



## ZPD053B-60-S40

### Technical Data Sheet

### 5mm Photo Transistor



### Descriptions

The ZPD053B-60-S40 is a high speed and high sensitive PIN photodiode in a standard 5 $\psi$  plastic package. Due to its black epoxy the device is sensitive to visible and infrared radiation.

### Features

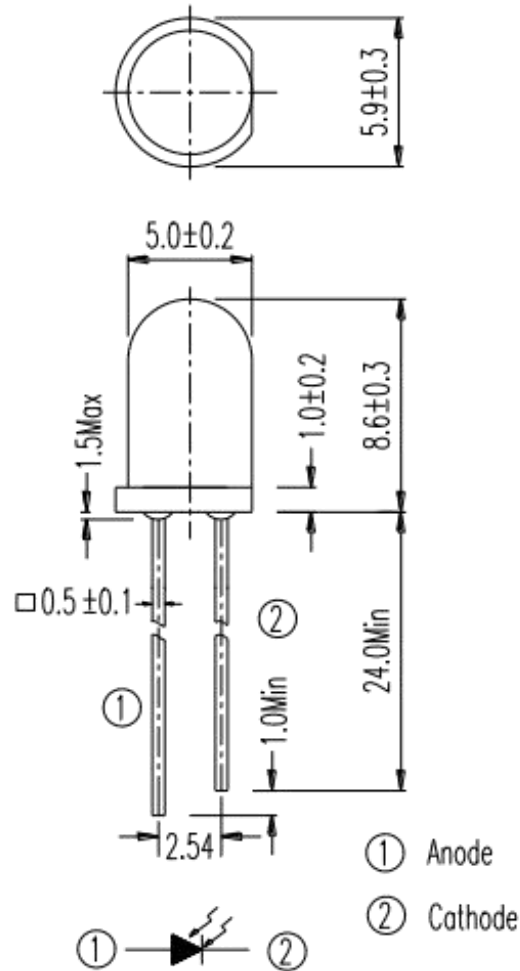
- Fast response time
- High photo sensitivity
- Pb.Free
- This product itself will remain within RoHS compliant version.

### Applications

- High speed photo detector
- Security system
- Camera



## Package Dimension



### Notes:

1. All dimensions are in millimeters
2. Tolerances unless dimensions  $\pm 0.3$  mm
3. Lead spacing is measured where the lead emerge from the package



## Absolute Maximum Ratings

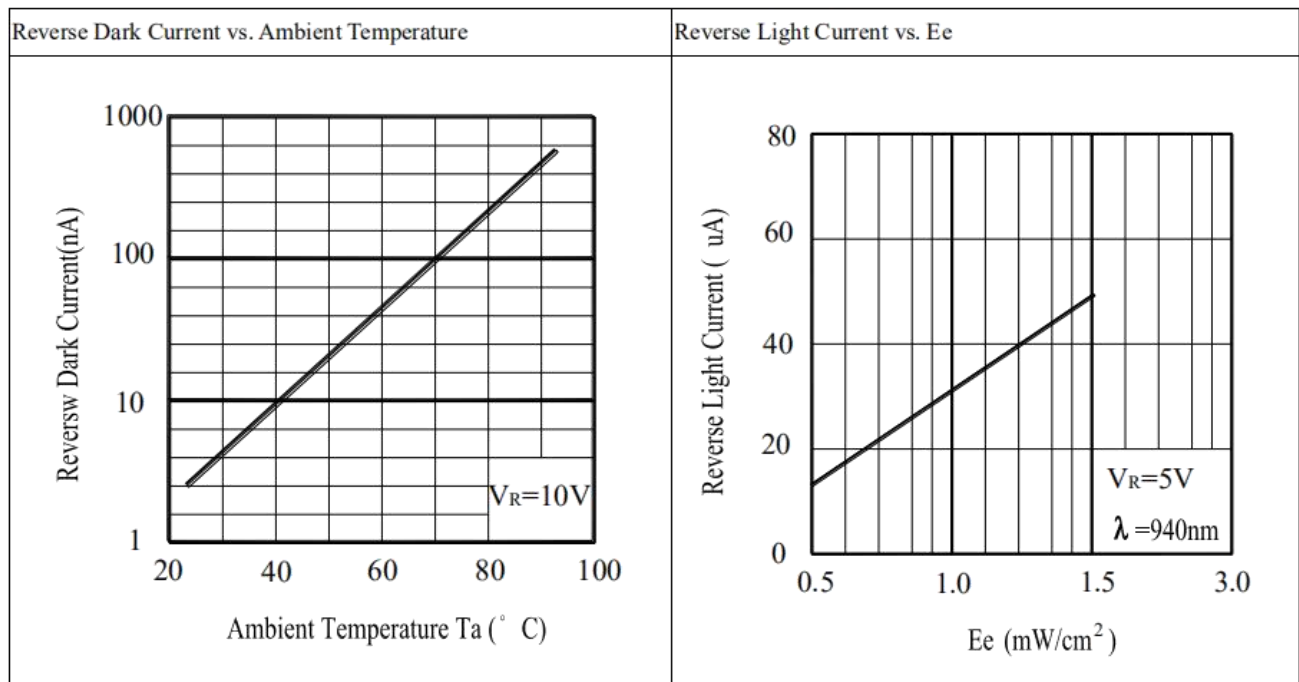
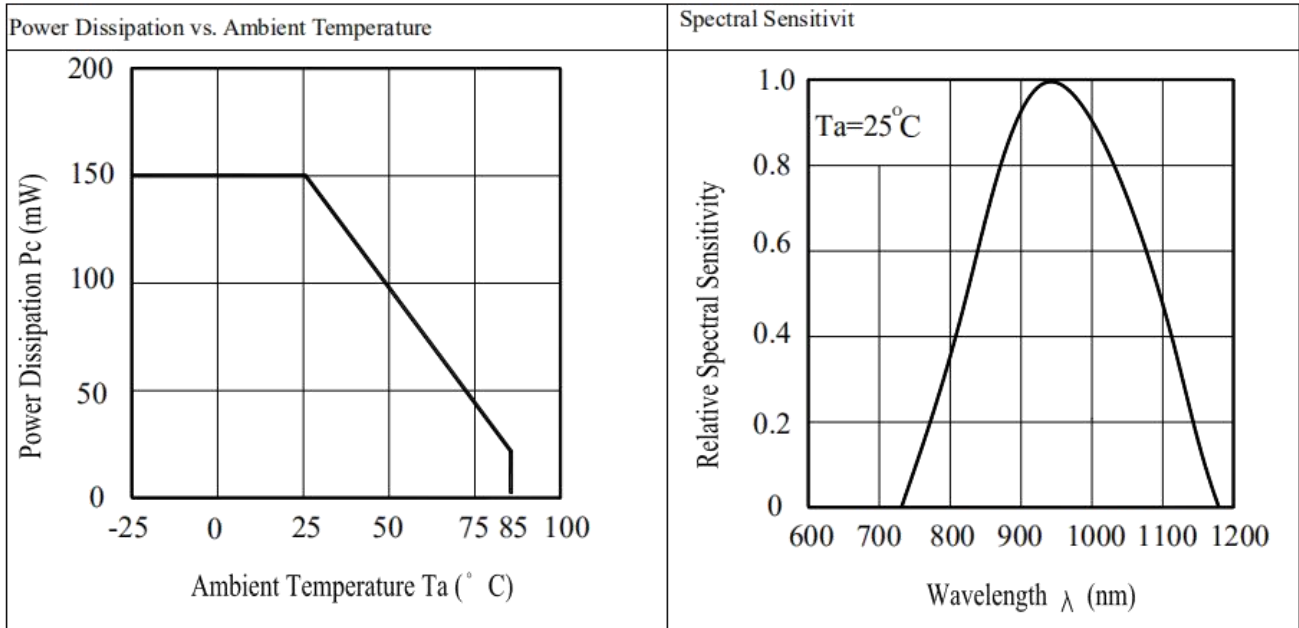
Parameter (Ta=25°C)	Symbol	Ratings	Unit
Power Dissipation at(or below) 25 Free Air Temperature	Pd	150	mW
Reverse Voltage	VR	30	V
Operating Temperature	Topr	-25~+85	°C
Storage Temperature	Tstg	-40~+100	°C
Lead Soldering Temperature (2mm form body for 5 seconds)	Tsol	260	°C

## Electro-Optical Characteristics

Parameter (Ta=25°C)	Symbol	Condition	Min.	Typ.	Max.	Units
Range Of Spectral Bandwidth	$\lambda_{0.5}$	--	800	--	1200	nm
Wavelength Of Peak Sensitivity	$\lambda_p$	--		980		nm
Open-Circuit Voltage	V <sub>OC</sub>	Ee=1mW/cm <sup>2</sup> $\lambda_p=940\text{nm}$	--	0.44	--	V
Short-Circuit Current	I <sub>SC</sub>	Ee=0.555mW/cm <sup>2</sup> $\lambda_p=940\text{nm}$	--	10	--	μA
Reverse Light Current	I <sub>L</sub>	Ee=1mW/cm <sup>2</sup> $\lambda_p=940\text{nm}$ V <sub>R</sub> =5V	--	70	--	μA
Reverse Dark Current	I <sub>D</sub>	Ee=0mW/cm <sup>2</sup> V <sub>R</sub> =10V	--	--	10	nA
Reverse Breakdown Voltage	B <sub>VR</sub>	Ee=0mW/cm <sup>2</sup> I <sub>R</sub> =100μA	30	170	--	V
Total Capacitance	C <sub>t</sub>	Ee=0mW/cm <sup>2</sup> V <sub>R</sub> =5V f=1MHz	--	10	--	pF
Rise Time	t <sub>r</sub>	VR=10V	--	10	--	nS
Fall Time	t <sub>f</sub>	RL=1000 Ω	--	10	--	



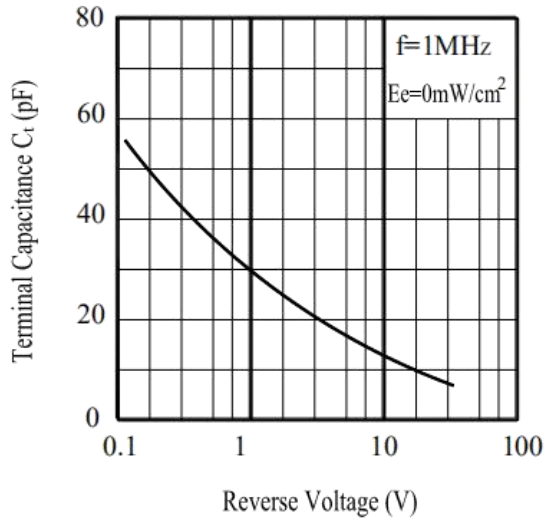
## Typical Electrical/Optical/Characteristics Curves





# CHAU LIGHT Technical Data Sheet

Terminal Capacitance vs. Reverse Voltage



Response Time vs. Load Resistance

