



## ZPD808B

### Technical Data Sheet

### 4.8mm Semi-Lens Infrared Photodiode



### Descriptions

ZPD808B is a high speed and sensitive PIN photodiode in a cylindrical side view plastic package. The epoxy package itself is an IR filter, spectrally matched to IR emitter.

### Features

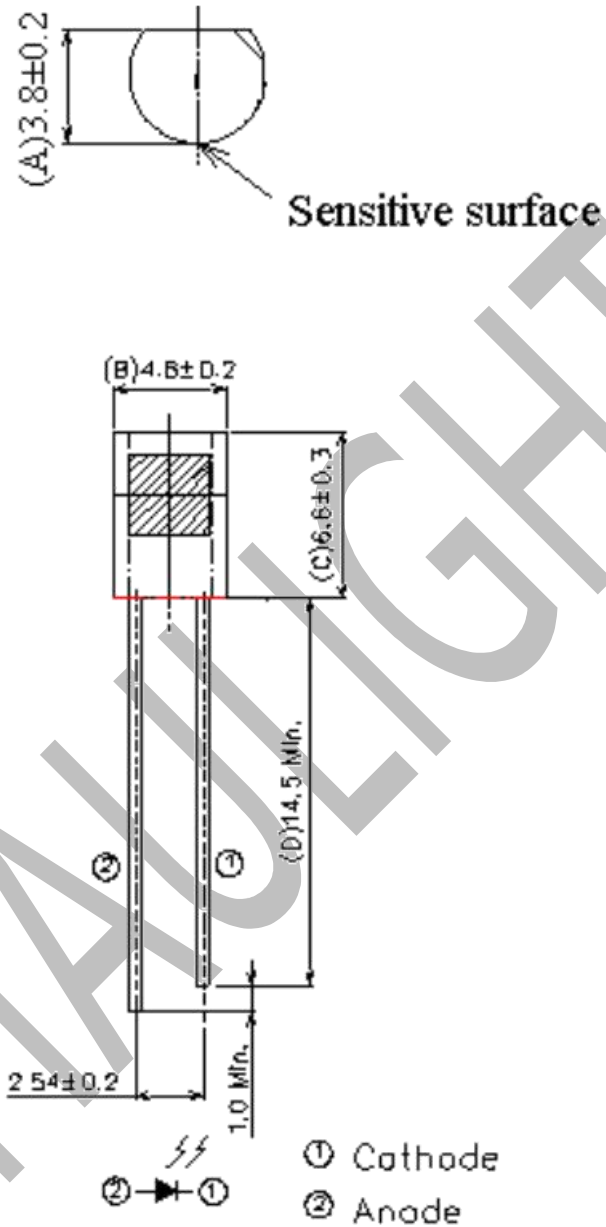
- Fast response times
- High photo sensitivity
- Small junction capacitance
- Pb.Free
- The product itself will remain within RoHS compliant version.
- Compliance with EU REACH

### Applications

- High speed photo detector
- Camera
- Optoelectronic switch
- VCRs , Video camera
- Amusement machines



## Package Dimension



### Notes:

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



## Absolute Maximum Ratings (Ta=25°C)

Parameter (Ta=25°C)	Symbol	Rating	Unit
Reverse Voltage	VR	32	V
Power Dissipation	Pd	150	mW
Operating Temperature	Topr	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +100	°C
Soldering Temperature(*1)	Tsol	260	°C

Notes: \*1: Soldering time  $\leq$  5 seconds.



## Electro-Optical Characteristics

Parameter (Ta=25°C)	Symbol	Condition	Min.	Typ.	Max.	Unit
Range of Spectral Bandwidth	$\lambda_{0.5}$	--	400	--	1100	nm
Wavelength of Peak Sensitivity	$\lambda_p$	--	--	940	--	nm
Open-Circuit Voltage	VOC	Ee=5m W/cm <sup>2</sup> $\lambda_p=940\text{nm}$	--	0.35	--	V
Short-Circuit Current	ISC	Ee=1m W/cm <sup>2</sup> $\lambda_p=940\text{nm}$	--	18	--	uA
Reverse Light Current	IL	Ee=1m W/cm <sup>2</sup> $\lambda_p=940\text{nm}$ VR=5V	31.0	--	35.0	uA
Dark Current	Id	Ee=0m W/cm <sup>2</sup> VR=10V	--	5	30	nA
Reverse Breakdown	BVR	Ee=0m W/cm <sup>2</sup> IR=100uA	32	170	--	V
Total Capacitance	Ct	Ee=0m W/cm <sup>2</sup> VR=3V f=1MHZ	--	25	--	pF
Rise/Fall Time	tr/tf	VR=10V RL=1K $\Omega$	--	50/50	--	nS

Note:

Tolerance of Luminous Intensity:  $\pm 10\%$

Tolerance of Dominant Wavelength:  $\pm 1\text{nm}$

Tolerance of Forward Voltage:  $\pm 0.1\text{V}$



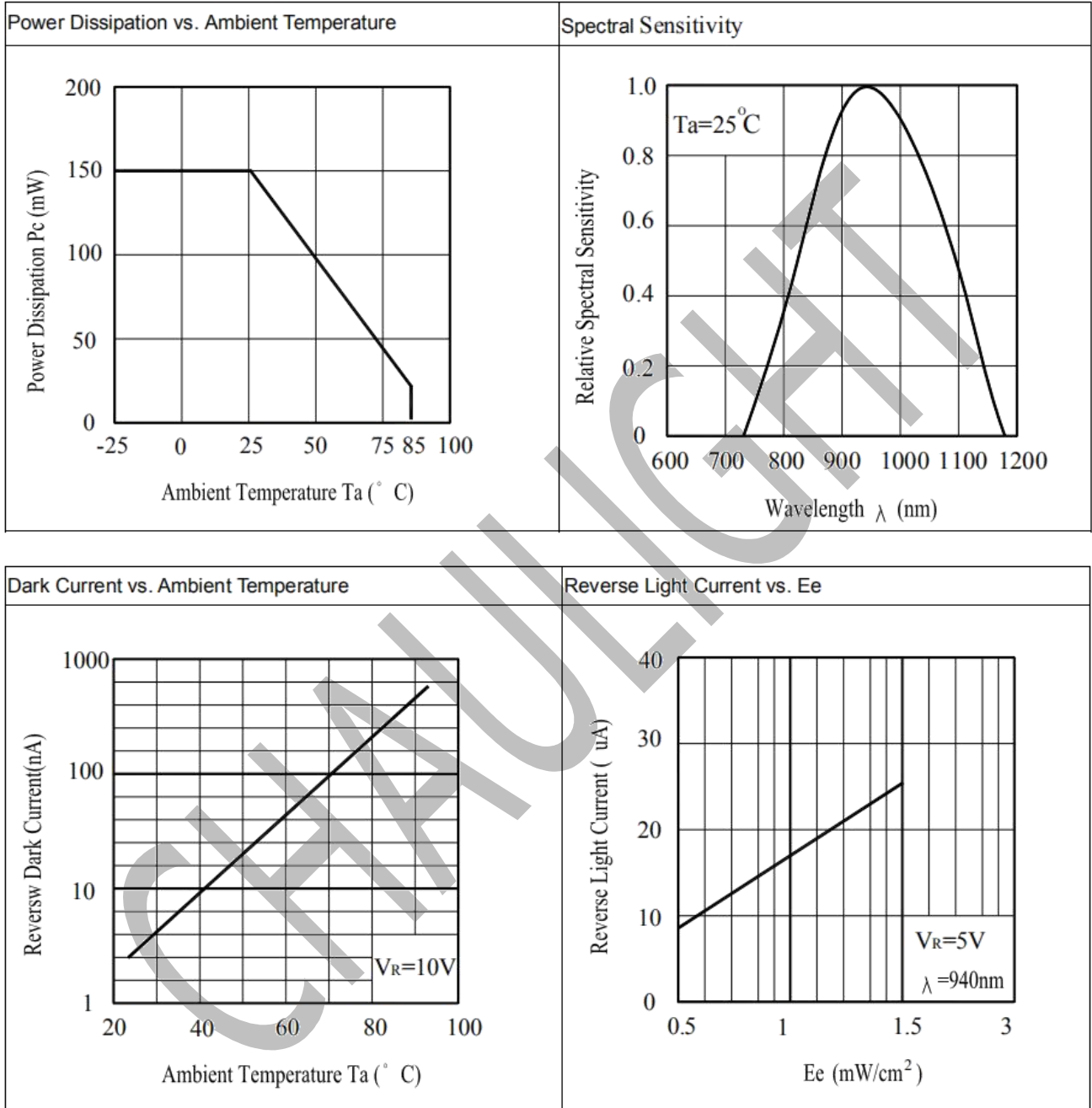
## Rank

Parameter	Symbol	Condition	Min.	Max.	Unit
BIN4	IL	Ee=1m W/cm2 $\lambda_p=940\text{nm}$ VR=5V	31.0	35.0	$\mu\text{A}$

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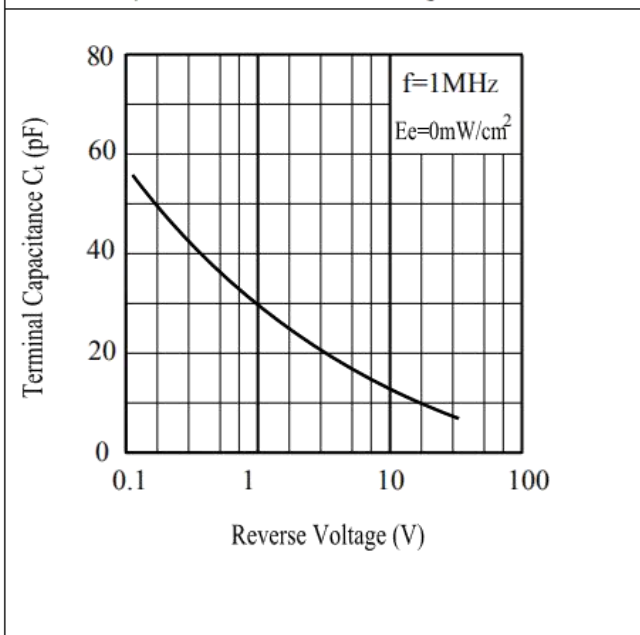


## Typical Electro-Optical Characteristics Curves

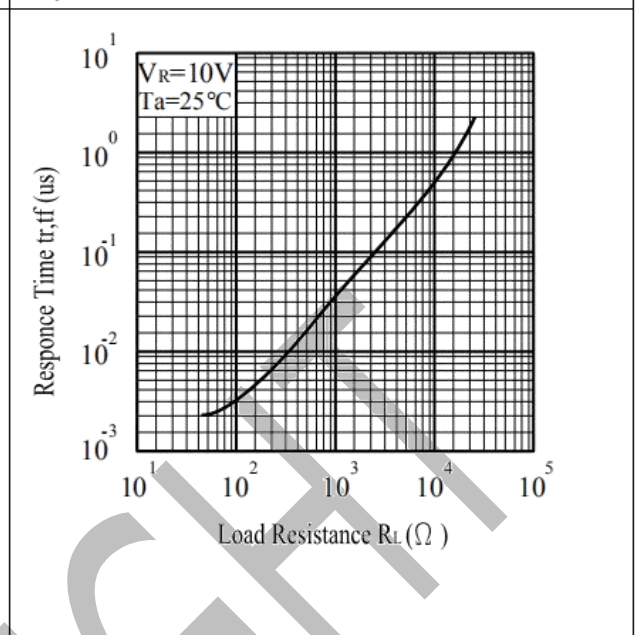




Terminal Capacitance vs. Reverse Voltage



Response Time vs. Load Resistance



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