

Technical Data Sheet

1.5mm Side Looking Phototransistor

PT928-6C

Features

- Fast response time
- High sensitivity
- Small junction capacitance

Descriptions

PT928-6C 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

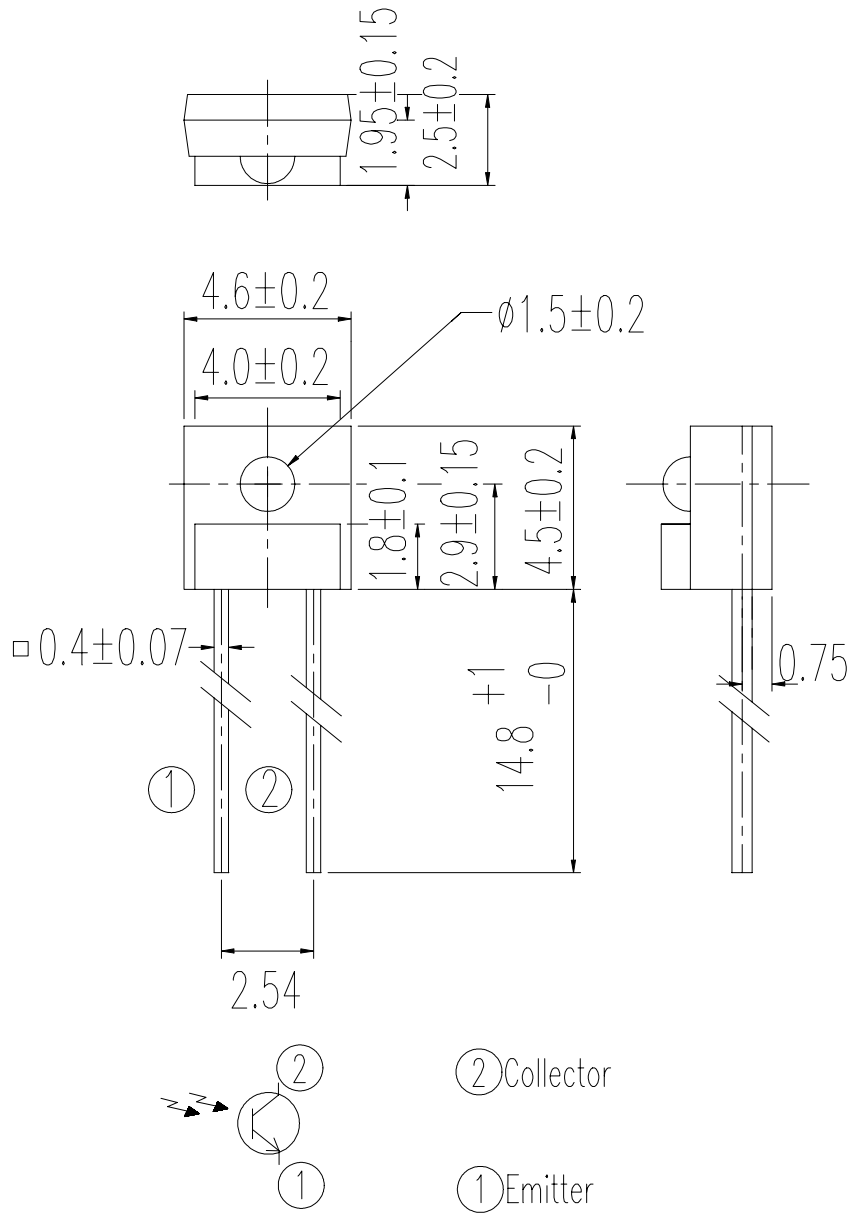
- Optoelectronic switch
- VCR , Video Camera
- Floppy disk drive
- Infrared applied system

Device Selection Guide

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

Device No:DPT-092-082

Package Dimensions



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

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	°C
Storage Temperature	T _{stg}	-40 ~ +85°C	°C
Lead Soldering Temperature	T _{sol}	260	°C
Power Dissipation at (or below) 25°C Free Air Temperature	P _c	75	mW

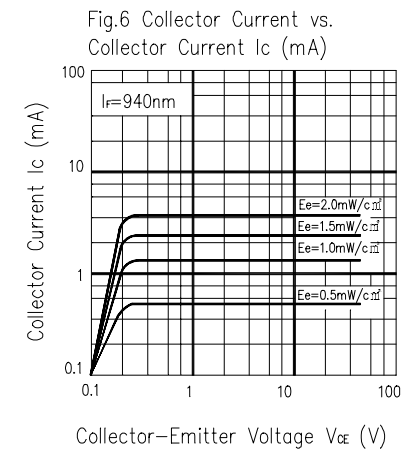
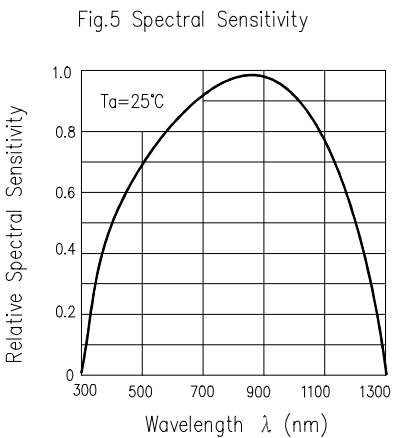
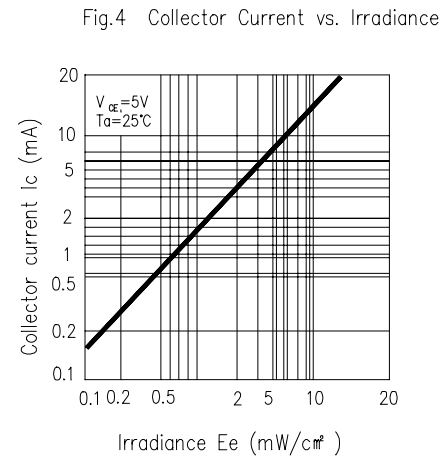
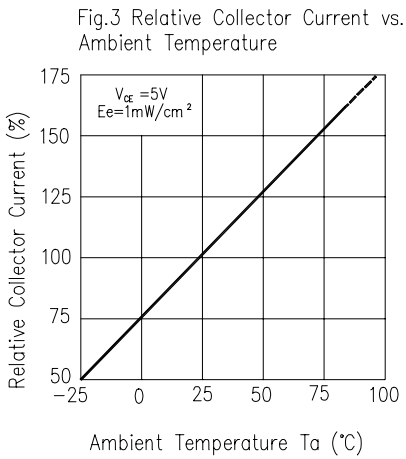
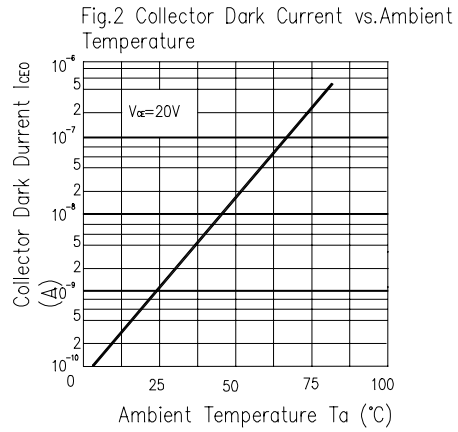
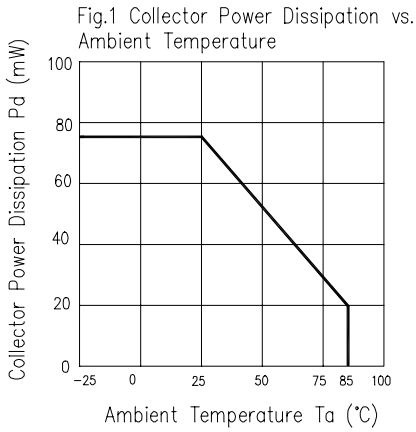
Notes: *1:Soldering time ≤ 5 seconds.

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C =2mA Ee=1mW/cm ²	---	---	0.4	V
Rise Time	t _r	V _{CE} =5V I _C =1mA	---	15	---	μS
Fall Time	t _f	RL=1000Ω	---	15	---	
Collector Dark Current	I _{CEO}	Ee=0mW/cm ² V _{CE} =20V	---	---	100	nA
On State Collector Current	I _{C(on)}	Ee=0.555mW/cm ² V _{CE} =5V	0.52		3.48	mA
Wavelength of Peak Sensitivity	λ _p	---	---	860	---	nm
Rang of Spectral Bandwidth	λ _{0.5}	---	400	---	1200	nm

Device No:DPT-092-082

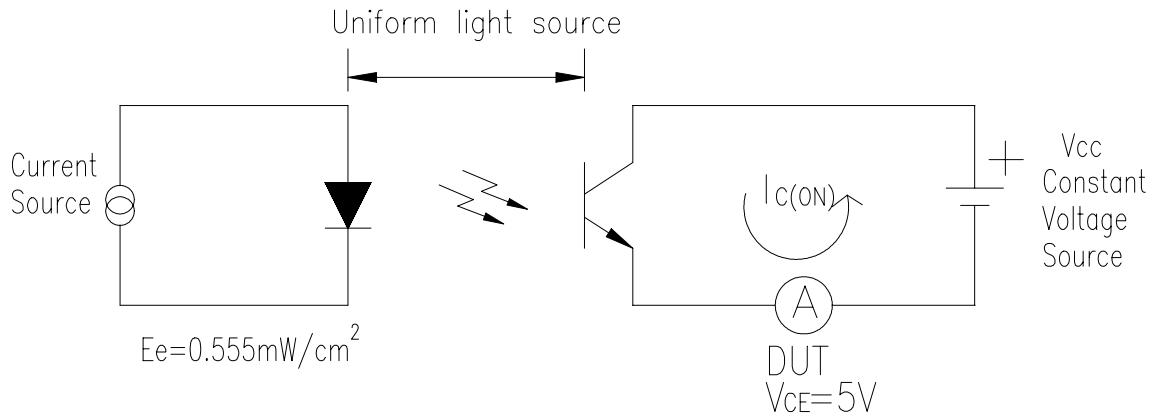
Typical Electro-Optical Characteristics Curves



Device No:DPT-092-082

Test method

Light current test method for PT:



Ranks

Color code	Parameter	Symbol	Min	Max	Unit	Test condition
Black	7-3	$I_{C(ON)}$	0.52	1.22	mA	$V_{CE}=5V$ $E_e=0.555\text{mW}/\text{cm}^2$
Black	7-2		0.87	1.74		
Black	7-1		1.22	2.26		
Black	6-2		1.56	3.04		
Black	6-1		1.74	3.48		

Device No:DPT-092-082

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 $I_R \geq U \times 2$ $E_e \leq L \times 0.8$ $V_F \geq U \times 1.2$ U : Upper Specification Limit L : Lower Specification Limit	0/1
2	Temperature Cycle	H : +85°C 30mins \updownarrow 5mins L : -55°C 30mins	50Cycle	22pcs		0/1
3	Thermal Shock	H :+100°C 5mins \updownarrow 10secs L :-10°C 5mins	50Cycle	22pcs		0/1
4	High Temperature Storage	TEMP. : +100°C	1000hrs	22pcs		0/1
5	Low Temperature Storage	TEMP. : -55°C	1000hrs	22pcs		0/1
6	DC Operating Life	$V_{CE}=5V$	1000hrs	22pcs		0/1
7	High Temperature/ High Humidity	85°C / 85% R.H	1000hrs	22pcs		0/1

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Device No:DPT-092-082

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