



BRIGHTTEK

BRIGHTTEK (EUROPE) LIMITED

Brighten up The World With LED!



ISO/TS 16949:2009



BS EN ISO 14001:2004



QC 080000 IECQ HSPM

PRODUCT DATASHEET



- ▶ PLCC4 SMD
- ▶ 3528+Lens 3.7t Series
- ▶ Yellow (585~595nm)

NOY63S50-50MA



Release Date: 08 December 2022 Version: A1.0



3 5 2 8 1 . 9 t S e r i e s

3528 1.9t Series

RoHS
Compliant



FEATURES:

- **Package:** PLCC4 Top View White SMT Package
- **Forward Current:** 50mA
- **Forward Voltage (typ.):** 2.2V
- **Luminous Intensity (typ.):** 12000mcd (12.5lm)@50mA
- **Colour:** Yellow
- **Wavelength:** 585~595nm
- **Viewing angle:** 25°
- **Materials:**
 - Package: Heat Resistant Polymer
 - Resin: Silicon (Water Clear)
 - L/T Finish: Ni/Ag plated Copper Alloy
- **Operating Temperature:** -40~+100°C
- **Storage Temperature:** -40~+100°C
- **Grouping parameters:**
 - Forward voltage
 - Luminous intensity
 - Dominant Wavelength
- **Soldering methods:** IR Reflow
- **MSL:** acc. to JEDEC Level 3 (J-STD20D)
- **Packing:** 12mm tape with max.700/reel, ø178mm (7")

APPLICATIONS:

- Decorative Lighting
- Indicator
- Backlighting
- Dashboard
- Display
- Information Board
- Light Strip

CHARACTERISTICS:

Absolute Maximum Characteristics (Ta=25°C)

Parameter	Symbol	Ratings	Unit
Forward Current	I _F	50	mA
Pulse Forward Current Duty 1/10, width 0.1mS	I _{PF}	100	mA
Power Dissipation	P _D	180	mW
Reverse Voltage	V _R	5	V
Reverse Current @10V	I _R	10	μA
Junction Temperature	T _j	125	°C
Operating Temperature	T _{OPR}	-40~+100	°C
Storage Temperature	T _{STG}	-40~+100	°C
Soldering Temperature	T _{SD}	260	°C
Forward Voltage at Low Current @1μA	V _{F2}	>0.9	V

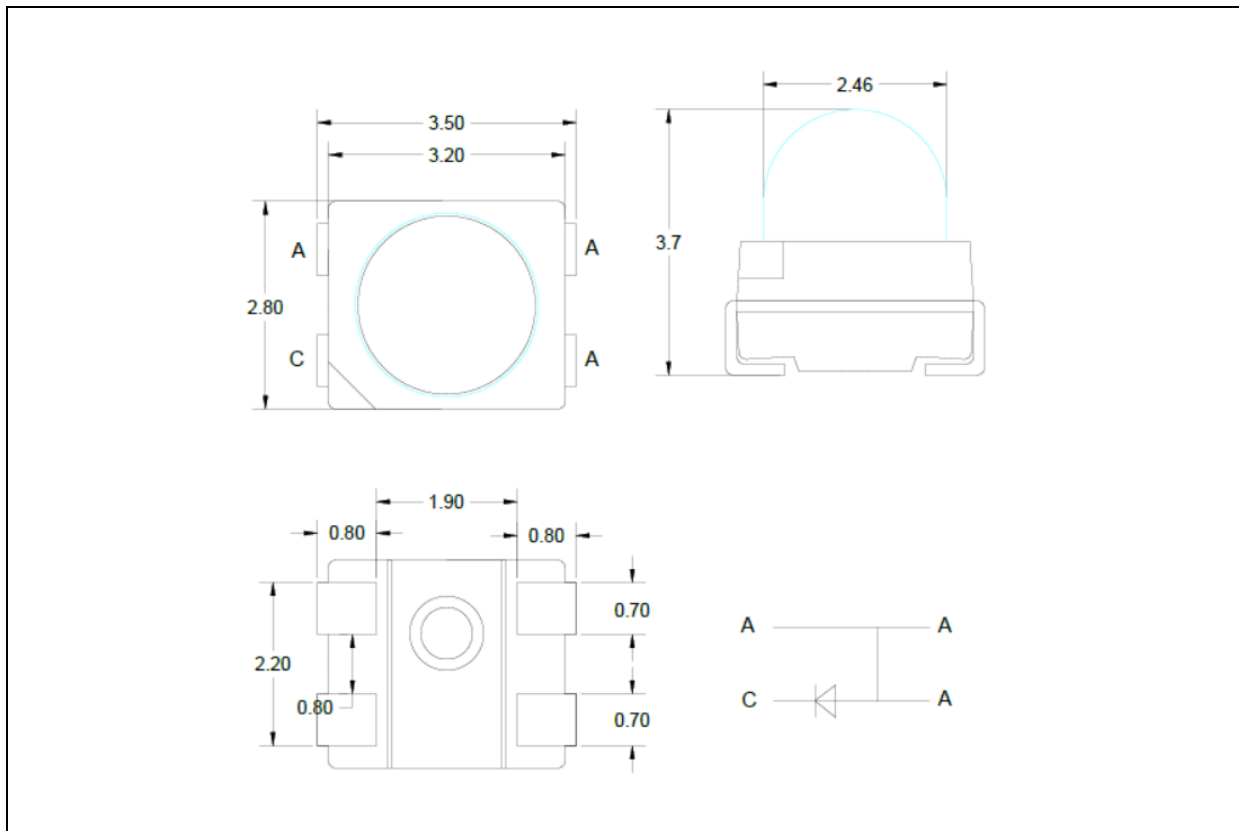
Electrical & Optical Characteristics (Ta=25°C)

Parameter	Symbol	Values			Unit	Test Condition
		Min.	Typ.	Max.		
Forward Voltage	V _F	1.9	---	2.5	V	I _F =50mA
Luminous Intensity	I _v	8000	12000	---	mcd	I _F =50mA
Luminous Flux	Φ _v	8.15	12.5	---	lm	I _F =50mA
Dominant Wavelength	λ _D	585	---	595	nm	I _F =50mA
Viewing Angle	2θ _{1/2}	---	25	---	deg	I _F =50mA

1. Luminous intensity (I_v) ±10%, Forward Voltage (V_F) ±0.1V, Viewing angle(2θ_{1/2}) ±5%, Wavelength ±1.5nm

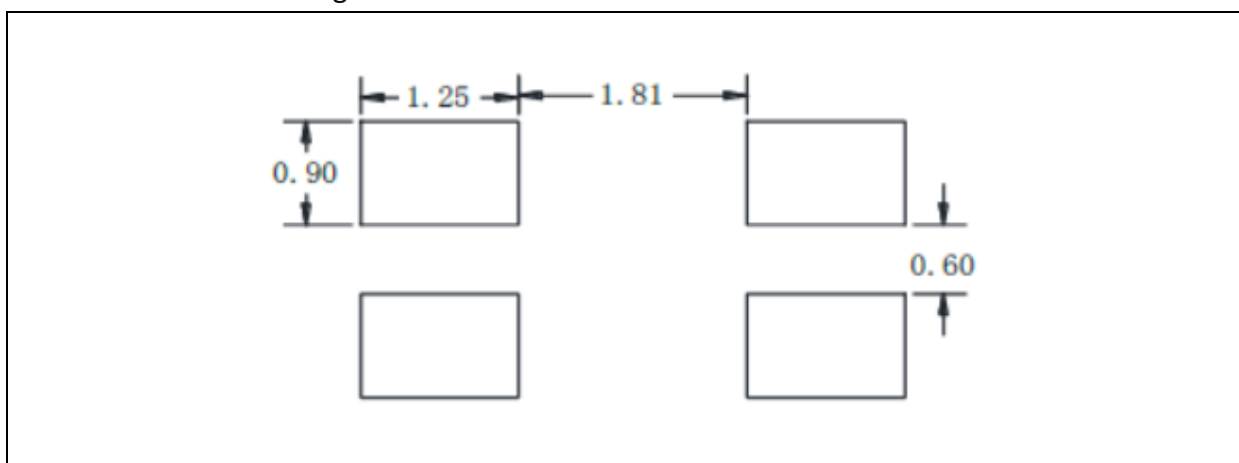
OUTLINE DIMENSION:

Package Dimension:



1. All dimensions are in millimetre (mm).
2. Tolerance $\pm 0.2\text{mm}$, unless otherwise noted.

Recommended Soldering Pad Dimension:



1. Dimensions are in millimetre (mm).
2. Tolerance $\pm 0.1\text{mm}$ with angle tolerance $\pm 0.5^\circ$.

BINNING GROUPS:

Forward Voltage Classifications ($I_F = 50\text{mA}$):

Code	Min.	Max.	Unit
3A-n	1.9	2.5	V

Luminous Intensity Classifications ($I_F = 50\text{mA}$):

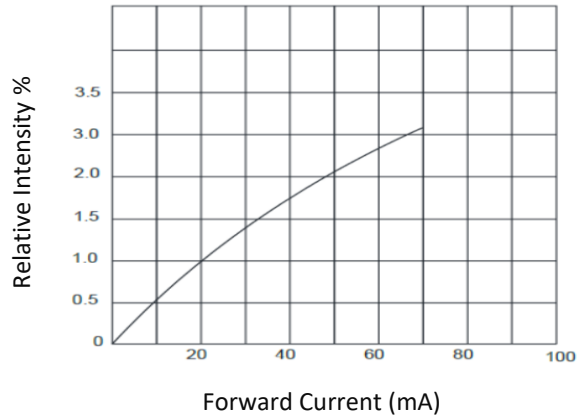
Code	Min.	Max.	Unit
GA-n	8000	16000	mcd
	8.15	15	lm

Dominant Wavelength Classifications ($I_F = 50\text{mA}$):

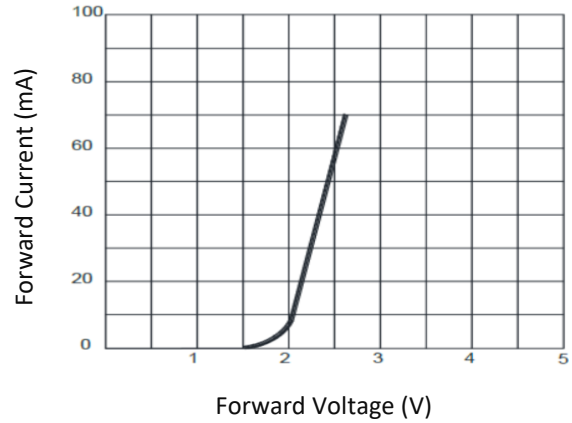
Code	Min.	Max.	Unit
WY	585	595	nm

ELECTRO-OPTICAL CHARACTERISTICS:

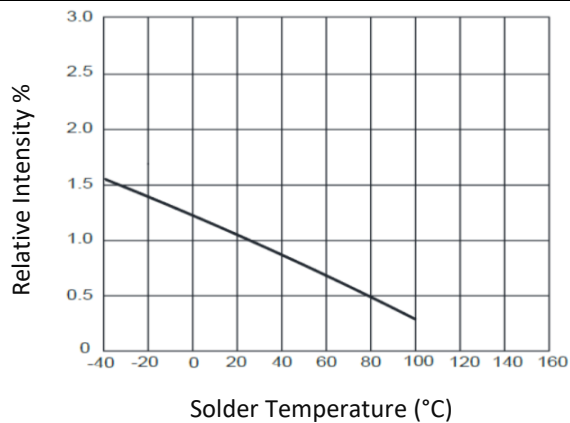
Relative Intensity v.s. Forward Current



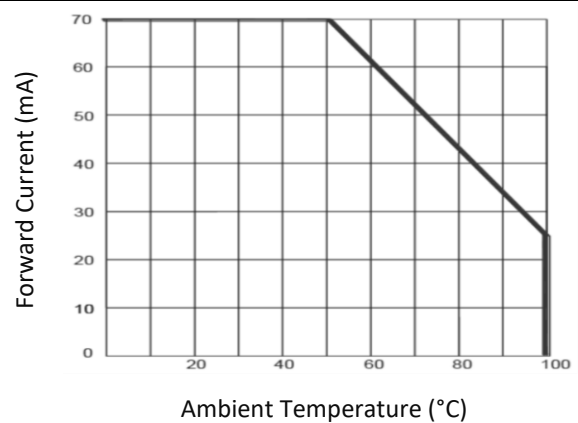
Forward Current v.s. Forward Voltage



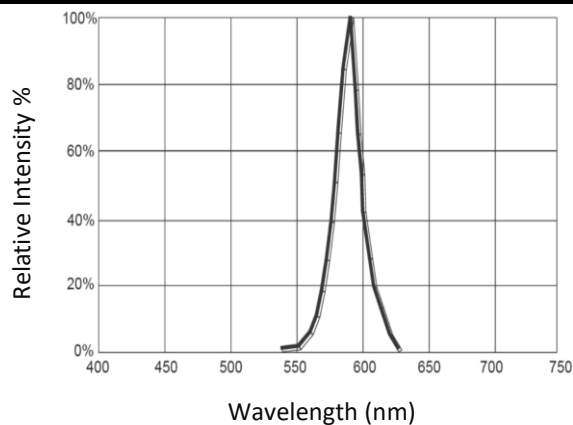
Relative Intensity v.s. Temperature



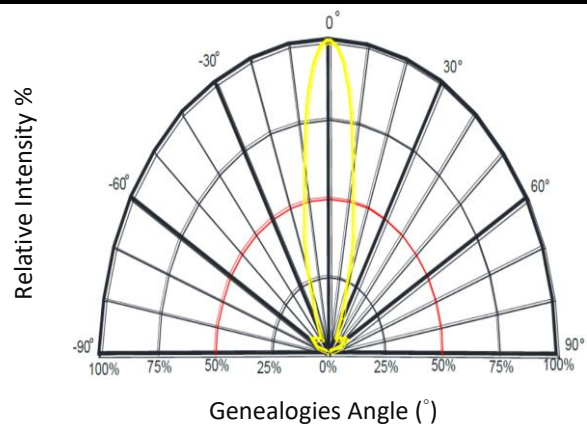
Forward Current Derating Curve



Relative Intensity v.s. Wavelength



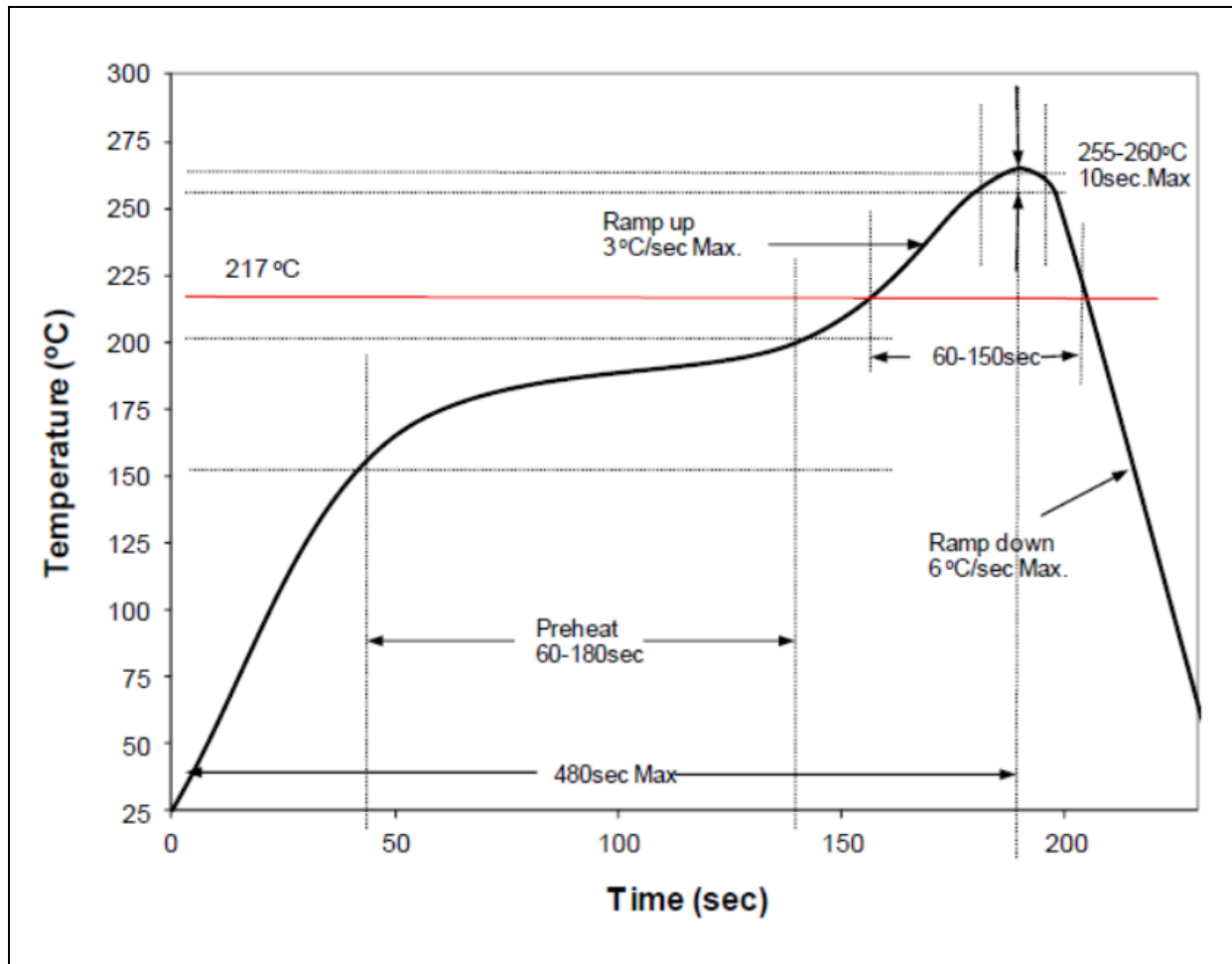
Directive Radiation





RECOMMENDED SOLDERING PROFILE:

IR Reflow Lead-free Solder:



Note:

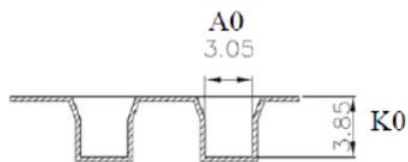
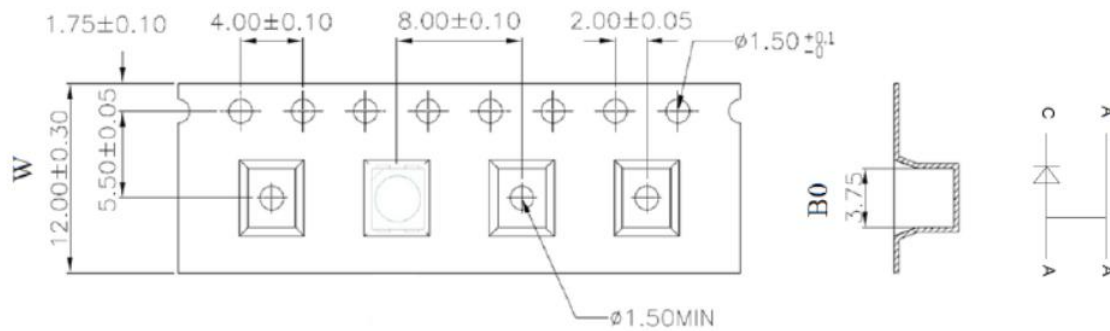
1. Maximum reflow soldering: 1 time.
2. Recommended reflow temperature 240°C. The maximum soldering temperature should be limited to 260°C.
3. Before, during, and after soldering, should not apply stress on the components and PCB board.



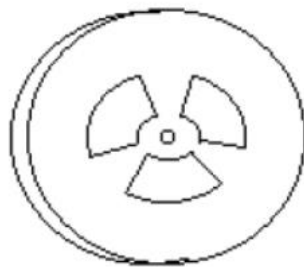
PACKING SPECIFICATION:

Reel Dimension:

Max.700pcs/reel



Item	Spec. (mm)	Tolerance(mm)
W	12.00	±0.30
A0	3.05	±0.10
B0	3.75	±0.10
K0	3.85	±0.05



Diameter : 178 mm
Width : 12 mm
700 pcs/Reel
Antistatic Reel

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 desiccating 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:

- $60\pm 3^{\circ}\text{C}$ x 24hrs and <5%RH, for 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-electrostatic glove is recommended when handling 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	08/12/2022	Datasheet set-up.