BRIGHTEK

BRIGHTEK (EUROPE) LIMITED

Brighten Up The World With LED !

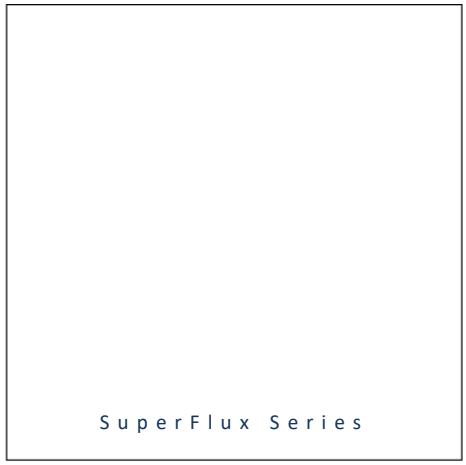
ISO/TS 16949:2009 BS EN ISO 14001:2004 QC 080000 IECQ HSPM

PRODUCT DATASHEET

- ► SuperFlux
- ► 3mm Round 4.0t
- ► Blue (470m)

Release Date: 26 June 2022 Version: A1.1

N0B58P94ZS-30MA



SuperFux Series

RoHS Compliant

FEATURES:

- **Package:** THT Through Hole 4 Pins Package
- **Forward Current:** 30mA
- **Forward Voltage (typ.):** 3.4V
- **Luminous Flux (typ.):** 2.2lm@30mA
- **Colour:** Blue
- **Wavelength (typ.):** 470nm
- **Viewing angle:** 80°
- **Materials:**
  - Die: InGaN
  - Resin: Epoxy (Water Clear)
  - L/T Finish: Ag plated
- **Operating Temperature:** -20~+80°C
- **Storage Temperature:** -30~+100°C
- **Grouping parameters:**
  - Forward voltage
  - Luminous flux
  - Dominant wavelength
- **Soldering methods:** DIP Iron or Wave Soldering
- **Preconditioning:** acc. to JEDEC Level 3
- **Packing:** 60pcs/tube; 6300pcs/carton

APPLICATIONS:

- Decorative Lighting
- Indicator
- Commercial Lighting

CHARACTERISTICS:

Absolute Maximum Characteristics (Ta=25°C)

Parameter	Symbol	Ratings	Unit
Forward Current	I_F	30	mA
Peak Forward Current (Duty 1/10; width 10KHz)	I_{FP}	100	mA
Reverse Current @5V	I_R	10	μA
Power Dissipation	P_D	102	mW
Electrostatic Discharge	ESD	4000	V
Operating Temperature	T_{OPR}	-20~+80	°C
Storage Temperature	T_{STG}	-30~+100	°C

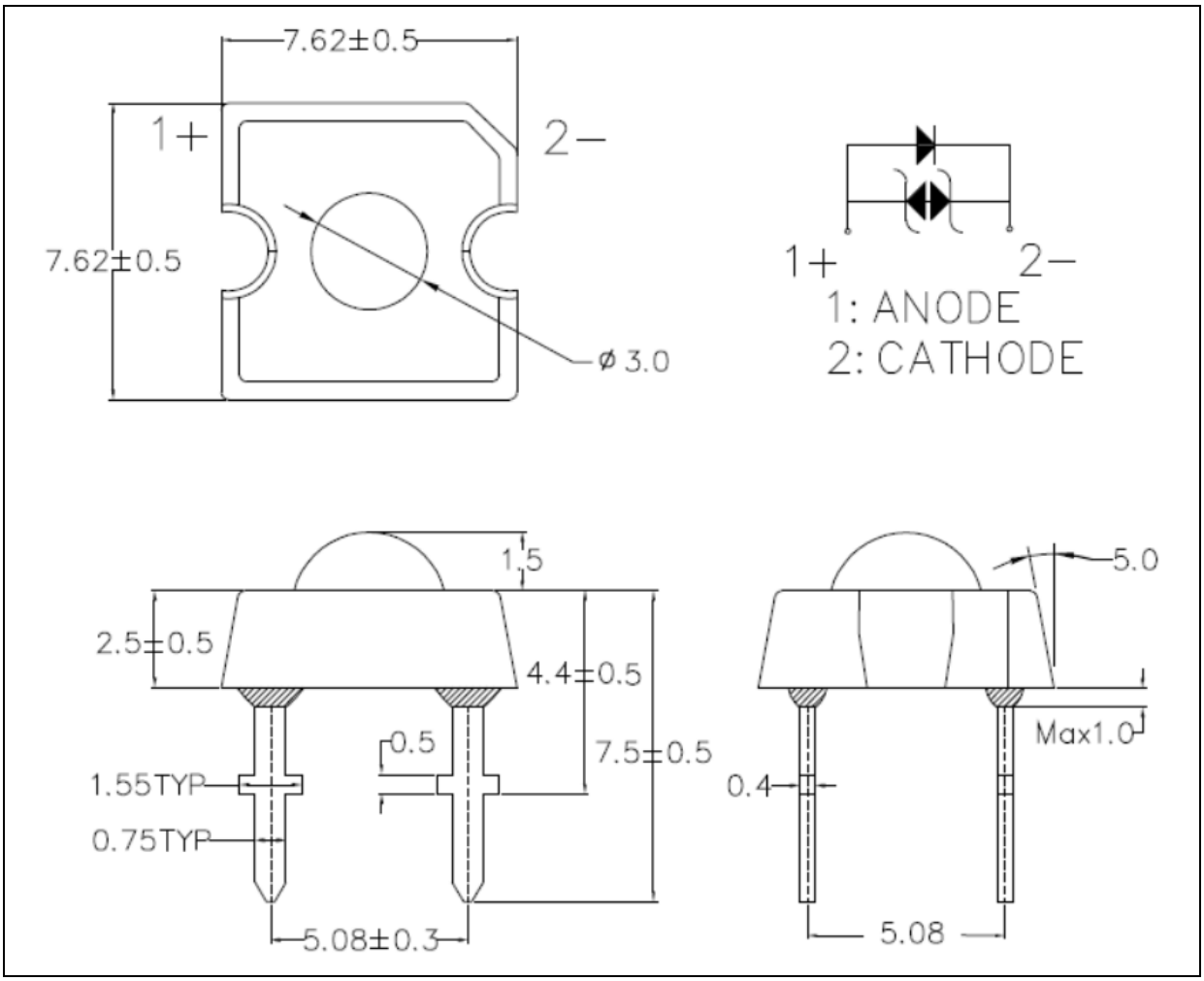
Electrical & Optical Characteristics (Ta=25°C)

Parameter	Symbol	Values			Unit	Test Condition
		Min.	Typ.	Max.		
Forward Voltage	V_F	2.8	---	4.0	V	I_F=30mA
Luminous Flux	Φ_V	1.3	2.2	---	lm	I_F=30mA
Dominant Wavelength	λ_D	---	470	---	nm	I_F=30mA
Spectral Half Width	$\Delta\lambda$	---	30	---	nm	I_F=30mA
Viewing Angle	$2\theta_{1/2}$	---	80	---	deg	I_F=30mA

1. Luminous intensity (I_V) ±15%, Forward Voltage (V_F) ±0.1V

OUTLINE DIMENSION:

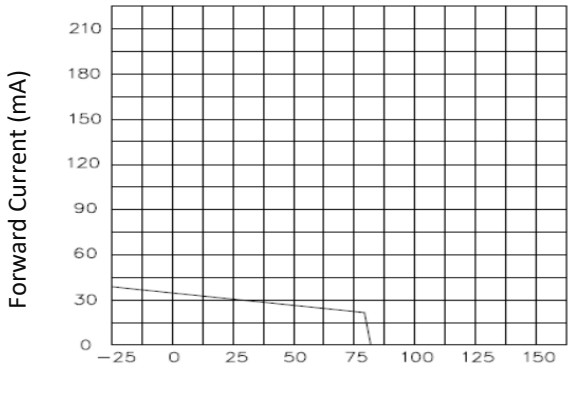
Package Dimension:



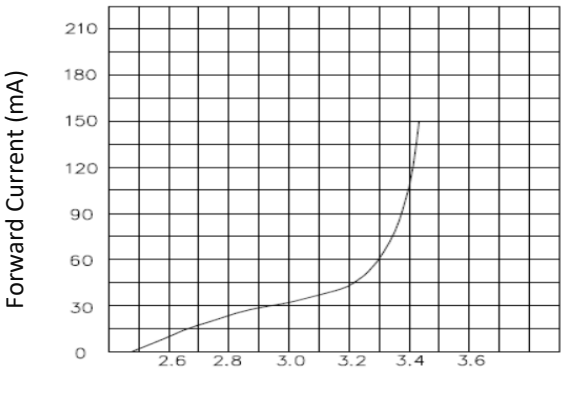
1. All dimensions are in millimetre (mm).
2. Tolerance ±0.2mm, unless otherwise noted.

ELECTRO-OPTICAL CHARACTERISTICS:

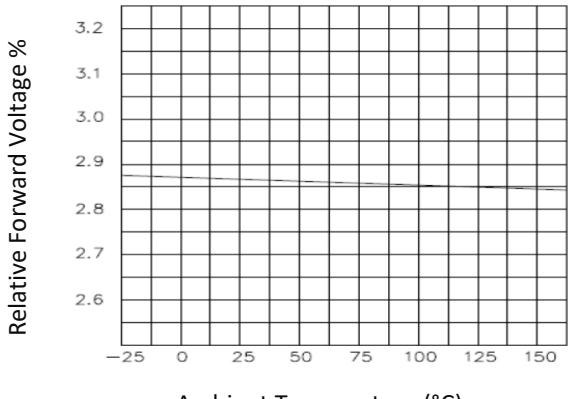
Temperature v.s. Forward Current



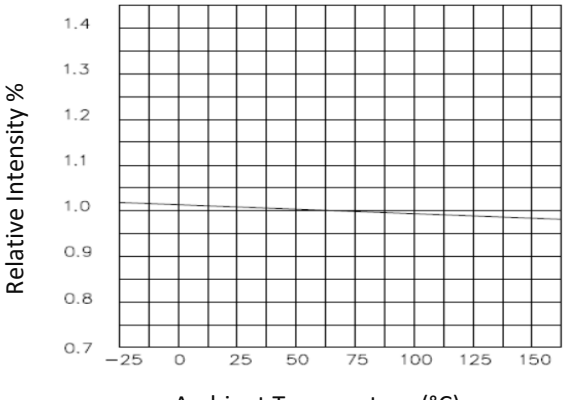
Forward Voltage v.s. Forward Current



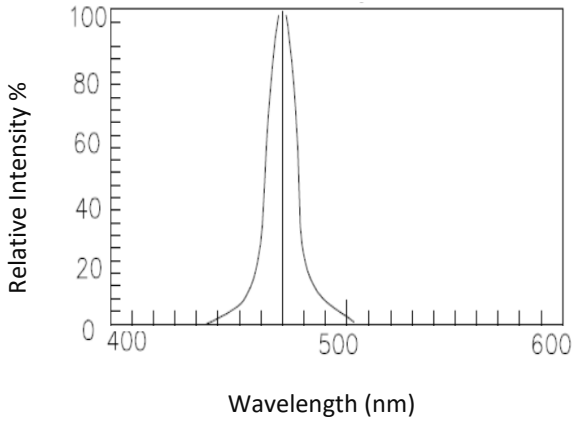
Relative Voltage v.s. Temperature



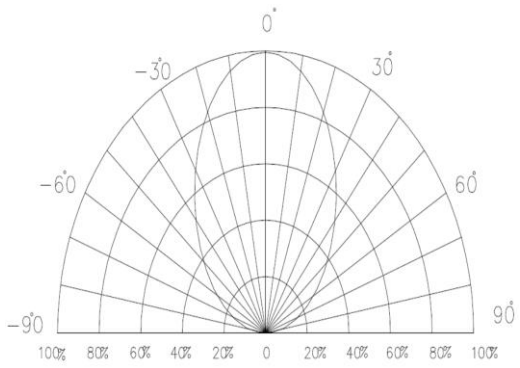
Relative Intensity v.s. Temperature



Relative Intensity v.s. Wavelength



Directive Radiation

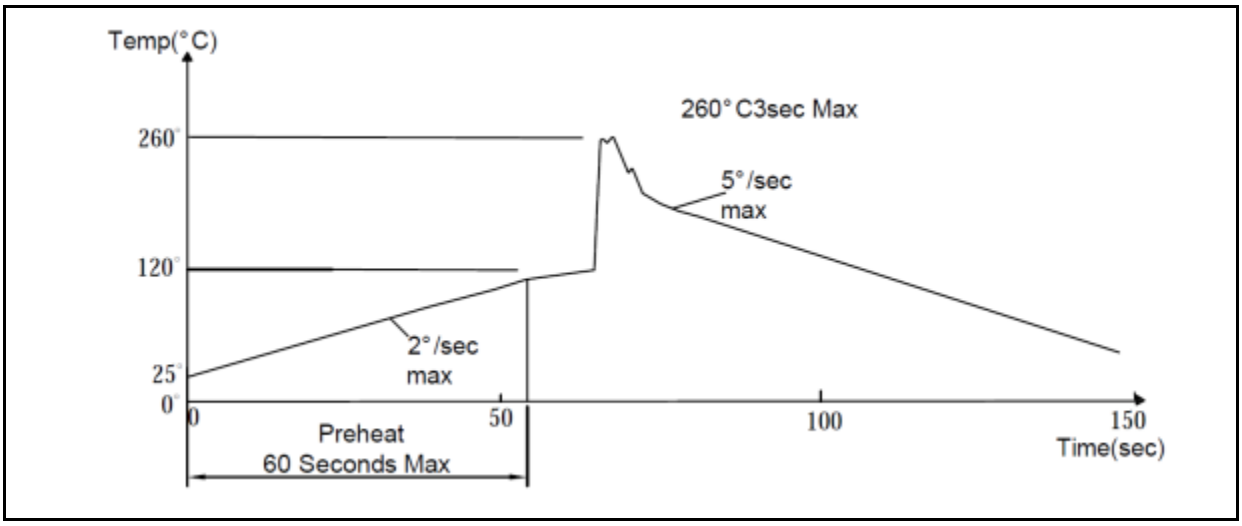


RECOMMENDED SOLDERING PROFILE:

DIP Iron:

- Soldering Iron 30W Max.
- Temperature 350°C Max.
- Soldering Time 3 seconds Max. One time only.
- Distance 2mm Min. (from solder joint to body).

Wave Soldering Profile:



Note:

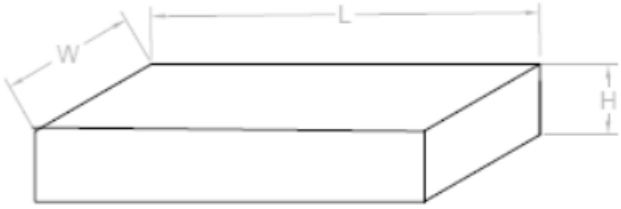
1. Maximum reflow soldering: 1 time.
2. Before, during, and after soldering, should not apply stress on the components and PCB board.
3. Recommended reflow temperature 240°C. The maximum soldering temperature should be limited to 260°C.

PACKING SPECIFICATION:

Reel Dimension:

60pcs/tube; 105 tubes (6300pcs)/carton

SIZE : L X W X H 55cm X 22.5cm X 10cm



PRECAUTIONS OF USE:

Storage:

It is recommended to store the products in the following conditions:

- Humidity: 60% R.H. Max.
- Temperature: 5°C~30°C (41°F ~86°F).

Shelf life in sealed bag: 12 months at 5°C~30°C and <60% R.H.

Once the package is opened, the products should be used within a week. Otherwise, they should be kept in a damp-proof box with descanting agent <10% R.H. and apply baking before use.

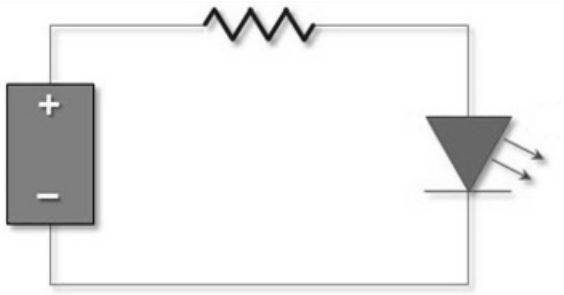
Baking:

It is recommended to bake the LED before soldering if the pack has been unsealed for longer than 24hrs. The suggested baking conditions are as followings:

- 60±3°C x 24hrs and <5%RH, taped / reel package.

It's normal to see slight color fading of carrier (light yellow) after baking in process.

Testing Circuit:



Must apply resistor(s) for protection (over current proof).

Cleaning:

Use alcohol-based cleaning solvents such as isopropyl alcohol to clean the LED carrier / package. Avoid putting any stress force directly on to the LED lens.

ESD (Electrostatic Discharge):

Static Electricity or power surge will damage the LED. Use of a conductive wrist band or anti-electrosatic glove is recommended when handing the LED all time. All devices, equipment, machinery, work tables, and storage racks must be properly grounded.

In the events of manual working in process, make sure the devices are well protected from ESD at any time.

REVISION RECORD:

Version	Date	Summary of Revision
A1.0	21/05/2021	Datasheet set-up.
A1.2	26/06/2022	Add -30MA ending.