Technical Data Sheet

3mm Silicon PIN Photodiode T-1

PT340\C

Features

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

Descriptions

PT340\C is a high speed and high sensitive PIN photodiode in a standard 3Φplastic package. Due to its water clear epoxy the device is sensitive to visible and infrared radiation.

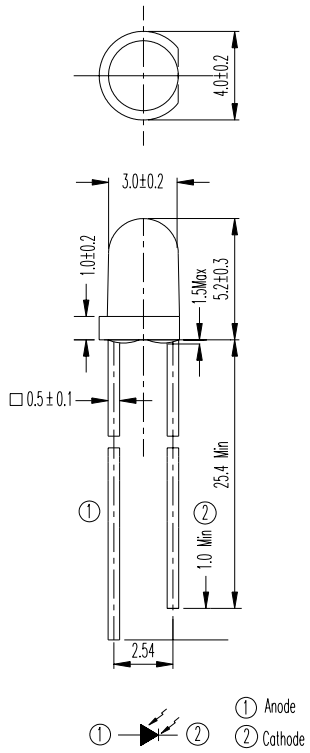
Applications

- Automatic door sensor
- Camera
- Game machine
- High speed photo detector

Device Selection Guide

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

Package Dimensions



Notes: 1.All dimensions are in millimeters
2.Tolerances unless dimensions ±0.25mm

Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Rating	Units
Reverse Voltage	V_R	32	V
Operating Temperature	T_{opr}	-25 ~ +85	℃
Storage Temperature	T_{stg}	-40 ~ +85	℃
Soldering Temperature	T_{sol}	260	℃
Power Dissipation at(or below) 25℃ Free Air Temperature	P_c	150	mW

Notes: *1:Soldering time≦5 seconds.

Electro-Optical Characteristics (Ta=25℃)

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
Open-Circuit Voltage	V_{OC}	Ee=5mW/cm^2 λ p=940nm	---	0.44	---	V
Short- Circuit Current	I_{SC}	Ee=1mW/cm^2 λ p=940nm	---	10	---	μA
Reverse Light Current	I_L	Ee=1mW/cm^2 λ p=940nm V_R=5V	---	10	---	μA
Reverse Dark Current	I_D	Ee=0mW/cm^2 V_R=10V	---	---	10	nA
Reverse Breakdown Voltage	B_{VR}	Ee=0mW/cm^2 I_R=100 μA	32	170	---	V
Total Capacitance	C_t	Ee=0mW/cm^2 V_R=5V f=1MHz	---	10	---	pF
Rise Time	t_r	V_R=10V R_L=100Ω	---	10	---	nS
Fall Time	t_f		---	10	---	

Typical Electro-Optical Characteristics Curves

Fig.1 Power Dissipation vs. Ambient Temperature

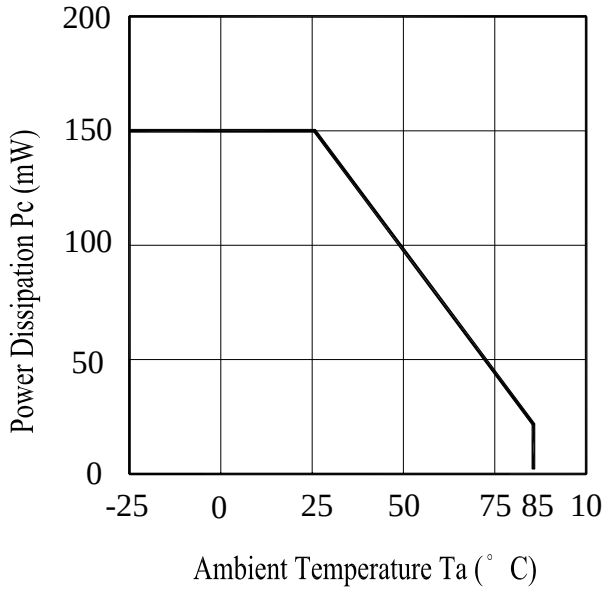


Fig.2 Spectral Sensitivity

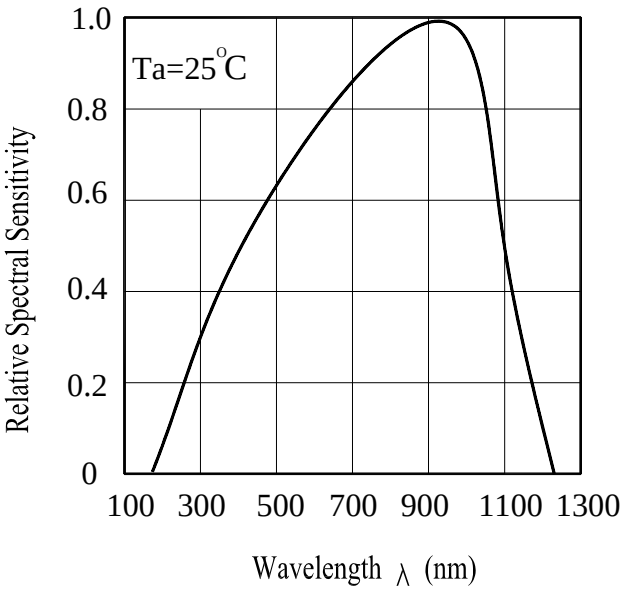


Fig.3 Dark Current vs. Ambient Temperature

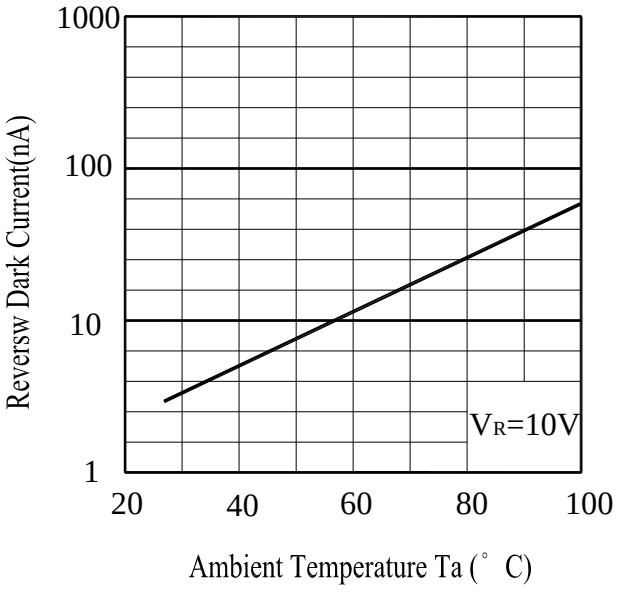
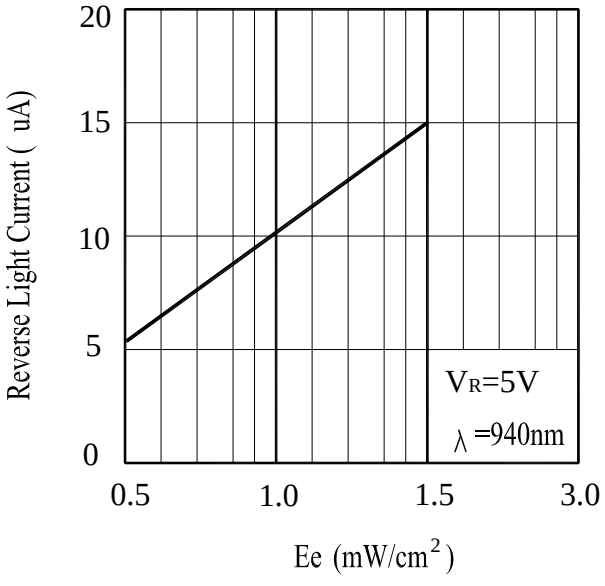


Fig. 4 Reverse Light Current vs. Ee



Typical Electro-Optical Characteristics Curves

Fig.5 Terminal Capacitance vs. Reverse Voltage

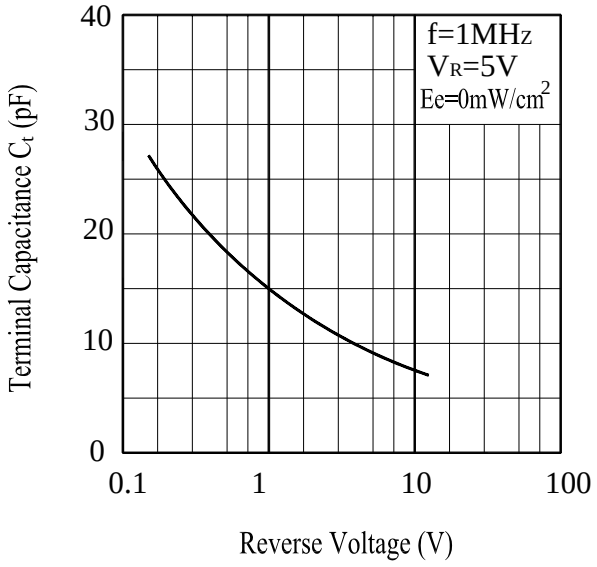
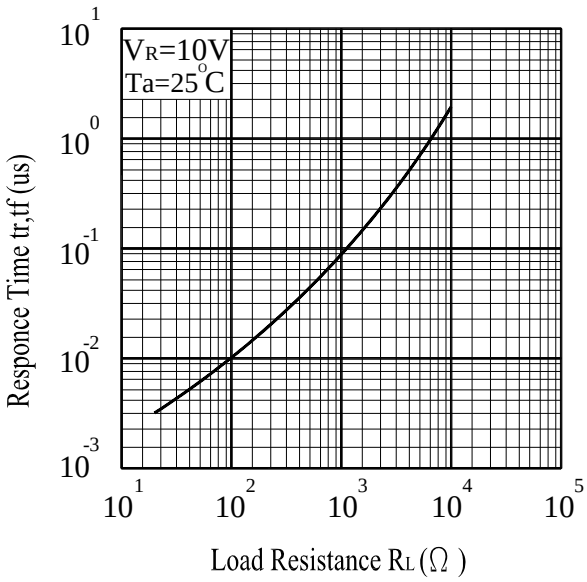


Fig.6 Response Time vs. Load Resistance



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℃±5℃	10secs	22pcs	$I_L \leqq L \times 0.8$ L：Lower Specification Limit	0/1
2	Temperature Cycle	H : +100℃ 15mins 5mins L : -40℃ 15mins	50Cycles	22pcs		0/1
3	Thermal Shock	H :+100℃ 5mins 10secs L :-10℃ 5mins	50Cycles	22pcs		0/1
4	High Temperature Storage	TEMP.：+100℃	1000hrs	22pcs		0/1
5	Low Temperature Storage	TEMP.：-40℃	1000hrs	22pcs		0/1
6	DC Operating Life	V_R=5V	1000hrs	22pcs		0/1
7	High Temperature/ High Humidity	85℃ / 85% R.H	1000hrs	22pcs		0/1