BRIGHTEK

BRIGHTEK (EUROPE) LIMITED

Brighten Up The World With LED !

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

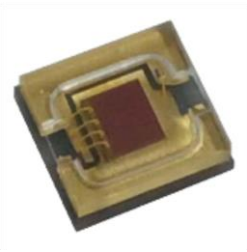
PRODUCT DATASHEET

ATTENTION
OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES

- ► Ceramic SMD
- ► 3639 1.21t Series
- ► Red (620nm)

Release Date: 06 September 2022 Version: A1.0

N0R62S30



3639 1.21t Series

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RoHS Compliant

APPLICATIONS:

- Decorative Lighting
- Portable Lighting
- Outdoor Lighting
- Commercial Lighting
- Architectural Lighting
- Pool and Fountain Light

FEATURES:

- **Package:** TOP View Ceramic Package with Glass Lens
- **Forward Current:** 1400~3000mA
- **Forward Voltage (typ.):** 2.2V
- **Luminous Flux (typ.):** 137lm@1400mA
- **Colour:** Red
- **Wavelength:** 620nm
- **Viewing angle:** 120°
- **Materials:**
  - Resin: Glass (Water Clear)
  - L/T Finish: Au plated
- **Operating Temperature:** -40~+85°C
- **Storage Temperature:** -40~+105°C
- **Grouping parameters:**
  - Forward Voltage
  - Luminous Flux
  - Dominant Wavelength
- **Soldering methods:** Reflow
- **Preconditioning:** MSL3 according to J-STD020
- **Packing:** 12mm tape with max.500pcs/reel, ø178mm (7'')

CHARACTERISTICS:

Absolute Maximum Characteristics (Ta=25°C)

Parameter	Symbol	Ratings	Unit
DC Forward Current	I_F	3000	mA
Pulse Forward Current Width≤100μs, Duty cycle≤1/10	I_{FP}	4500	mA
Reverse Voltage	V_R	5	V
Junction Temperature	T_j	125	°C
Electrostatic Discharge (HBM: MIL-STD-883 C 2)	ESD	6000	V
Operating Temperature	T_{OPR}	-40~+85	°C
Storage Temperature	T_{STG}	-40~+105	°C
Soldering Temperature (10S)	T_{SOL}	230 or 260 for 10S	°C

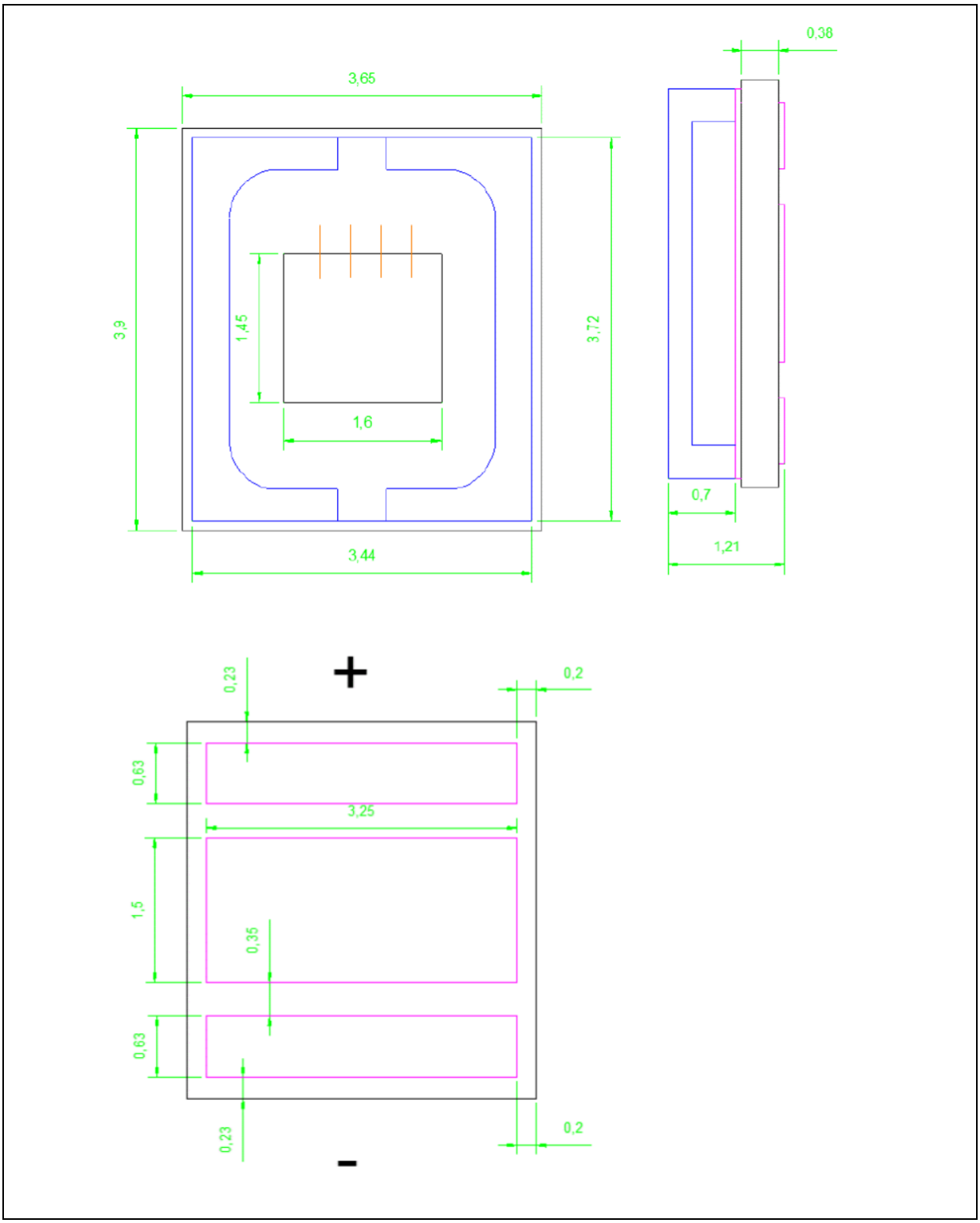
Electrical & Optical Characteristics (Ta=25°C)

Parameter	Symbol	Values			Unit	Test Condition
		Min.	Typ.	Max.		
Forward Voltage	V_F	---	2.2	---	V	I_F=1400mA
Luminous Flux	Φ_V	---	137	---	lm	I_F=1400mA
Dominant Wavelength	λ_D	---	620	---	nm	I_F=1400mA
Viewing Angle	$2\theta_{1/2}$	---	120	---	deg	I_F=1400mA

1. Luminous flux (Φ_V) ±7%, Forward Voltage (V_F) ±0.05V, Viewing angle($2\theta_{1/2}$) ±10°

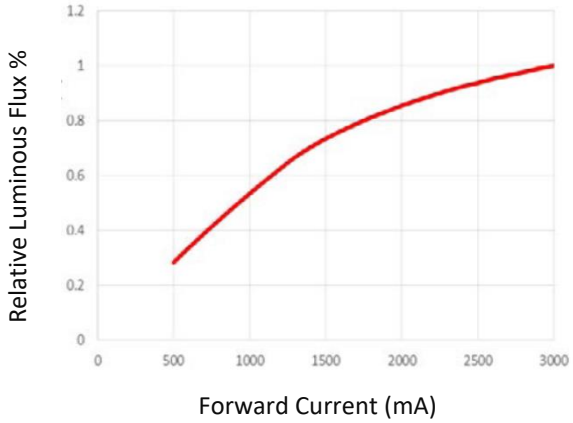
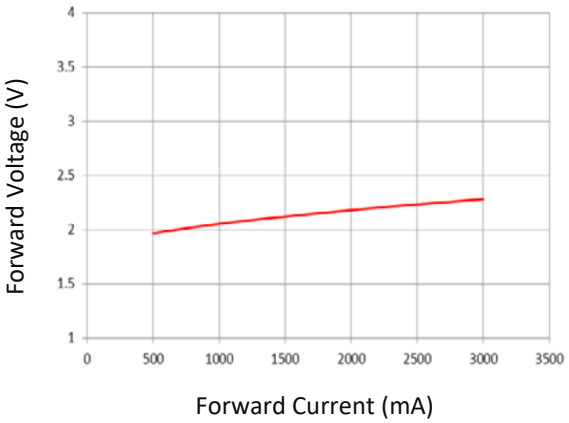
OUTLINE DIMENSION:

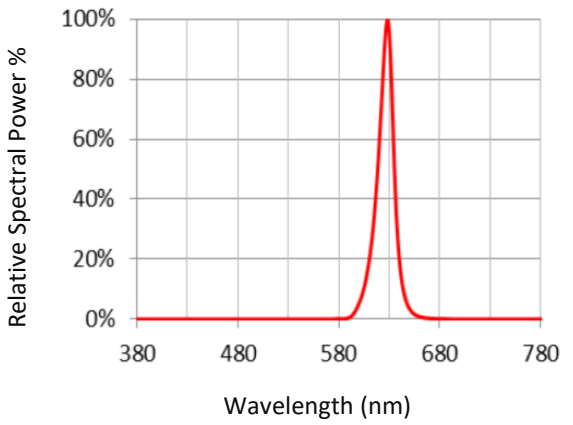
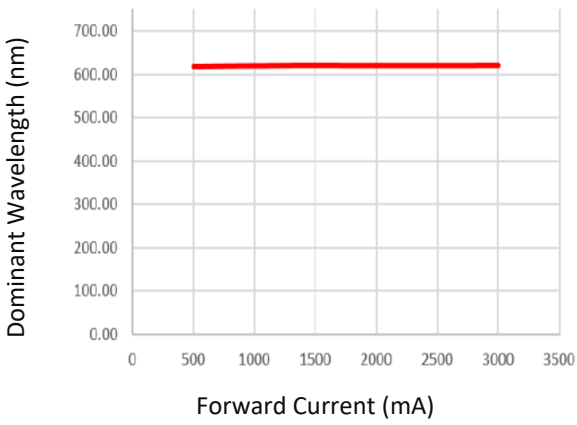
Package Dimension:



1. All dimensions are in millimetre (mm).
2. Tolerance ±0.13mm, unless otherwise noted.

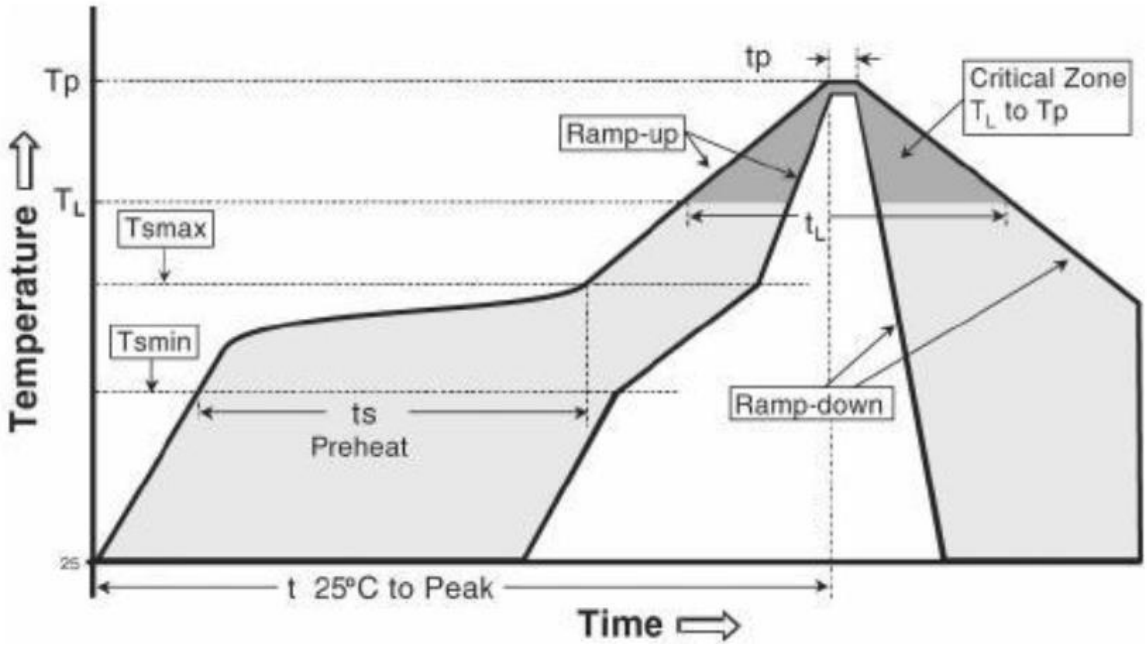
ELECTRO-OPTICAL CHARACTERISTICS:

Relative Luminous Flux v.s. Forward Current	Forward Current v.s. Forward Voltage
	

Relative Spectral Power v.s. Wavelength	Forward Current v.s. Wavelength
	

RECOMMENDED SOLDERING PROFILE:

Reflow Lead-free Solder:



Temperature Min. (T_{smin})	150°C
Temperature Max. (T_{smax})	200°C
Period from T_{smin} to T_{smax}	60-120 seconds
Ramp-up Rate (T_L to T_P)	Max. 3°C/second
Liquidous Temperature (T_L)	217°C
Time Maintained above T_L	60-150 seconds
Peak Package Temperature (T_P)	Max. 260°C
Time within 5°C of the Specified Classification Temperature T_C	Max. 30 seconds
Ramp-down Rate (T_P to T_L)	Max. 6°C/second
Time from 25°C to Peak Temperature	Max. 8 mins

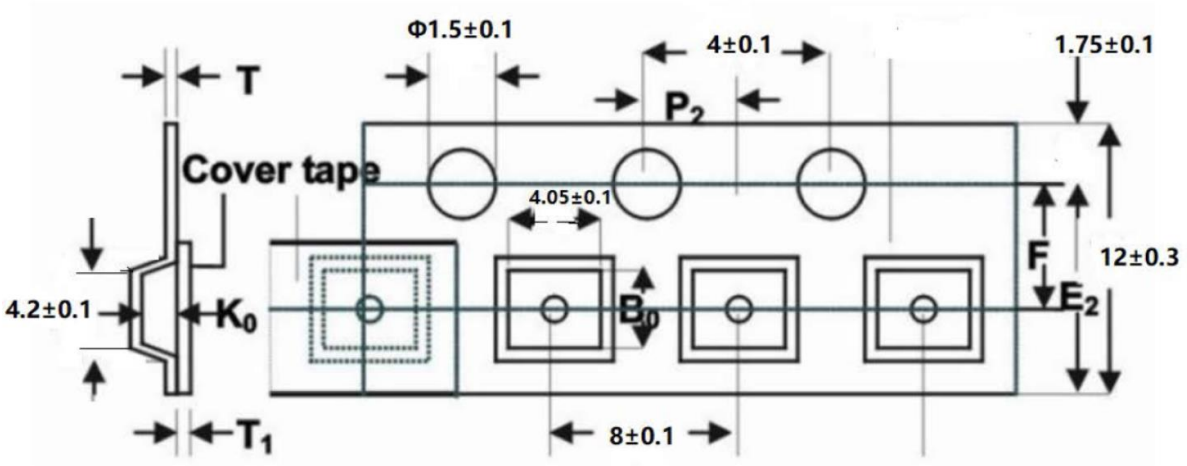
Note:

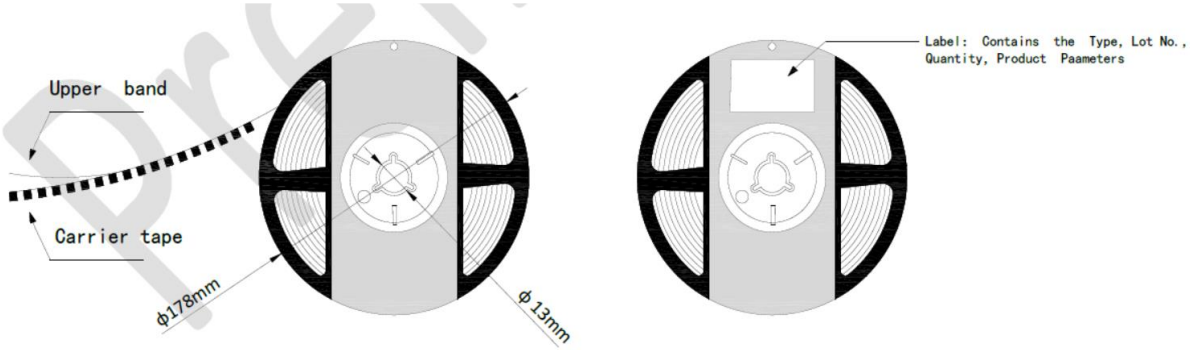
1. Maximum reflow soldering: 2 times.
2. Before, during, and after soldering, should not apply stress on the components and PCB board.
3. Recommended soldering temperature: 230°C. The maximum soldering temperature should be limited to 260°C for max. 10seconds.

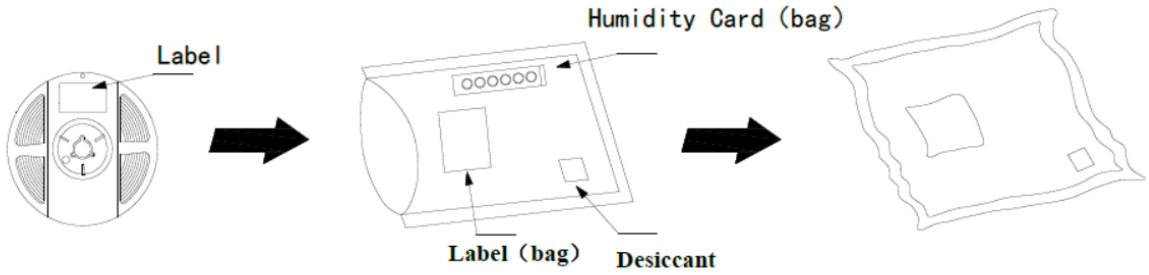
PACKING SPECIFICATION:

Reel Dimension:

Max. 5000pcs/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 descanting agent <10% R.H. and apply baking before use.

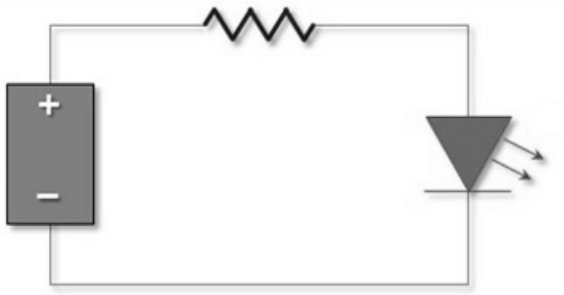
Baking:

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	06/09/2022	Datasheet set-up.