



Specification for Approval

- DEVICE NUMBER: BPD-NQHAC4-LC14.0
- CUSTOMER:

SAMPLES
ATTACHED AREA

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2018/10/10	1.0	1.0	1.0	1.0	1.0					Initial Released
2018/12/20	1.0	1.1	1.0	1.0	1.0					Modification of receiving wavelength diagram
2020/8/13	1.0	1.2	1.0	1.0	1.1					I _L :240→195μA and add angle of sensitivity

FOR CUSTOMER'S APPROVAL STAMP OR SIGNATURE

APPROVED	PURCHASE	MANUFACTURE	QUALITY	ENGINEERING

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ISSUED	APPROVED	PREPARED

END-LOOK PACKAGE PIN PHOTO DIODE

I Features

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

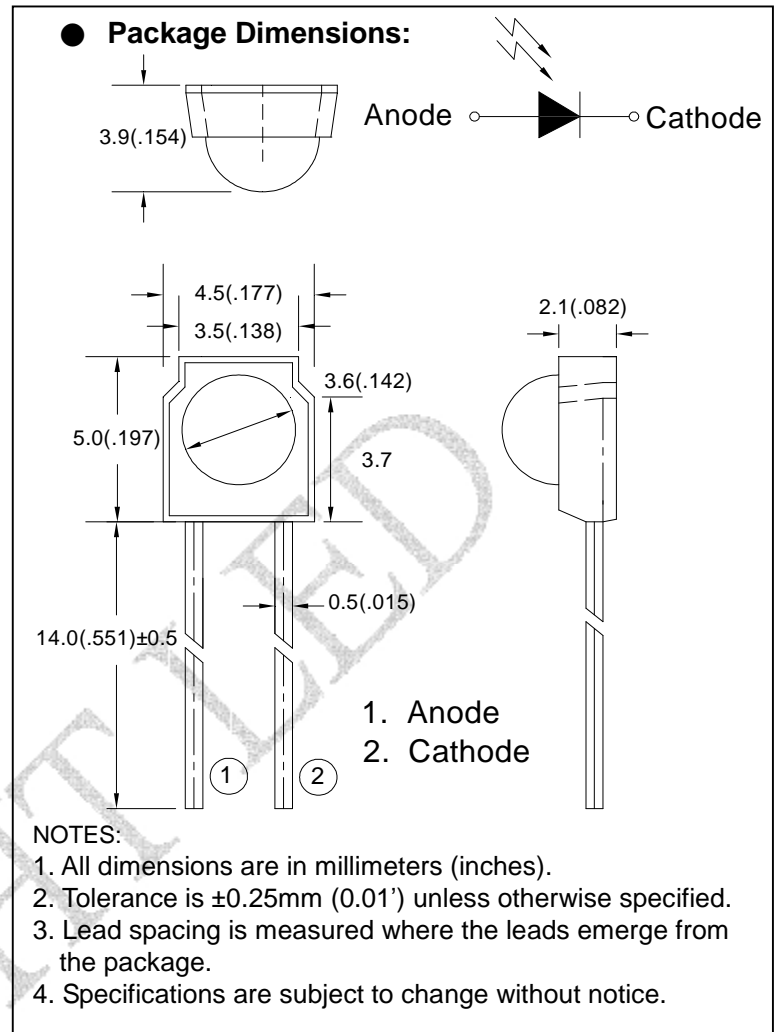
I Description

The BPD-NQHAC4-LC14.0 device consists of a PIN silicon photodiode molded in a clear 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.



I Absolute Maximum Ratings ($T_a=25^\circ\text{C}$)

Parameter	Maximum Rating	Unit
Power Dissipation	100	mW
Reverse Breakdown Voltage	60V	
Operating Temperature	$-40^\circ\text{C} \sim +85^\circ\text{C}$	
Storage Temperature Range	$-45^\circ\text{C} \sim +85^\circ\text{C}$	

I Electrical Characteristics (Ta=25°C unless otherwise noted)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Reverse Light Current	I_L		195		μA	$V_R=5V, E_e=1mW/cm^2$
Reverse Dark Current	I_D	-	-	100	nA	$V_R=10V, E_e=0 mW/cm^2$
Reverse Break down Voltage	$V_{(BR)}$	35	-	-	-	$I_R=100\mu A$
Forward Voltage	V_F	-	-	1.3	V	$I_F=1mA$
Total Capacitance	C_T	-	9	-	PF	$V_R=5V, E_e=0, f=1.0MHZ$
Rise Time/ Fall Time	tr/tf	-	50	-	ns	$V_R=20V, \lambda=940nm, R_L=50\Omega$
Angle of sensitivity	$2\theta_{1/2}$	-	85	-	deg	

I Typical Optical-Electrical Characteristic Curves

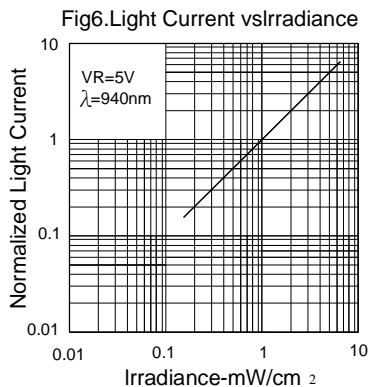
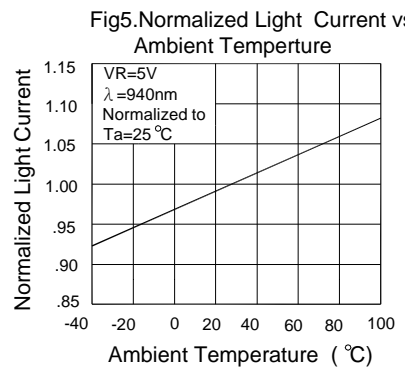
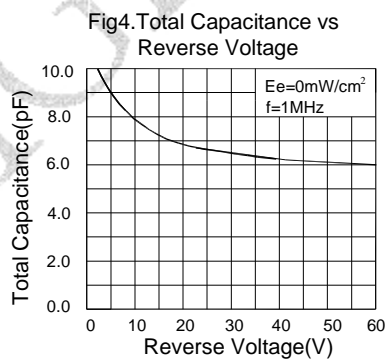
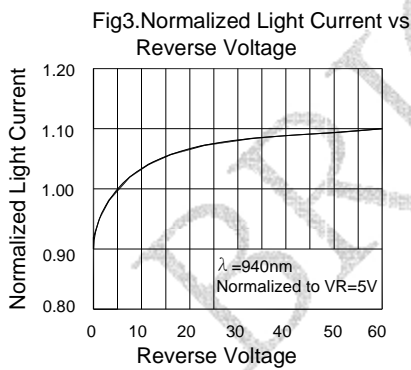
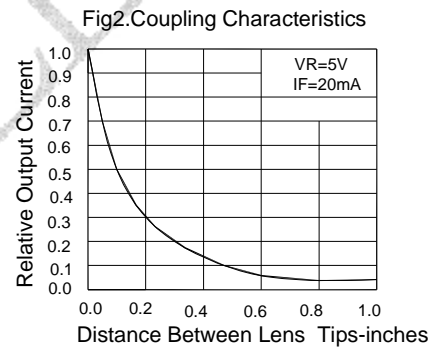
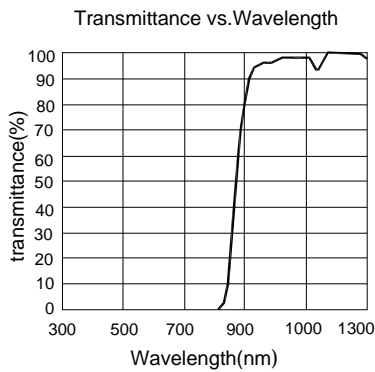
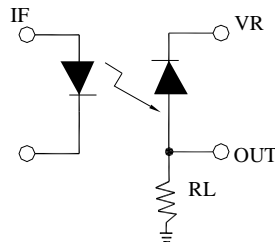
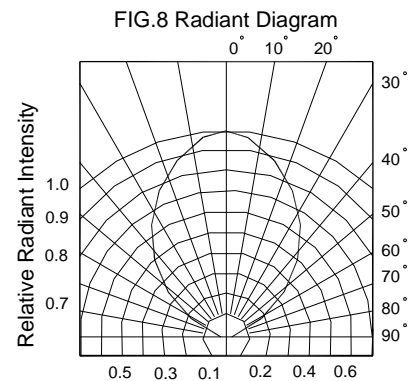


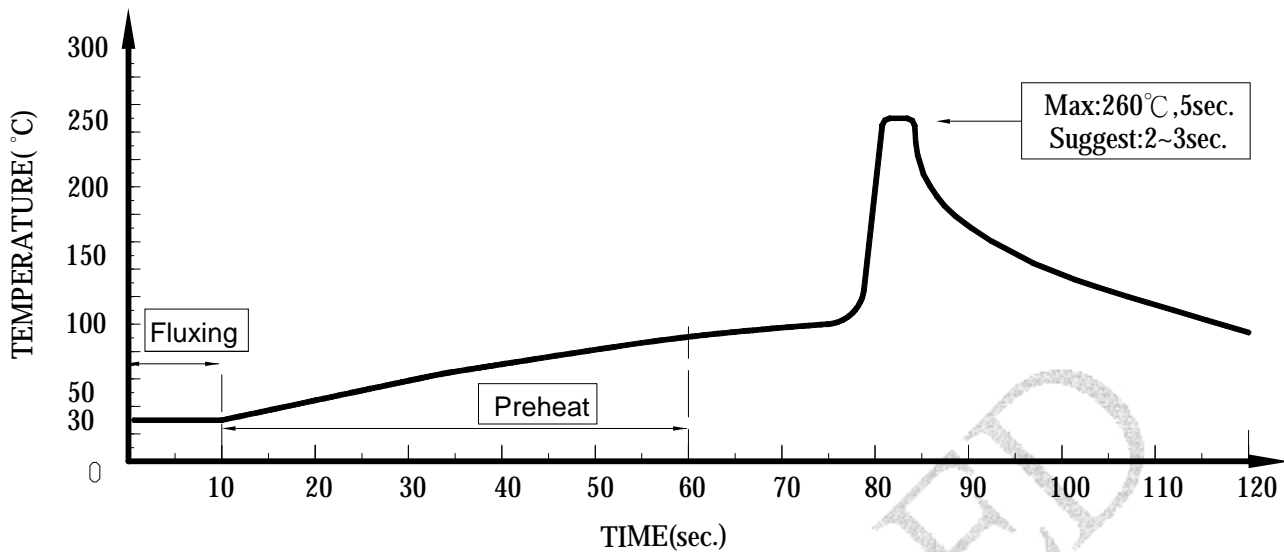
Fig7. Switching Time Test Circuit



Note:
See Above For tr/tf Conditions



● Dip Soldering

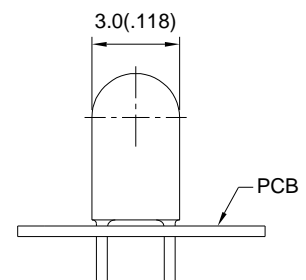


1. Please avoid any external stress applied to the lead-frames and epoxy while the LEDs are at high temperature, especially during soldering
2. DIP soldering and hand soldering should not be done more than one time.
3. After soldering, avoid the epoxy lens from mechanical shock or vibration until the 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

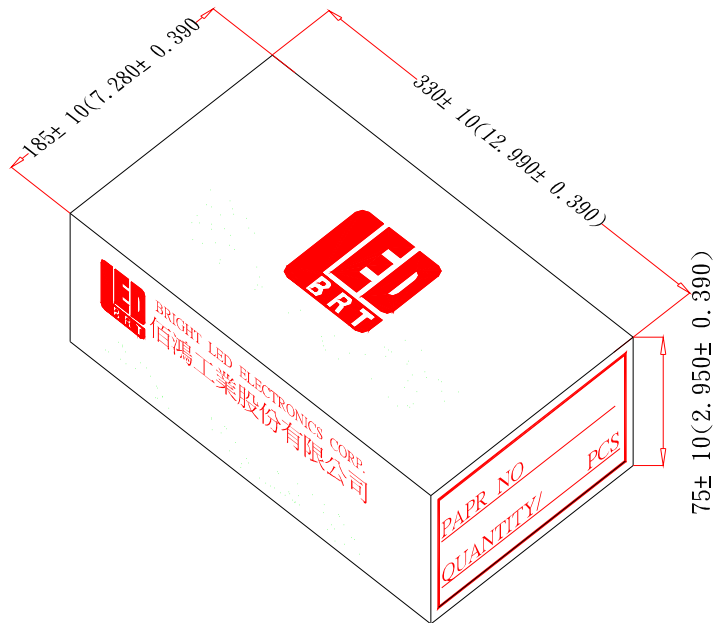
● IRON Soldering

A: Max: 350°C Within 3 sec. One time only.

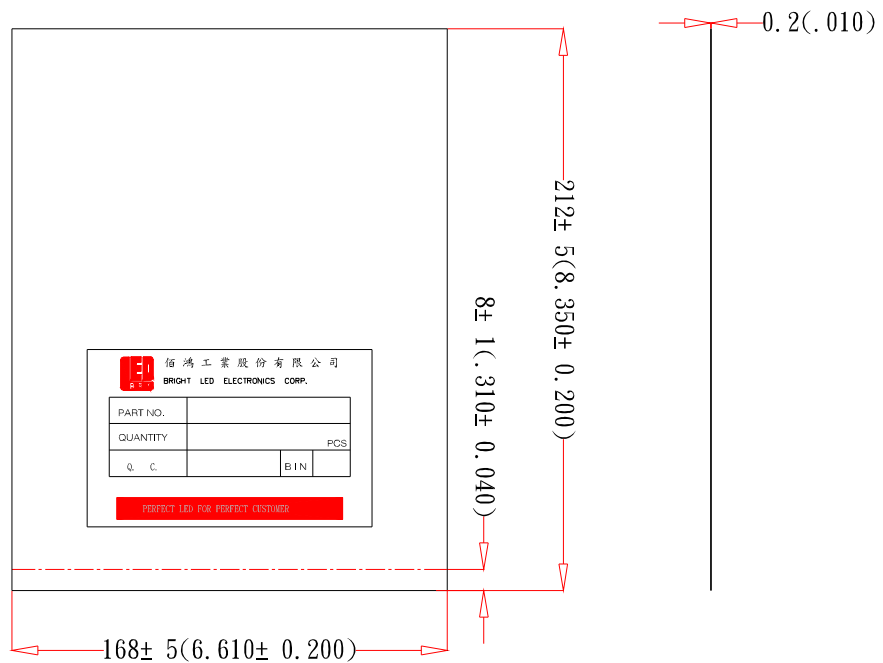
B: The products of 3mm without flange, welding condition of flat plate PCB Max: 350°C Within 2 sec. One time only



I Tapping and packaging specifications(Units: mm)



I Packaging Bag Dimensions



Notes:

- 1、1000pcs per bag, 8Kpcs per box.
- 2、All dimensions are in millimeters(inches).
- 3、Specifications are subject to change without notice.



Photodiode Specification

- Commodity: Photodiode
- Collector Current Bin Limits (IF=10mA Vce =5V)

BIN CODE	Min.(uA)	Max.(uA)
6	77	110
7	110	158
8	158	221
9	221	309
10	309	433

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