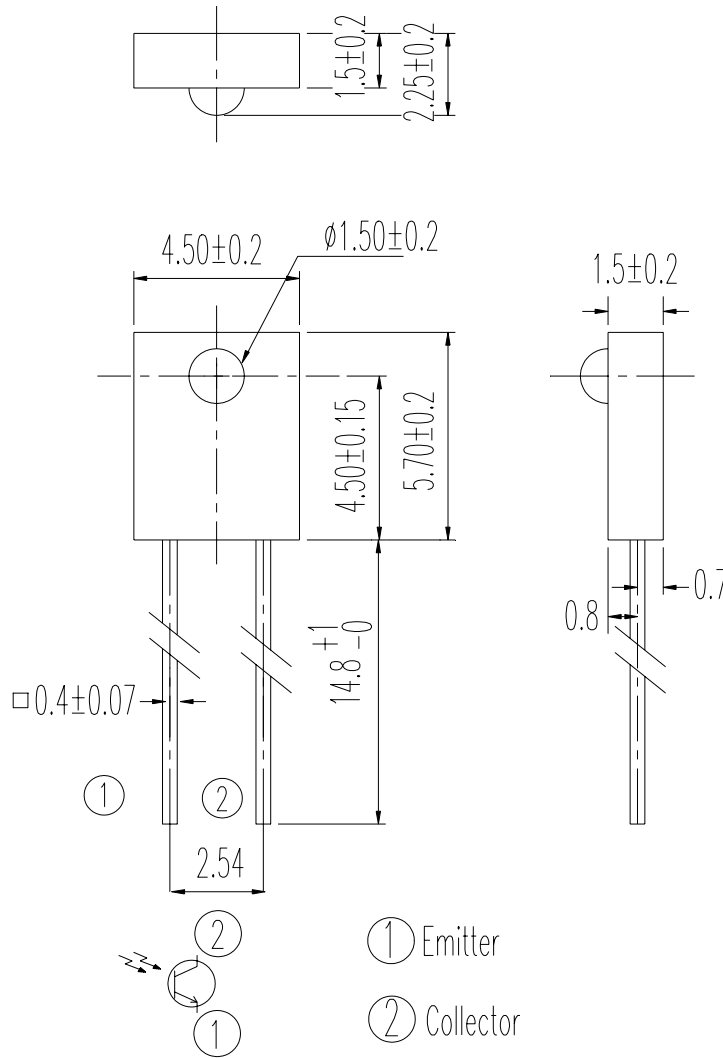
- Optoelectronic switch
- VCR , Video Camera
- Floppy disk drive
- Infrared applied system

### Device Selection Guide

LED Part No.	Chip	Lens Color
	Material	
PT	Silicon	Water Clear

Device No:DPT-090-081

**Package Dimensions**



- Notes:** 1.All dimensions are in millimeters  
2.Tolerances unless dimensions  $\pm 0.1$ mm

**Device No:DPT-090-081**

**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>	-25 ~ +85°C	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +85°C	°C
Lead Soldering Temperature	T <sub>sol</sub>	260	°C
Power Dissipation at (or below) 25°C Free Air Temperature	P <sub>c</sub>	75	mW

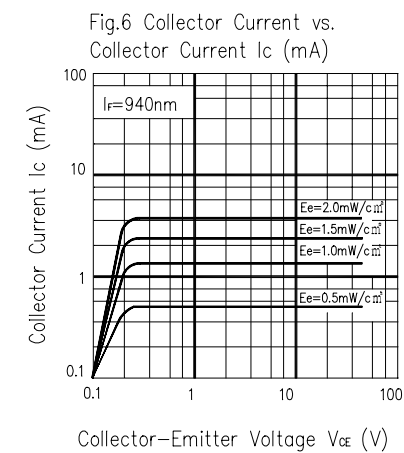
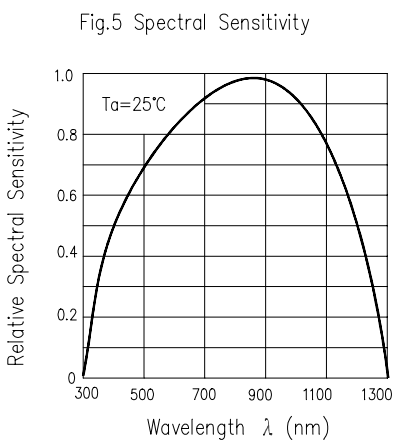
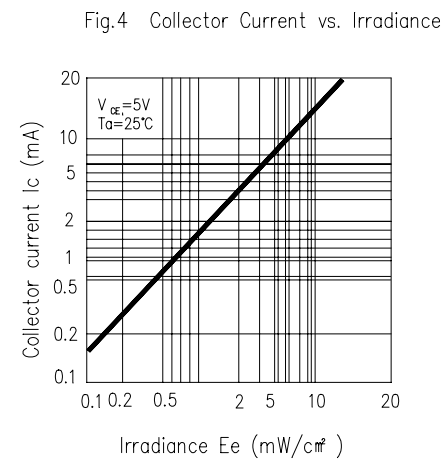
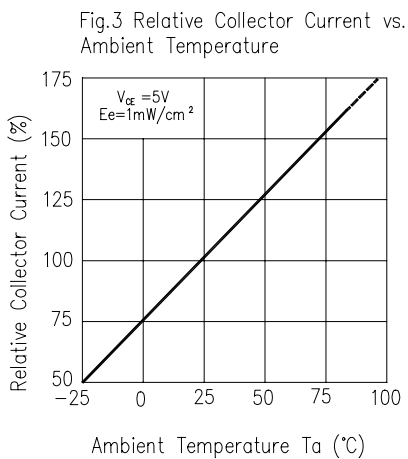
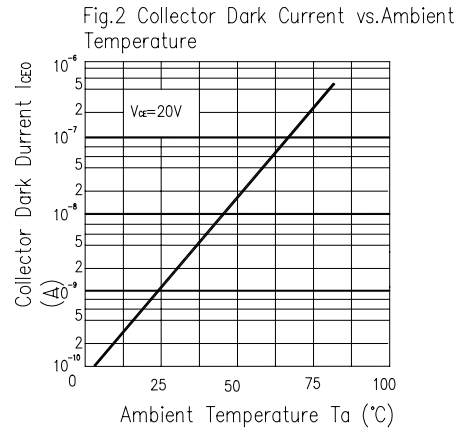
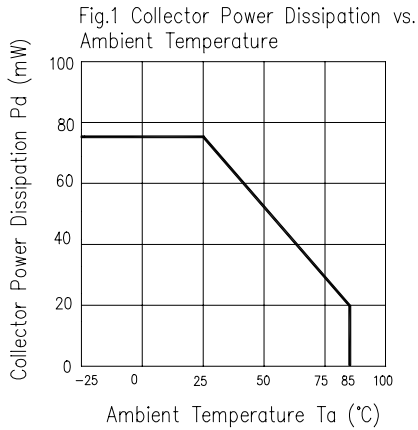
**Notes:** \*1:Soldering time ≤ 5 seconds.

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

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =2mA Ee=1mW/cm <sup>2</sup>	---	---	0.4	V
Rise Time	t <sub>r</sub>	V <sub>CE</sub> =5V I <sub>C</sub> =1mA	---	15	---	μS
Fall Time	t <sub>f</sub>	RL=1000Ω	---	15	---	
Collector Dark Current	I <sub>CEO</sub>	Ee=0mW/cm <sup>2</sup> V <sub>CE</sub> =20V	---	---	100	nA
On State Collector Current	I <sub>C(on)</sub>	Ee=0.555mW/cm <sup>2</sup> V <sub>CE</sub> =5V	0.78		3.12	mA
Wavelength of Peak Sensitivity	λ <sub>p</sub>	---	---	860	---	nm
Rang of Spectral Bandwidth	λ <sub>0.5</sub>	---	400	---	1100	nm

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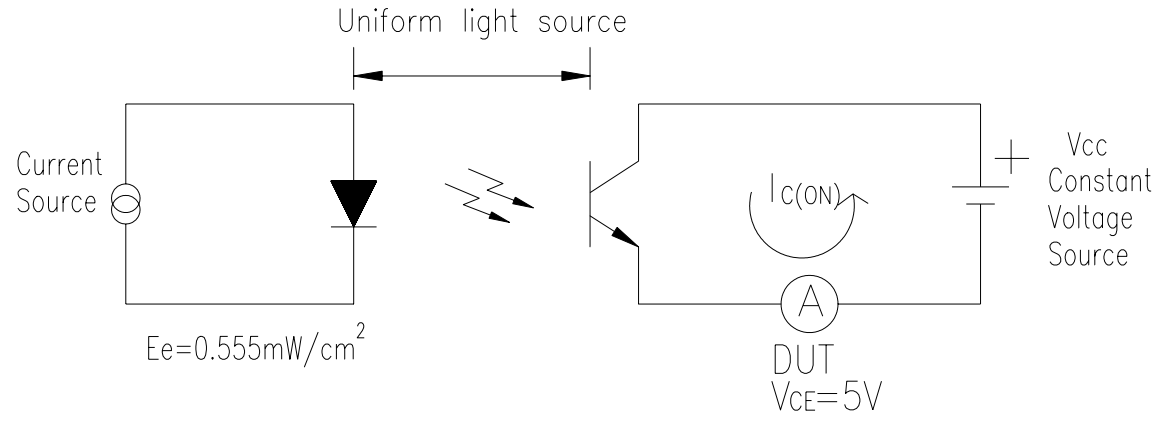
**Typical Electro-Optical Characteristics Curves**



**Device No:DPT-090-081**

**Test method**

Light current test method for PT:



**Ranks**

Color code	Parameter	Symbol	Min	Max	Unit	Test condition
Black	BIN1	$I_{C(ON)}$	0.78	1.56	mA	$V_{CE}=5\text{V}$ $E_e=0.555\text{mW/cm}^2$
Black	BIN2		1.09	2.02		
Black	BIN3		1.40	2.73		
Black	BIN4		1.56	3.12		

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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 Conditions	Test Hours/ Cycles	Sample Sizes	Failure Judgement Criteria	Ac/Re
1	Solder Heat	TEMP:260°C±5°C	10sec	22pcs	More than 90% of lead to be covered by soldering	0/1
2	Temperature Cycle	H : +85°C    30mins ↕ 5mins L : -55°C    30mins	50Cycle	22pcs		0/1
3	Thermal Shock	H :+100°C    5mins ↕ 10secs L :-10°C    5mins	50Cycle	22pcs	I <sub>R</sub> ≥ U×2 E <sub>e</sub> ≤ L×0.8 V <sub>F</sub> ≥ U×1.2	0/1
4	High Temperature Storage	TEMP. : +100°C	1000hrs	22pcs		U : Upper
5	Low Temperature Storage	TEMP. : -55°C	1000hrs	22pcs	Specification Limit	0/1
6	DC Operating Life	V <sub>CE</sub> =5V	1000hrs	22pcs	L : Lower Specification Limit	0/1
7	High Temperature/ High Humidity	85°C / 85% R.H	1000hrs	22pcs		0/1

<b>EVERLIGHT ELECTRONICS CO., LTD.</b> Office: No 25, Lane 76, Sec 3, Chung Yang Rd, Tucheng, Taipei 236, Taiwan, R.O.C	Tel: 886-2-2267-2000, 2267-9936 Fax: 886-2267-6244, 2267-6189, 2267-6306 <a href="http://www.everlight.com">http://www.everlight.com</a>
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