ZPD053B-90-S90

Technical Data Sheet

5mm Photo Transistor

Descriptions

The ZPD053B-90-S90 is a high speed and high sensitive PIN photodiode in a standard 5ψ plastic package. Due to its black epoxy the device is sensitive to visible and infrared radiation.

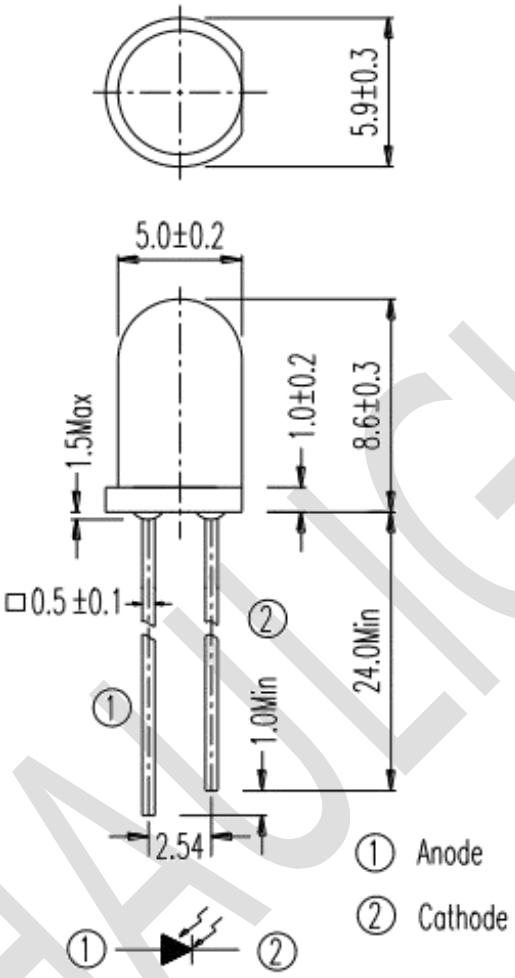
Features

- Fast response time
- High photo sensitivity
- Pb.Free
- This product itself will remain within RoHS compliant version.

Applications

- High speed photo detector
- Security system
- Camera

Package Dimension



Notes:
1.All dimensions are in millimeters
2.Tolerances unless dimensions ±0.3mm
3.Lead spacing is measured where the lead emerge from the package

Absolute Maximum Ratings

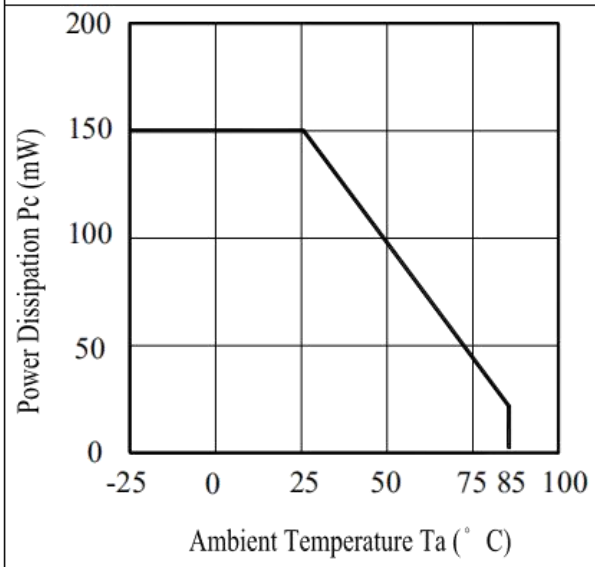
Parameter（Ta=25℃）	Symbol	Ratings	Unit
Power Dissipation at(or below) 25 Free Air Temperature	Pd	150	mW
Reverse Voltage	VR	32	V
Operating Temperature	Topr	-25~+85	℃
Storage Temperature	Tstg	-40~+100	℃
Lead Soldering Temperature (2mm form body for 5 seconds)	Tsol	260	℃

Electro-Optical Characteristics

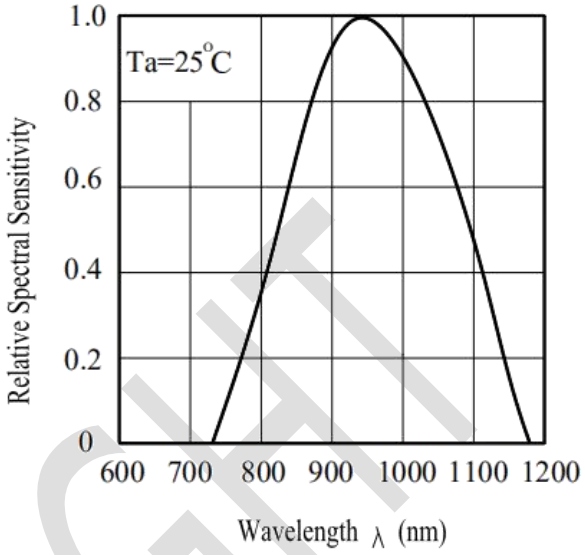
Paramete（Ta=25℃）	Symbol	Condition	Min.	Typ.	Max.	Units
Range Of Spectral Bandwidth	$\lambda_{0.5}$	--	840	--	1100	nm
Wavelength Of Peak Sensitivity	λ_P	--		940		nm
Open-Circuit Voltage	V_{OC}	Ee=1mW/cm^2 ʎp=940nm	--	0.39	--	V
Short-Circuit Current	I_{SC}	Ee=0.555mW/cm^2 ʎp=940nm	--	35	--	μA
Reverse Light Current	I_L	Ee=1mW/cm^2 ʎp=940nm V_R=5V	20	--	30	μA
Reverse Dark Current	I_D	Ee=0mW/cm^2 V_R=10V	--	5	30	nA
Reverse Breakdown Voltage	B_{VR}	Ee=0mW/cm^2 I_R=100μA	32	170	--	V
Total Capacitance	C_t	Ee=0mW/cm^2 V_R=5V f=1MHz	--	18	--	pF
Rise Time	t_r	VR=10V RL=1000Ω	--	45	--	nS
Fall Time	t_f		--	45	--	

Typical Electrical/Optical/Characteristics Curves

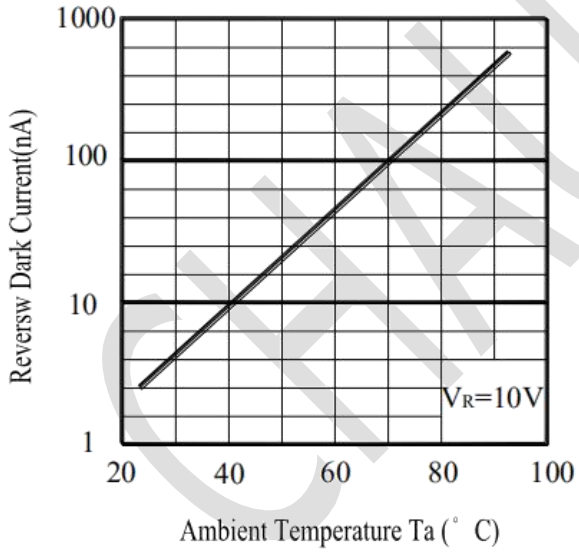
Power Dissipation vs. Ambient Temperature



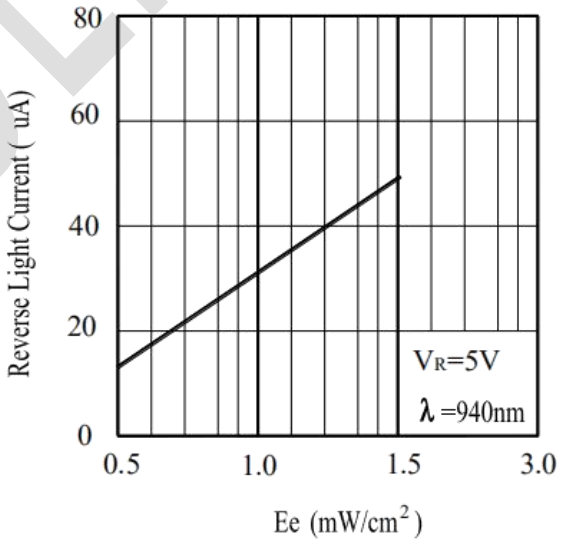
Spectral Sensitivit



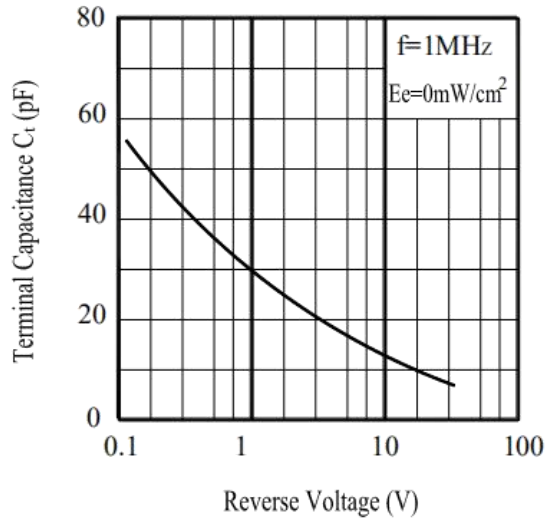
Reverse Dark Current vs. Ambient Temperature



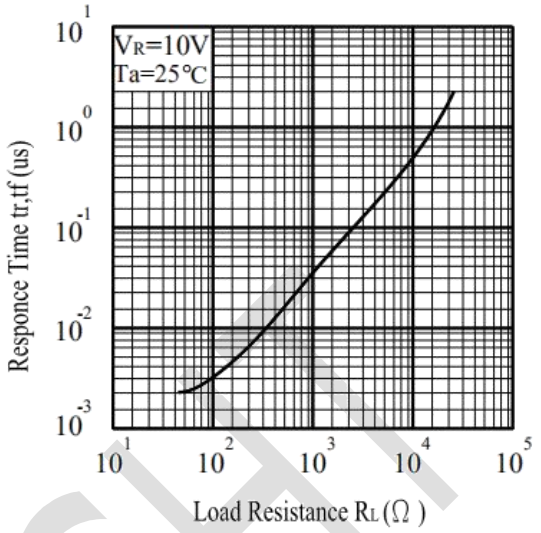
Reverse Light Current vs. Ee



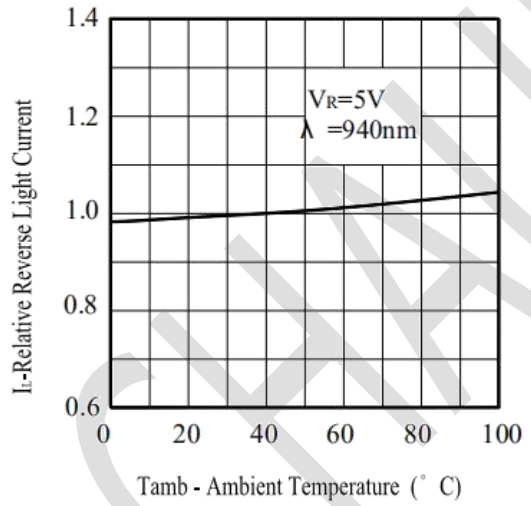
Terminal Capacitance vs. Reverse Voltage



Response Time vs. Load Resistance



Relative Reverse Light Current vs. Ambient Temperature



Relative Radiant Intensity vs. Angular Displacement