

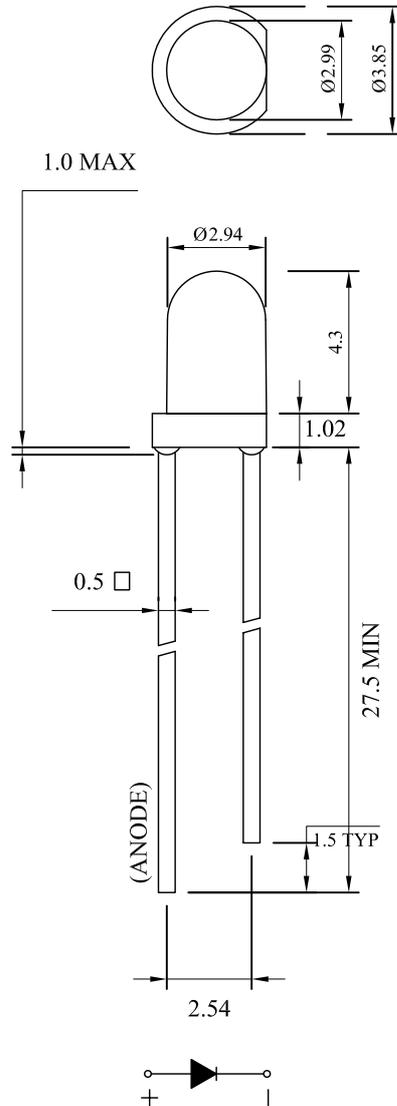


PART NO: 3AMSB00

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Description: 3mm Silicon PIN Photodiode

Package Dimensions:



Part No	Material	Lens Color
PD	Silicon	Black

NOTES

- 1.All dimensions are in millimeters .
- 2.Tolerance is ± 0.25 mm unless otherwise noted.
- 3.Protruded resin under flange is 1.0mm max.
- 4.Lead spacing is measured where the leads emerge from the package.
- 5.Specifications are subject to change without notice.



Absolute Maximum Ratings at TA=25°C

Parameter	Symbol	Maximum Rating	Unit
Reverse Voltage	VR	32	V
Power Dissipation	PD	150	mW
Operation Temp.	Tamb	-25°C to+85°C	
Storage Temp.	Tstg	-25°C to+85°C	
Soldering Temp.(5s)	Tsd	260°C for 5 seconds	

Opto-electrical Characteristics at TA=25°C

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Rang of Spectral Bandwidth	$\lambda_{0.5}$	840		1200	nm	Vs=5V Ev=0
Perk wavelength	λ_p		940		nm	
Open-Circuit Voltage	Voc		0.42		V	Ee=1mw/cm ² $\lambda_p=940\text{nm}$
Short-Circuit Current	Isc		10		uA	
Reverse Light Current	IL		12		uA	Ee=1mw/cm ² $\lambda_p=940\text{nm}$ VR=5V
Dark Current	Id				nA	
Reverse Breakdown Voltage	BVR	32	150		V	Ee=0mw/cm ² IR=100uA
Rise/Fall Time	tr/tf		6/6	ns		Ee=0mw/cm ² IR=100uA
Controlled angle	$\Delta\theta$		30		deg	

1.Features:

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



Typical Electrical / Optical Characteristics Curves
(25° C Ambient Temperature Unless Otherwise Noted)

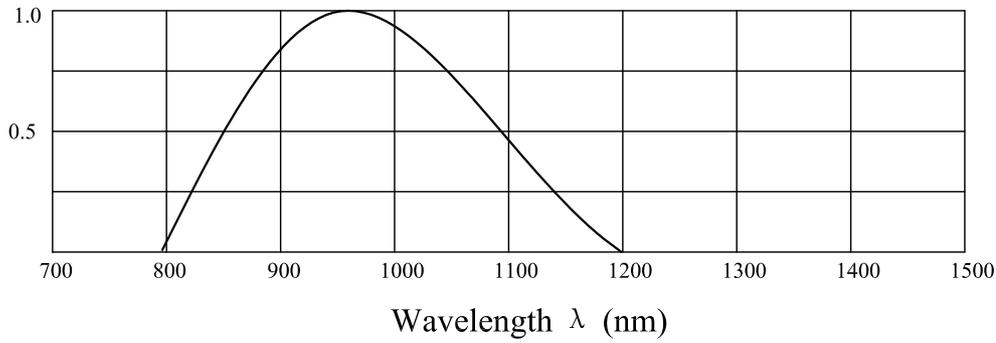
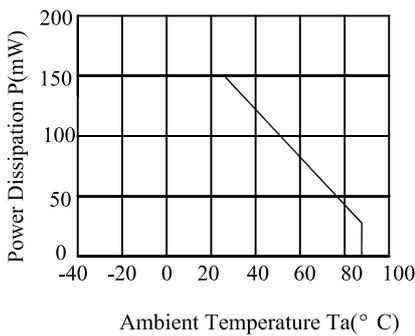
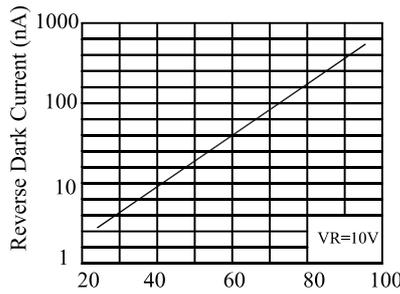


Fig. 1 Relative Intensity vs . Wavelength



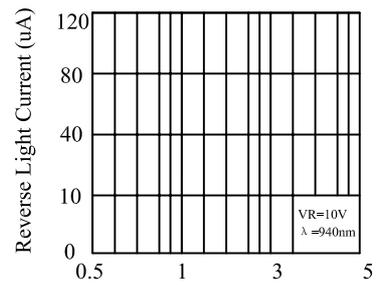
Ambient Temperature $T_a(^{\circ}C)$

Fig.2 Power Dissipation vs Ambient Temperature



Ambient Temperature

Fig.3 Dark Current vs Ambient Temperature



E_e (mw/cm²)

Fig 4 Responce Time vs Load Resistance

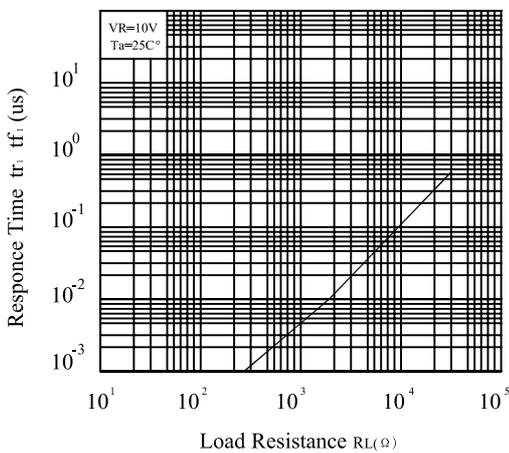
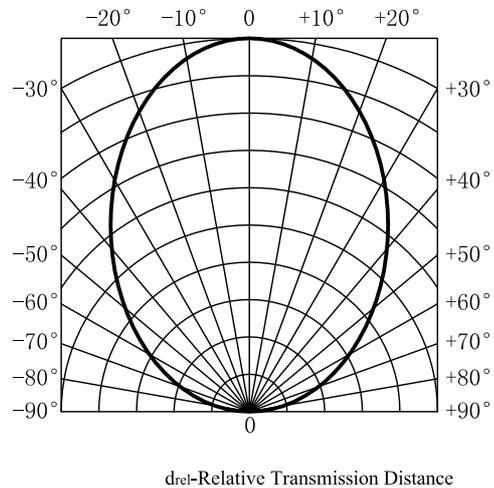


Fig.5 Response Time vs Load Resistance



drel-Relative Transmission Distance

Fig.6 Spatial Distribution



CAUTIONS

1.Application

High speed photo detector

Camera

Optoelectronic switch

VCRs Video camera

Floppy

2. Cleaning

Use alcohol-based cleaning solvent such as isopropyl alcohol to clean the LEDs if necessary.

3.Lead Forming & Assembly

During lead forming, the leads should be bent at point at least 3mm from the base of LED lens.

Do not use the base of the lead frame as a fulcrum during forming.

Lead forming must be done before soldering, at normal temperature.

During assembly on PCB, use minimum clench force possible to avoid excessive mechanical stress.

4.Soldering

Recommended soldering conditions:

Soldering iron		Wave soldering	
Temperature	300 Max	Pre-heat	100 Max
Soldering time	3 sec.Max (one time only)	Pre-heat time	60sec.Max
		Solder wave	260 Max
		Soldering time	10sec.Max

Note: Excessive soldering temperature and/or time might result in deformation of the LED lens or catastrophic failure of the LED.

5. Protege Of ESD

Since the device is static sensitive, it is requested that anti-static measures should be taken on human body, all devices (including soldering iron) and equipment, machinery, desk and ground.