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

ATTENTION
OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES

- ▶ PLCC2 Top View SMD
- ▶ 2835 0.70t
- ▶ Yellow 590nm

Release Date: 04 March 2025 Version: A1.1

N0Y69S53

2835 0.70t Series

2835 0.70t Series

RoHS Compliant

Pb

APPLICATIONS:

- Backlighting
- Indication Light
- Switch light
- Dashboard
- Decoration Lighting

FEATURES:

- **Package:** PLCC2 Single Colour Top View SMD
- **Forward Current:** 60mA
- **Forward Voltage (typ.):** 2.1V
- **Luminous Intensity (typ.):** 2000mcd/8lm@60mA
- **Colour:** Yellow
- **Dominant Wavelength (typ.):** 590nm
- **Viewing Angle:** 120°
- **Materials:**
  - Resin: Silicone (Water Clear)
  - Finishing: Ag plated
- **Operating Temperature:** -40~+85°C
- **Storage Temperature:** -40~+85°C
- **ESD (HBM):** 2000V
- **Grouping Parameters:**
  - Forward voltage
  - Luminous intensity
  - Dominant wavelength
- **Soldering Methods:** Reflow
- **MSL Level:** acc. to JEDEC Level 5a
- **Packing:** 8mm tape with max.4000/reel, ø178mm (7'')

CHARACTERISTICS:

Absolute Maximum Characteristics (T_a=25°C)

Parameter	Symbol	Ratings	Unit
Forward Current	I_F	60	mA
Peak Forward Current Duty 1/10; width 0.1ms	I_{FP}	100	mA
Power Dissipation	P_D	0.2	W
Reverse Voltage	V_R	5	V
Reverse Current @8V	I_R	10	µA
Electrostatic Discharge (HBM)	ESD	2000	V
Operating Temperature	T_{OPR}	-40~+85	°C
Storage Temperature	T_{STG}	-40~+85	°C
Soldering Temperature	T_{SOL}	260 for 5S	°C

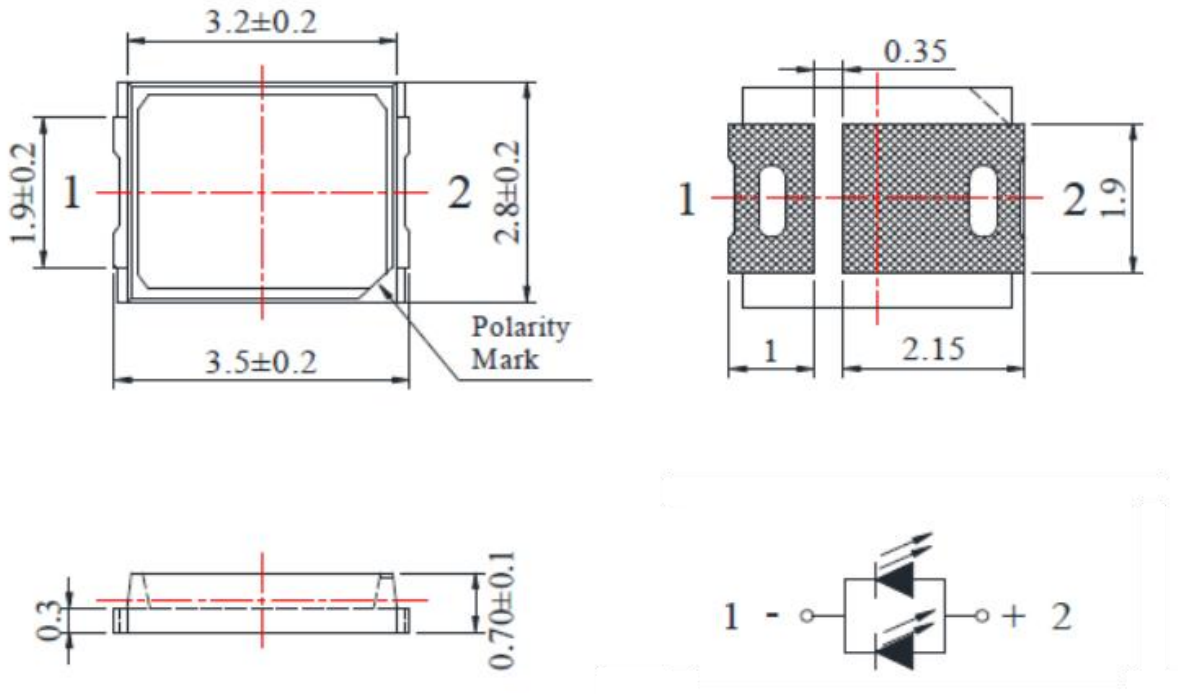
Electrical & Optical Characteristics (T_a=25°C)

Parameter	Symbol	Values			Unit	Test Condition
		Min.	Typ.	Max.		
Forward Voltage	V_F	1.6	2.1	2.4	V	I_F=60mA
Luminous Intensity	I_V	1500	2000	---	mcd	I_F=60mA
Luminous Flux	Φ_V	5	8	---	lm	I_F=60mA
Peak Wavelength	λ_P	---	592	---	nm	I_F=60mA
Dominant Wavelength	λ_D	---	590	---	nm	I_F=60mA
Spectral Line Half-Width	$\Delta\lambda$	---	15	---	nm	I_F=60mA
Viewing Angle	$2\theta_{1/2}$	---	120	---	deg	I_F=60mA

1. Luminous intensity (I_V) ±10%, Forward Voltage (V_F) ±0.1V.

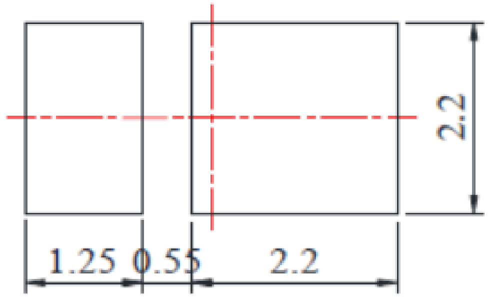
OUTLINE DIMENSION:

Package Dimension:



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

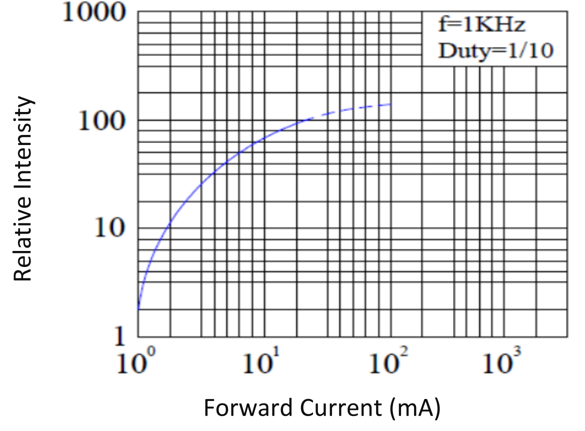
Recommended Soldering Pad Dimension:



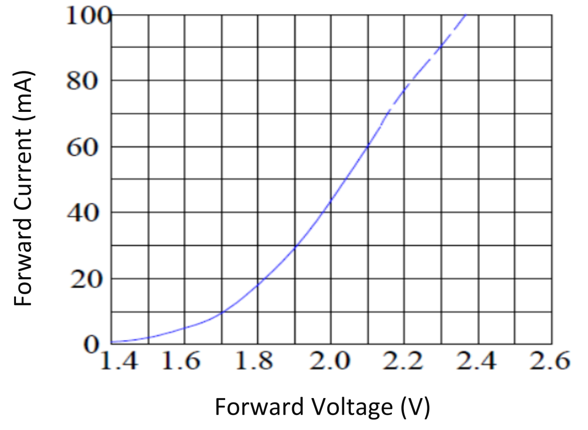
1. Dimensions are in millimetre (mm).
2. Tolerance ±0.1mm with angle tolerance ±0.5°.

ELECTRO-OPTICAL CHARACTERISTICS:

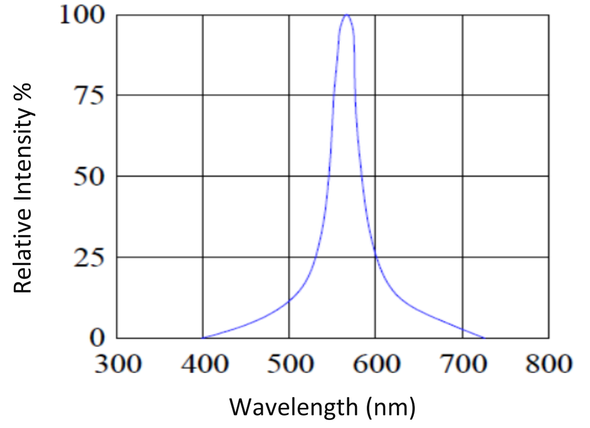
Relative Intensity v.s. Forward Current



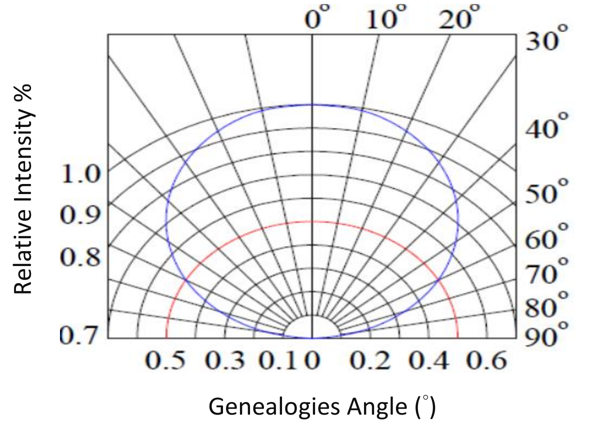
Forward Current v.s. Forward Voltage



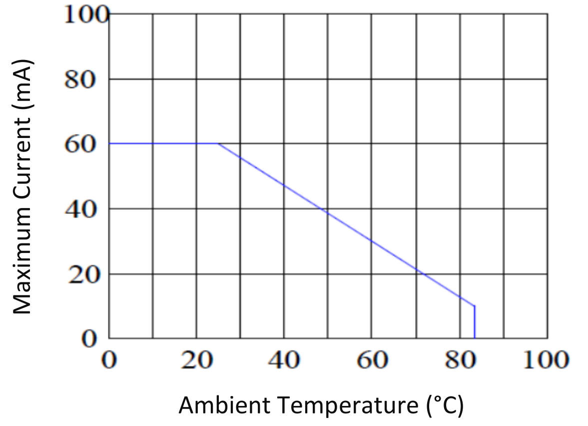
Relative Intensity v.s. Wavelength



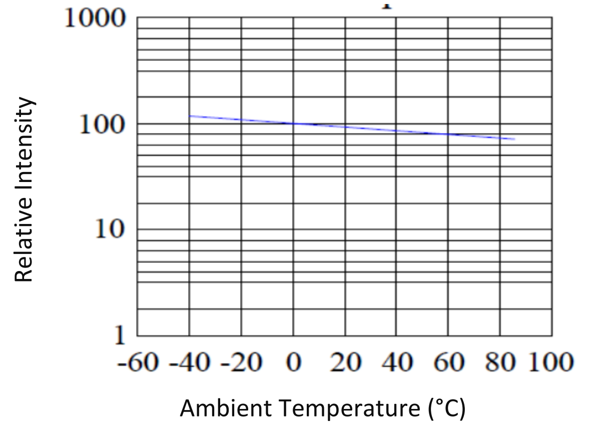
Relative Intensity v.s. Angular Displacement



Temperature Derating Chart

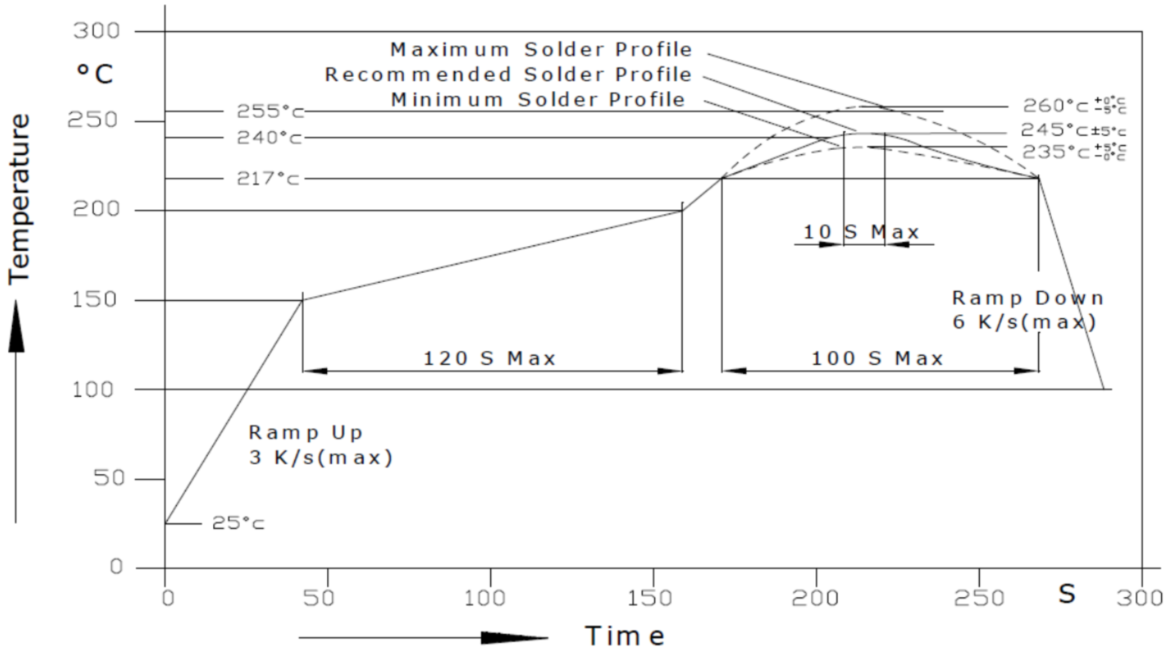


Relative Intensity Flux v.s. Ambient Temperature



RECOMMENDED SOLDERING PROFILE:

Reflow Solder:



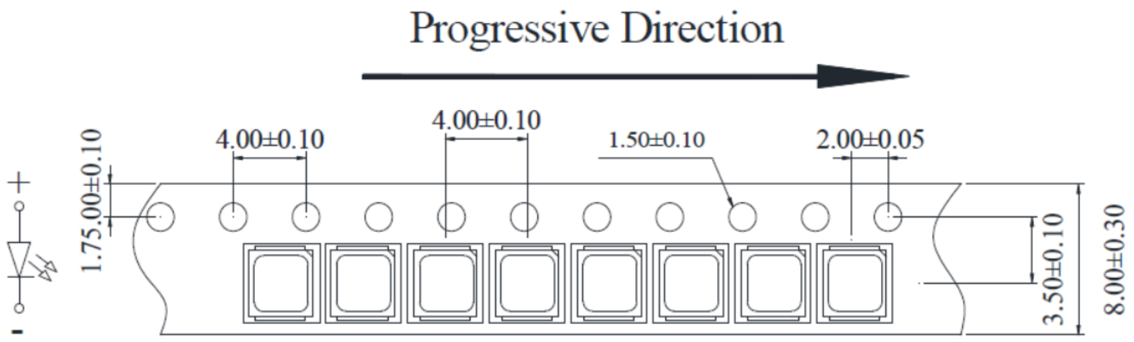
Note:

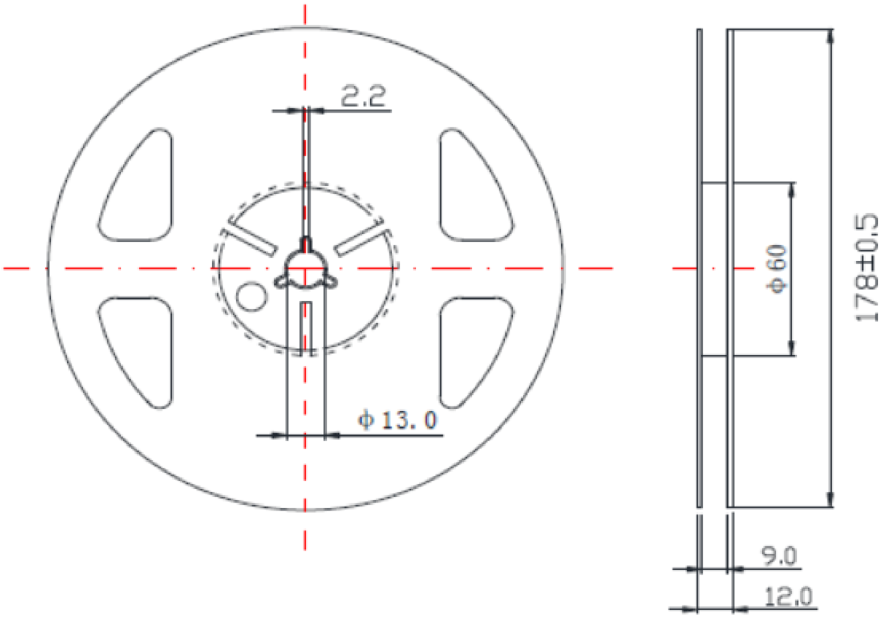
1. Recommend reflow temperature 240°C. The maximum soldering temperature should be limited to 260°C.
2. Maximum reflow soldering: 2 times.
3. Before, during, and after soldering, should not apply stress on the components and PCB board.

PACKING SPECIFICATION:

Reel Dimension:

Max.4000pcs/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 24 hours. Otherwise, they should be kept in a damp-proof box with descanting agent <10% R.H. and apply baking before use.

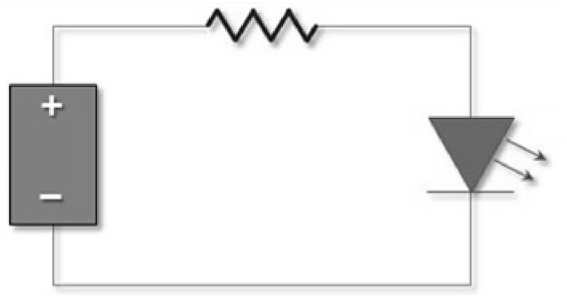
Baking:

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±5°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	12/09/2017	Datasheet set-up.
A1.1	04/03/2025	New datasheet format.