# *END- LOOK PACKAGE PIN PHOTO DIODE*

## Features

1. Linear response vs. irradiance
2. Fast switching time
3. End-looking Package ideal for space limited applications
4. Lens Appearance: Black
5. This product doesn't contain restriction Substance, comply RoHS standard

## Description

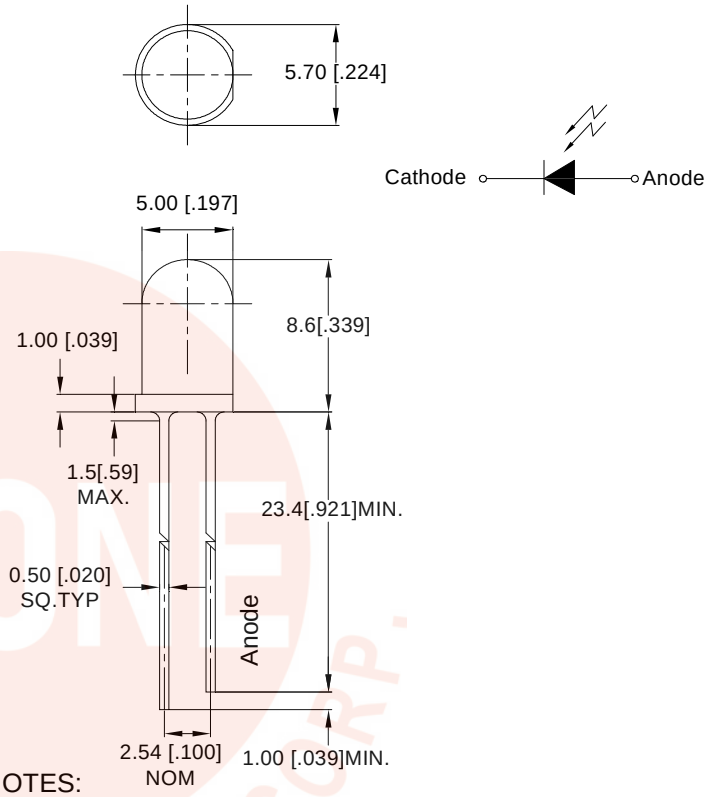
The BPD-BQD934 device consists of a PIN silicon photodiode molded in a black epoxy package which allows spectral response from visible to infrared light wavelengths.

The wide receiving angle provides relatively even reception over a large area.

The end-looking package is designed for easy PC board mounting.

This photodiode is mechanically and spectrally matched to BRIGHT's GaAs and GaAlAs series of infrared emitting diodes.

**●Package Dimensions:**




NOTES:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25mm (0.01") unless otherwise specified.
3. Lead spacing is measured where the leads emerge from the package
4. Specifications are subject to change without notice

## Absolute Maximum Ratings(Ta=25℃)

| Parameter | Maximum Rating | Unit |
|---|---|---|
| Power Dissipation | 100 | mW |
| Reverse Breakdown Voltage | 60V | |
| Operating Temperature | -40℃~+85℃ | |
| Storage Temperature Range | -45℃~+85℃ | |
| Lead Soldering Temperature | 260℃ for 5 seconds | |

## I Electrical Characteristics (Ta=25℃ unless otherwise noted)

| PARAMETER | SYMBOL | MIN | TYP | MAX | UNITS | TEST CONDITIONS |
|---|---|---|---|---|---|---|
| Reverse Light Current | $I_L$ | - | 80 | | μA | $V_R$=5V, Ee=1mW/cm$^2$ |
| Reverse Dark Current | $I_D$ | - | - | 30 | nA | $V_R$=10V, Ee=0 mW/cm$^2$ |
| Reverse Break down Voltage | $V_{(BR)}$ | 35 | - | - | V | $I_R$=100μA |
| Forward Voltage | $V_F$ | 0.5 | - | 1.3 | V | $I_F$=1mA |
| Spectral range of sensitivity | λ10% | 750 | 940 | 1100 | nm | |
| Wavelength of max sensitivity | λp | | 940 | | nm | |
| Total Capacitance | $C_T$ | - | 9 | - | pF | $V_R$=5V, Ee=0, f=1.0MHz |
| Rise Time/ Fall Time | tr/tf | - | 50 | - | ns | $V_R$=20V, λ=940nm, RL=50Ω |
| Angle of sensitivity | $2\theta_{1/2}$ | - | 30 | - | deg | |

## I Typical Optical-Electrical Characteristic Curves(Ta=25℃)

Fig1. Relative Response vs. Wavelength

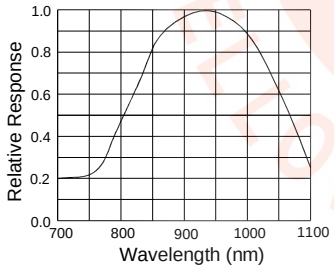



Fig2.Coupling Characteristics

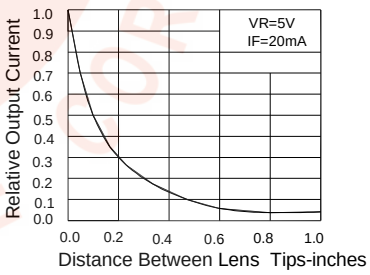



Fig3.Normalized Light Current vs Reverse Voltage

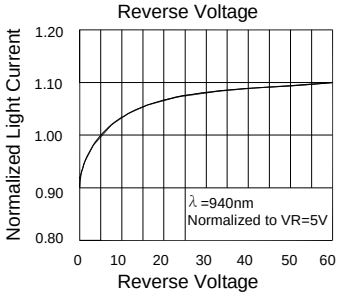



Fig4.Total Capacitance vs Reverse Voltage

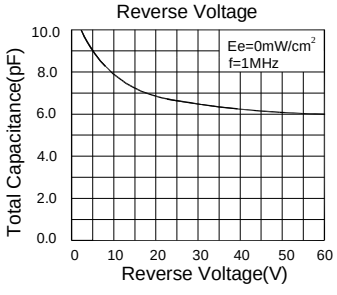



Fig5.Normalized Light Current vs Ambient Temperture

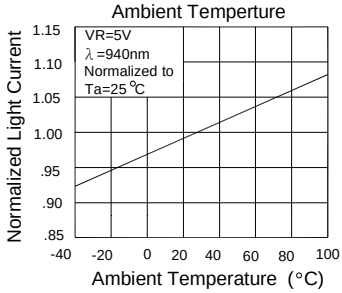



Fig6.Light Current vslrradiance

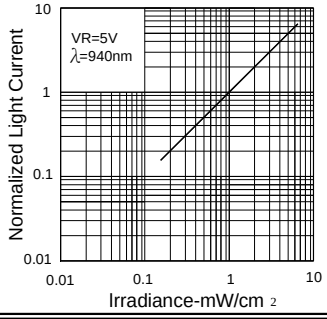
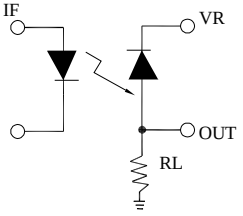
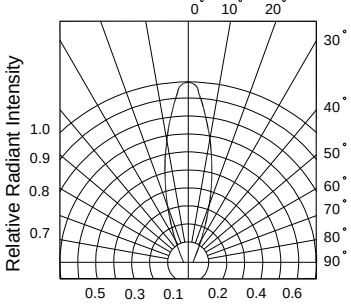



Fig7.Switching Time Test Circuit

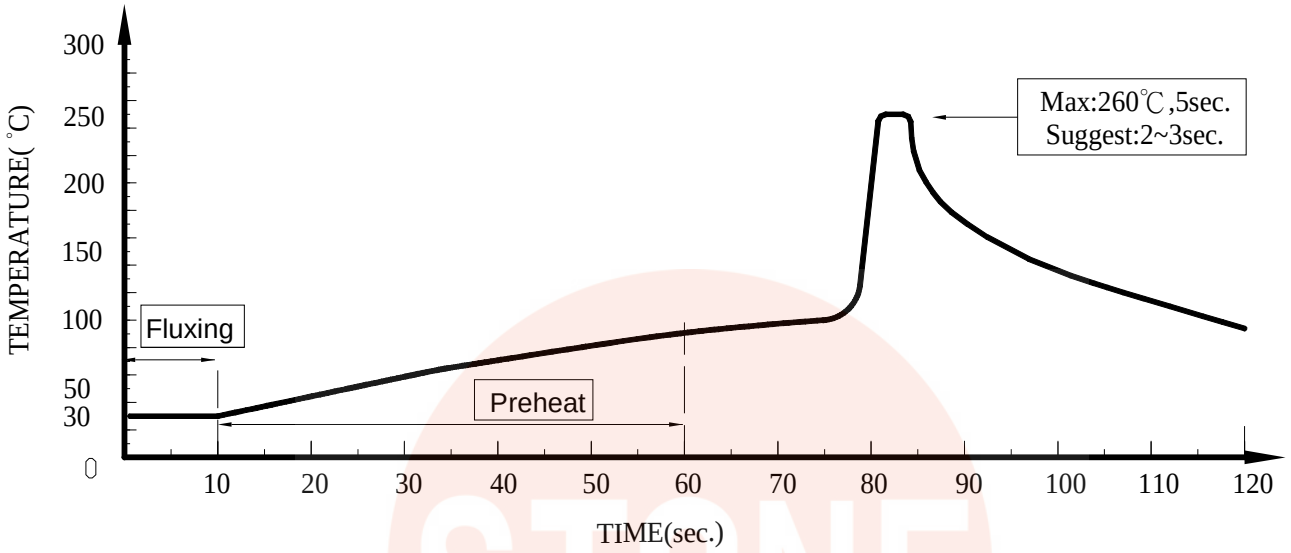



Note:
See Above For tr/tf Conditions

FIG.8 Radiant Diagram



## I Dip Soldering

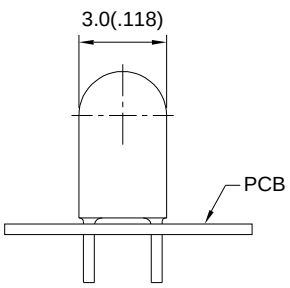



1. Please avoid any external stress applied to the lead-frames and epoxy while the LEDs are at high temperature, especially during soldering
2. DIP soldering and hand soldering should not be done more than one time.
3. After soldering, avoid the epoxy lens from mechanical shock or vibration until the LEDs are back to room temperature.
4. Avoid rapid cooling during temperature ramp-down process
5. Although the soldering condition is recommended above, soldering at the lowest possible temperature is feasible for the LEDs

## ● IRON Soldering

**A：Max：350℃ Within 3 sec. One time only.**

**B：The products of 3mm without flange, welding condition of flat plate PCB Max：350℃ Within 2 sec. One time only**



# Photodiode Specification

●Commodity: Photodiode

●Collector Current Bin Limits ($V_R$=5V, Ee=1mW/cm$^2$)

| BIN CODE | Min.( uA) | Max.(uA) |
|---|---|---|
| 2 | 44.3 | 53.2 |
| 3 | 53.2 | 64.0 |
| 4 | 64.0 | 77.0 |
| 5 | 77.0 | 92.0 |
| 6 | 92.0 | 110.0 |

NOTES: Tolerance of measurement of Radiant Intensity :±15%