



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



- ▶ PCB / CHIP LED
- ▶ 0404 (1010) 0.65t
- ▶ Red (625nm) / Green (525nm) / Blue (465nm)

NOM71S28



Release Date: 13 August 2026 Version: A1.3



0404 (1010) 0.65t

RoHS
Compliant



FEATURES (Red/Green/Blue):

- **Package:** PCB/CHIP LED Top View SMT Package
- **Forward Current:** 5/2/2mA*
- **Forward Voltage (typ.):** 1.8/2.6/2.7V
- **Luminous Intensity (typ.):** 20/5011mcd@5/2/2mA
- **Colour:** Red/Green/Blue
- **Dominant Wavelength (typ.):** 625/525/465nm
- **Viewing Angle:** 120/120/120°
- **Materials:**
 - Resin: Epoxy (Black Diffused)
- **Operating Temperature:** -40~+85°C
- **Storage Temperature:** -40~+85°C
- **Grouping Parameters:**
 - Forward voltage
 - Luminous intensity
 - Dominant wavelength
- **Soldering Methods:** Vapor-Phase Reflow, Infrared Reflow, Wave Solder
- **MSL Level:** acc. to JEDEC Level 3
- **Packing:** 8mm tape with max.48000/reel, ø355mm (14")

* In the order of Red/Green/Blue.

APPLICATIONS:

- Backlight in Dashboards
- Telecommunication Indicator
- 3C Appliance
- Flat Backlight for LCD
- Light Pipe Application

CHARACTERISTICS:

Absolute Maximum Characteristics (T_a=25°C)

Parameter	Symbol	Ratings	Unit
Forward Current	I _F	10/10/10*	mA
Peak Forward Current (per chip) Duty Factor=10%; Frequency=1KHz	I _{FP}	40	mA
Reverse Voltage	V _R	5	V
Reverse Current @5V	I _R	10	μA
Power Dissipation	P _D	24/32/32	mW
Electrostatic Discharge (HBM)	ESD	1000/400/400	V
Operating Temperature	T _{OPR}	-40~+85	°C
Storage Temperature	T _{STG}	-40~+85	°C

- * In the order of Red/Green/Blue.

Electrical & Optical Characteristics (T_a=25°C)

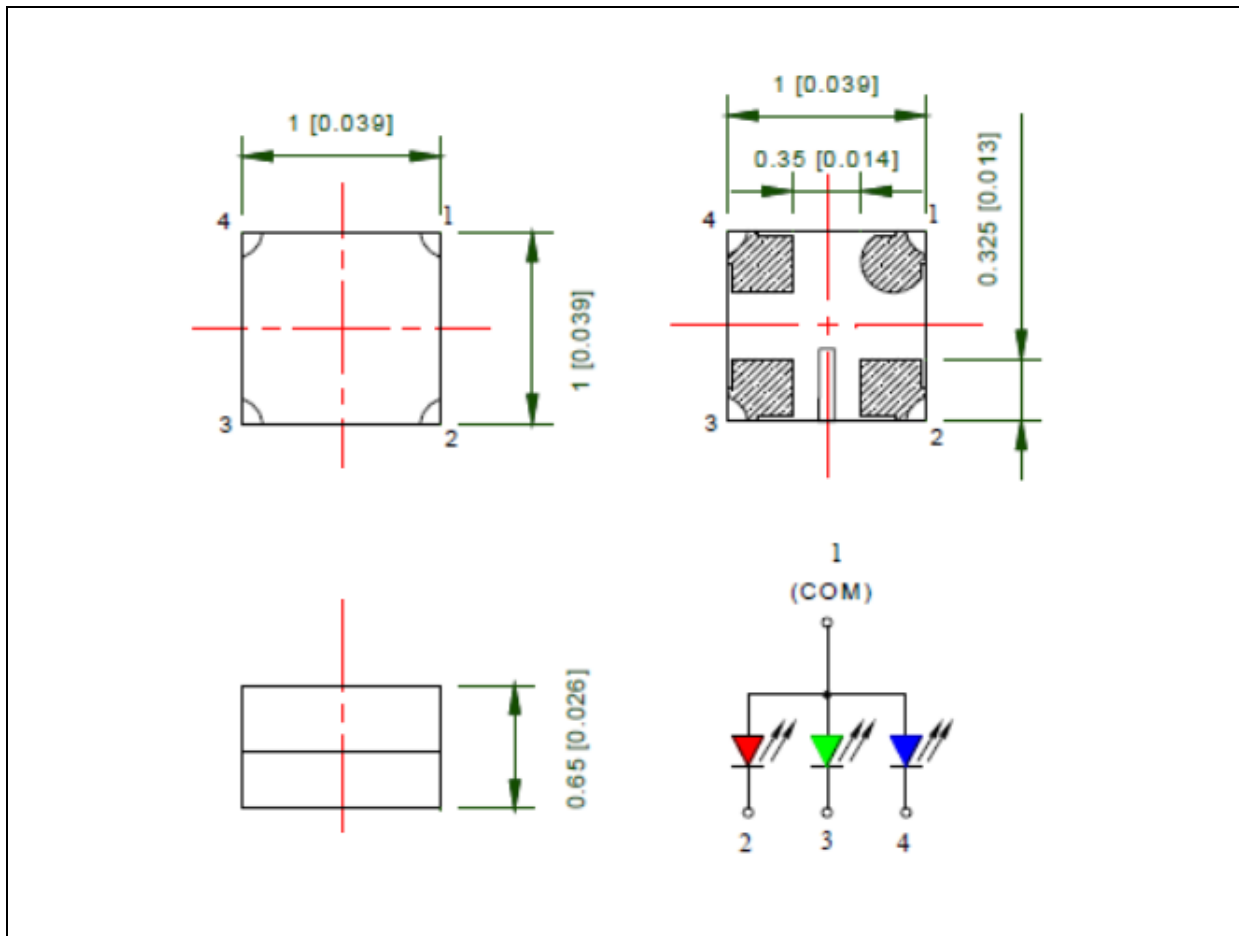
Parameter	Symbol	Values			Unit	Test Condition
		Min.	Typ.	Max.		
Forward Voltage	V _F	1.5/2.2/2.3*	1.8/2.6/2.7	2.4/3.2/3.2	V	I _F =5/2/2mA
Luminous Intensity	I _v	10/20/6	20/50/11	40/75/20	mcd	I _F =5/2/2mA
Dominant Wavelength	λ _D	---	625/525/465	---	nm	I _F =5/2/2mA
Peak Wavelength	λ _P	---	632/520/463	---	nm	I _F =5/2/2mA
Spectral Line Half Bandwidth	Δλ	---	20/35/25	---	nm	I _F =5/2/2mA
Viewing Angle	2θ _{1/2}	---	120/120/120	---	deg	I _F =5/2/2mA

- * In the order of Red/Green/Blue.
- Luminous intensity (I_v) ±15%, Forward Voltage (V_F) ±0.1V, Wavelength (λ_D) ±1nm.



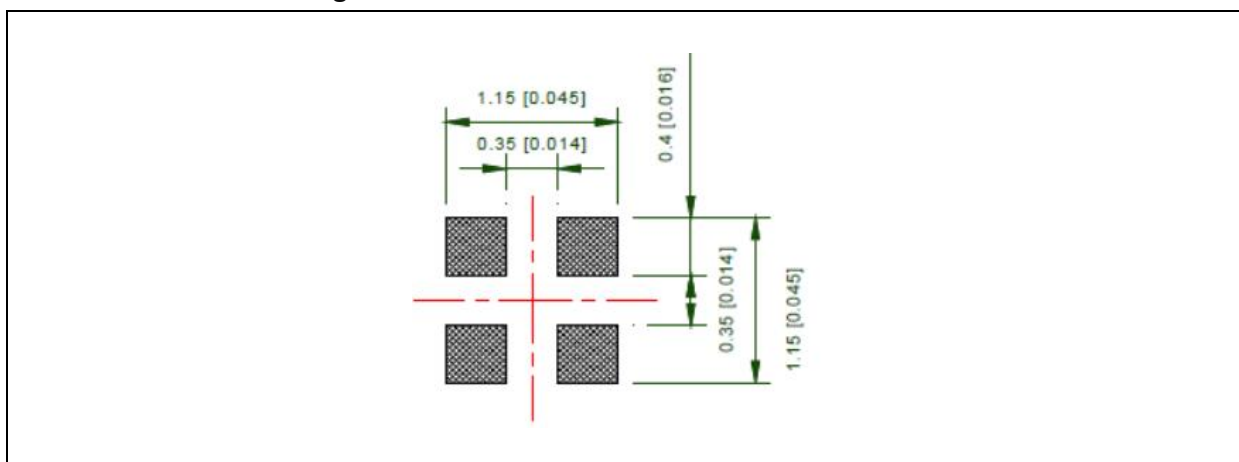
OUTLINE DIMENSION:

Package Dimension:



1. All dimensions are in millimetre (mm).
2. Tolerance $\pm 0.1\text{mm}$, unless otherwise noted.

Recommended Soldering Pad Dimension:

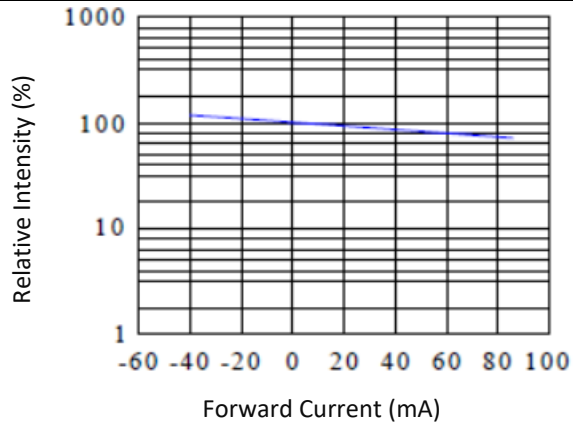


1. Dimensions are in millimetre (mm).
2. Tolerance $\pm 0.1\text{mm}$ with angle tolerance $\pm 0.5^\circ$.

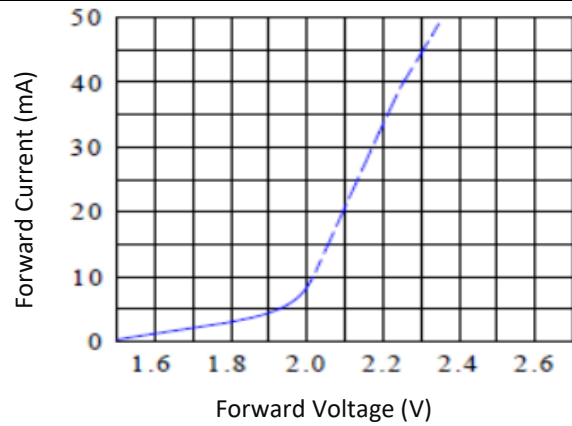


ELECTRO-OPTICAL CHARACTERISTICS (RED):

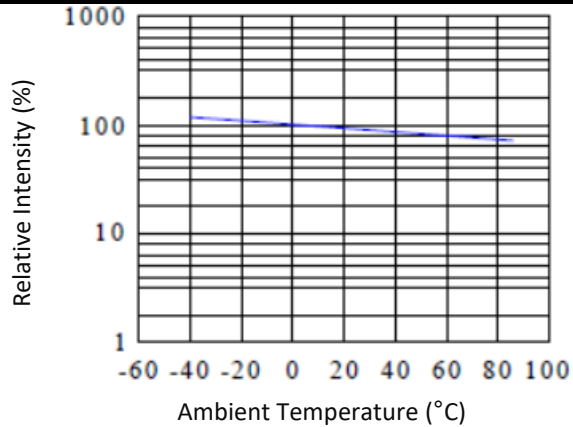
Luminous Intensity v.s. Forward Current



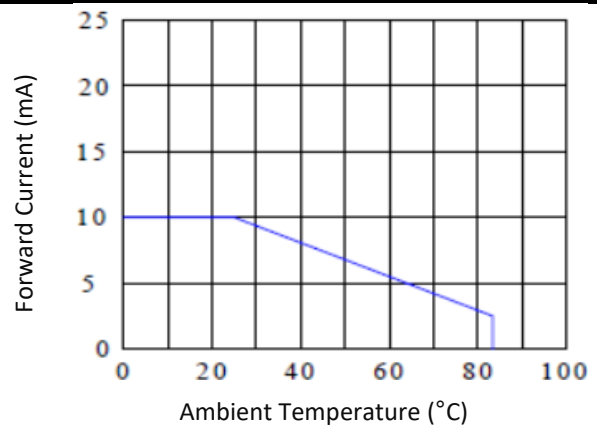
Forward Voltage v.s. Forward Current



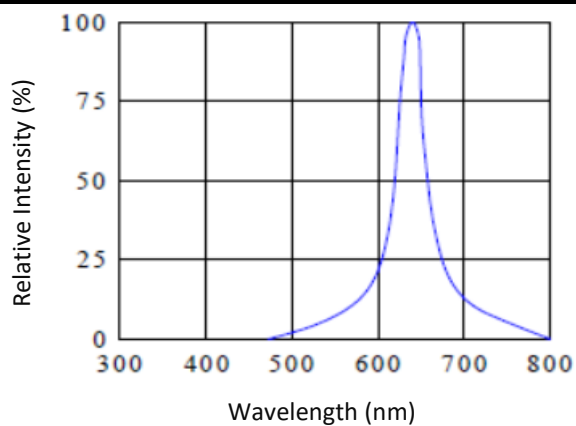
Luminous Intensity v.s. Temperature



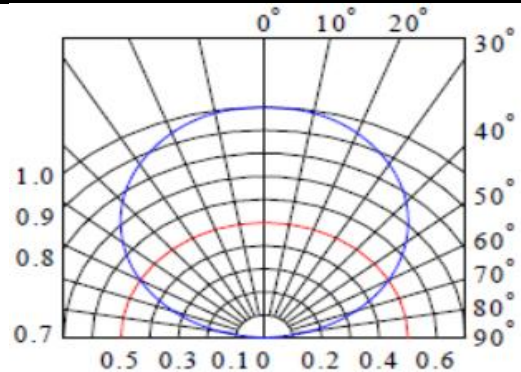
Forward Current Derating Curve



Relative Spectral Distribution



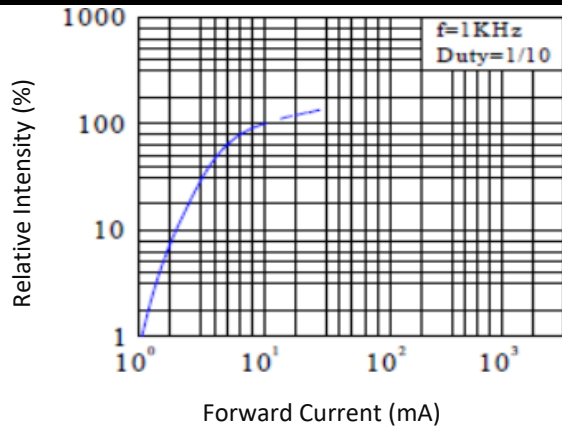
Directive Radiation



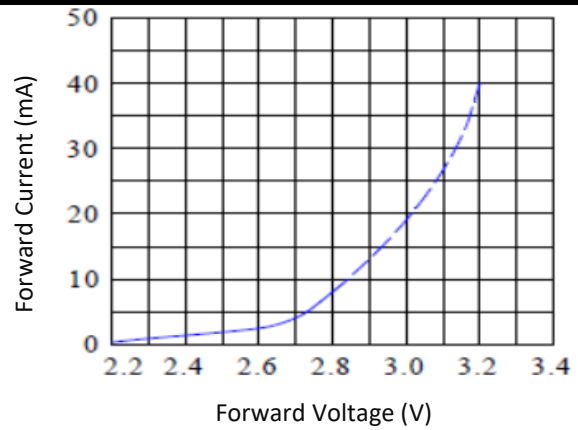


ELECTRO-OPTICAL CHARACTERISTICS (GREEN):

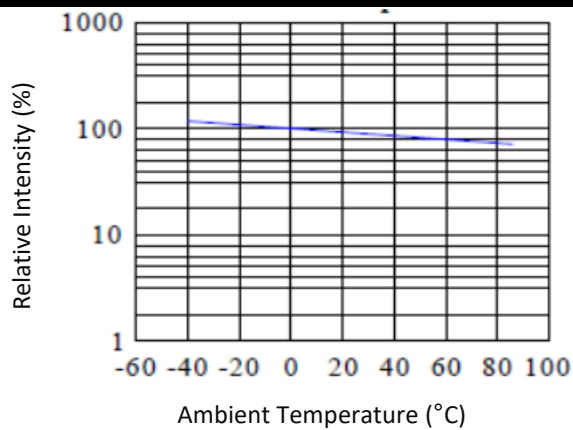
Luminous Intensity v.s. Forward Current



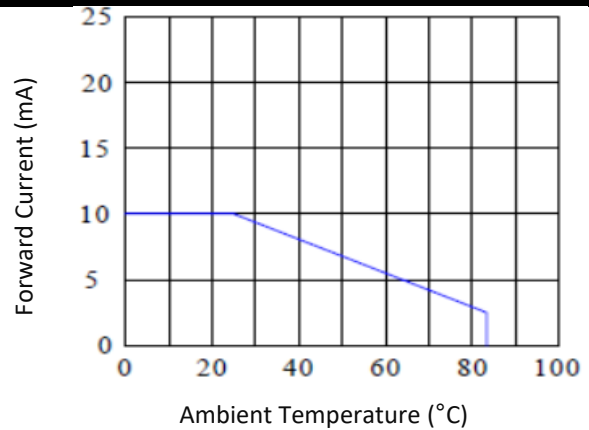
Forward Voltage v.s. Forward Current



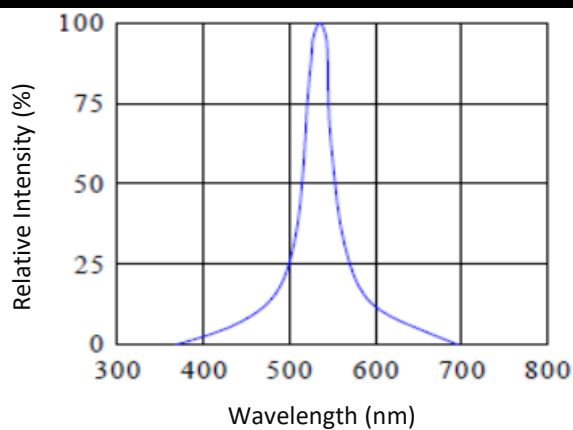
Luminous Intensity v.s. Temperature



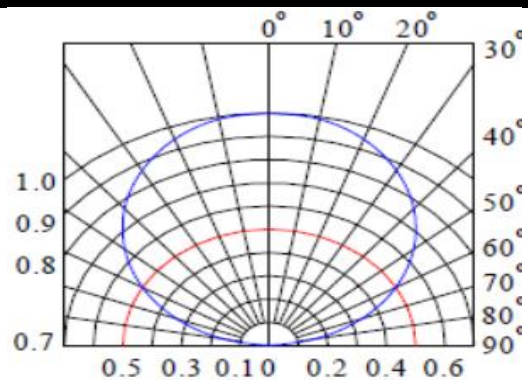
Forward Current Derating Curve



Relative Spectral Distribution



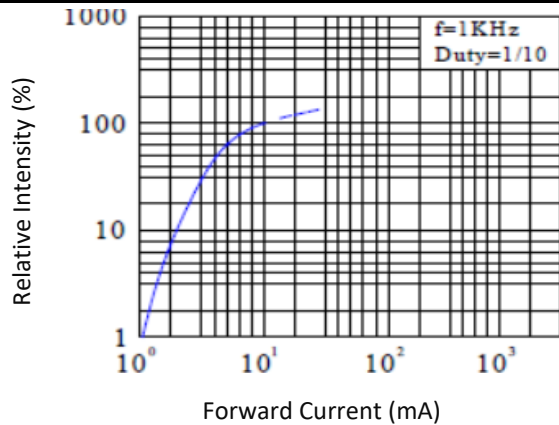
Directive Radiation



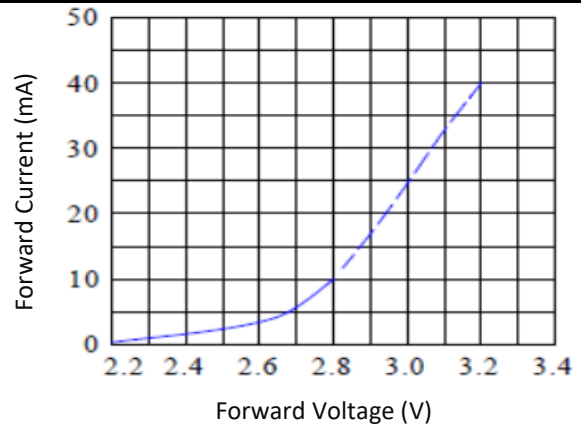


ELECTRO-OPTICAL CHARACTERISTICS (BLUE):

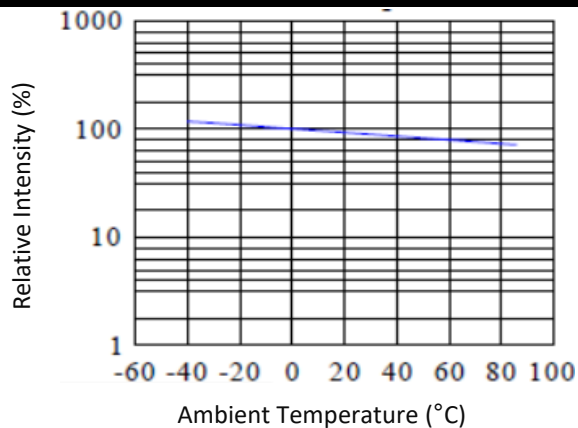
Luminous Intensity v.s. Forward Current



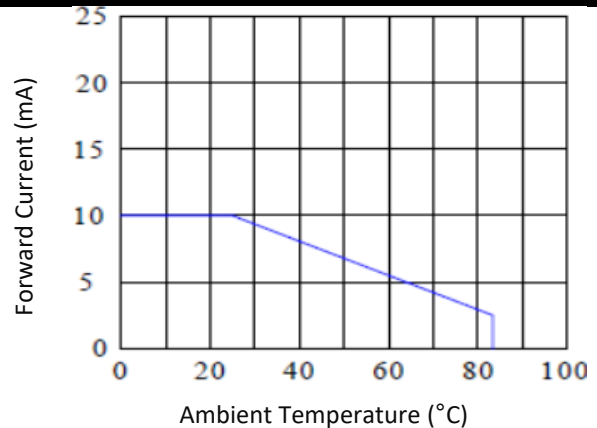
Forward Voltage v.s. Forward Current



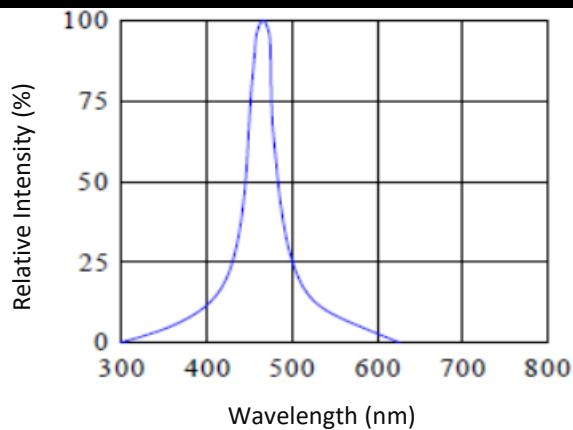
Luminous Intensity v.s. Temperature



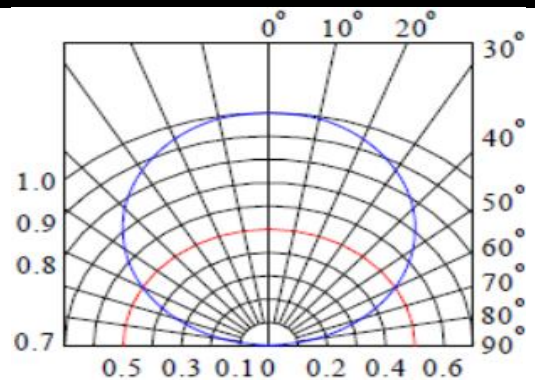
Forward Current Derating Curve



Relative Spectral Distribution

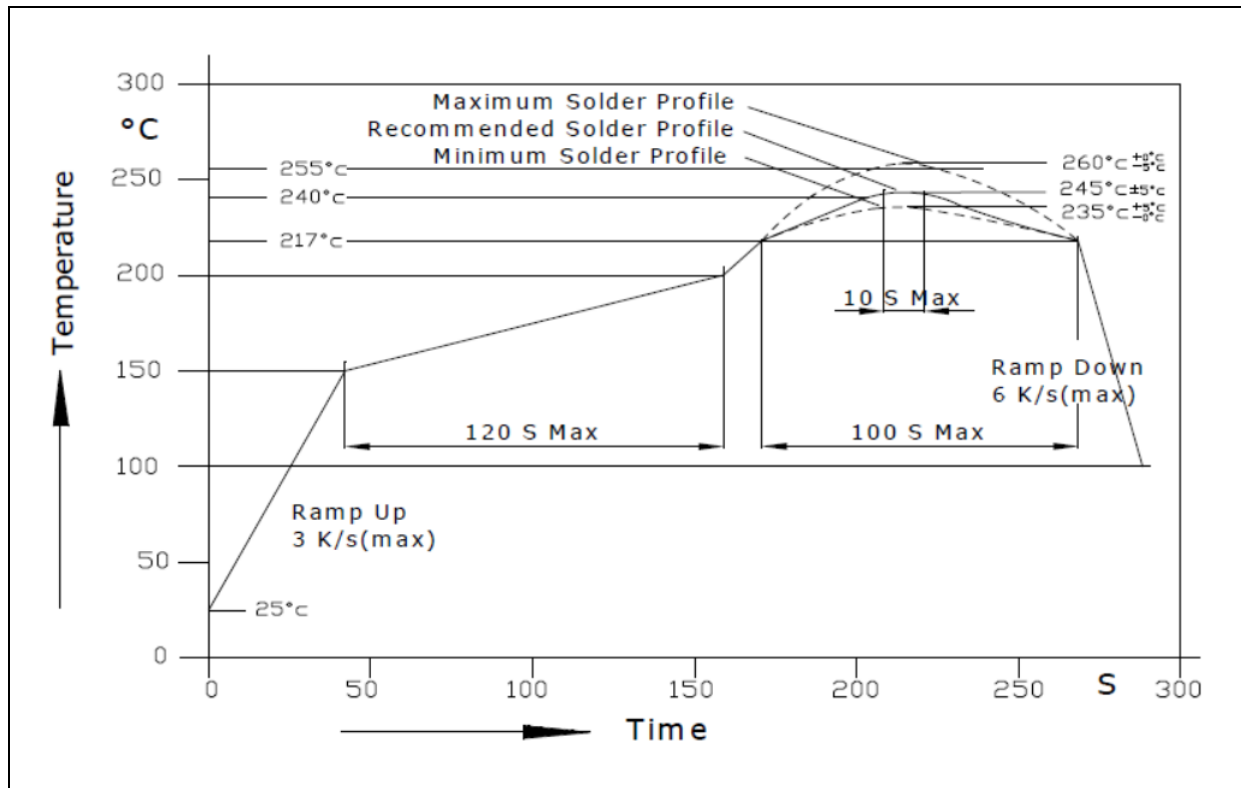


Directive Radiation



RECOMMENDED SOLDERING PROFILE:

Pb-Free Reflow Solder:



Note:

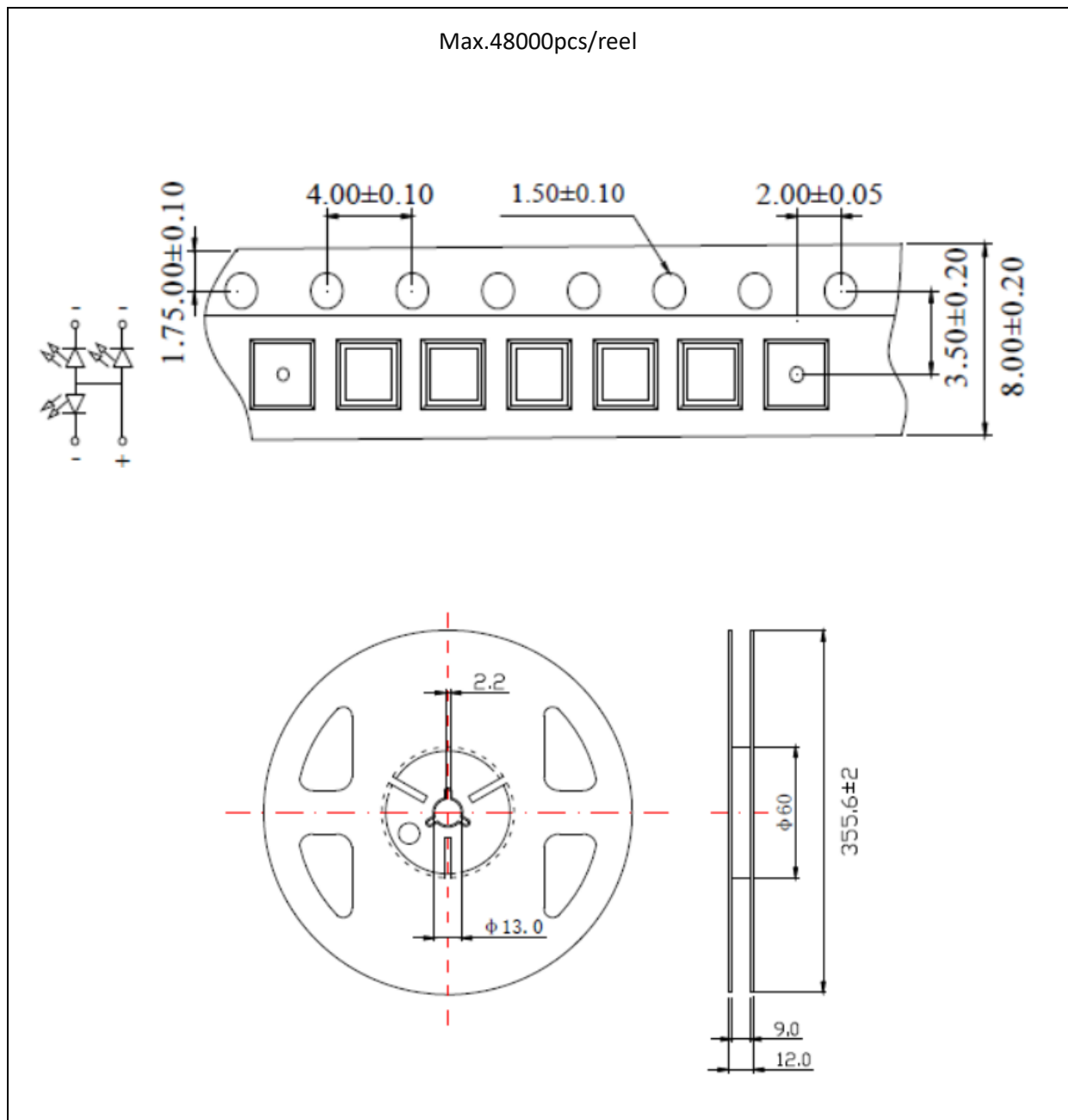
1. Recommend reflow temperature 240°C. The maximum soldering temperature should be limited to 250°C.
2. Maxima reflow soldering: 2 times.
3. Before, during, and after soldering, should not apply stress on the components and PCB board.

Reflow soldering		Soldering iron	
Pre-heat	150~200°C	Temperature	300°C Max.
Pre-heat time	120 sec. Max.	Soldering time	3 sec. Max.
Peak temperature	250°C Max.		(one time only)
Soldering time	10 sec. Max.(Max. two times)		



PACKING SPECIFICATION:

Reel Dimension:



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 168 hours. Otherwise, they should be kept in a damp-proof box with desiccating agent and to be stored at <10% R.H. and apply baking.

Baking:

It is required 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 blue) 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	28/03/2017	Datasheet set-up.
A1.1	02/10/2025	New datasheet format.
A1.2	06/08/2026	Revised testing current and packing quantity.
A1.3	13/08/2026	Revised MSL, package dimensions, and luminous intensity values.