



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

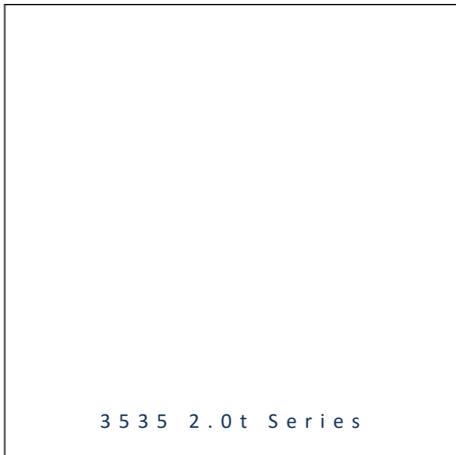


- ▶ Ceramic High Power
- ▶ 3535 2.0t Series
- ▶ Yellow (590nm)

NOY26S81



Release Date: 07 August 2016 Version: A1.0



3535 2.0t Series

3535 2.0t Series

RoHS
Compliant



AUTOMOTIVE
AEC-Q101

FEATURES:

- **Package:** Ceramic SMT Package with Silicon Lens
- **Forward Current:** 350~700mA
- **Forward Voltage (typ.):** 2.1V
- **Luminous Flux (typ.):** 60lm@350mA; 102lm@700mA
- **Colour:** Yellow
- **Wavelength:** 590nm
- **Viewing angle:** 120°
- **Materials:**
 - Die: AlGaInP
 - Resin: Silicon (Water Clear)
 - L/T Finish: Ag plated
- **Operating Temperature:** -40~+85°C
- **Storage Temperature:** -40~+100°C
- **Grouping parameters:**
 - Forward Voltage
 - Luminous Flux
 - Dominant Wavelength
- **Soldering methods:** Reflow
- **Preconditioning:** MSL2 according to J-STD020
- **Packing:** 12mm tape with 100pcs Min./reel, ø180mm (7")

APPLICATIONS:

- Decorative Lighting
- Portable Lighting
- Outdoor Lighting
- Commercial Lighting
- Indoor Lighting
- Industrial Lighting

CHARACTERISTICS:

Absolute Maximum Characteristics (Ta=25°C)

Parameter	Symbol	Ratings	Unit
DC Forward Current	I_F	700	mA
Pulse Forward Current D=0.01S; duty 1/10	I_{PF}	1000	mA
Reverse Voltage	V_R	5	V
Reverse Current @5V	I_R	10	μ A
Junction Temperature	T_j	150	°C
Thermal Resistance Junction to Solder Point	R_{th}	11	°C/W
Electrostatic Discharge (HBM: MIL-STD-883 C 3B)	ESD	8000	V
Operating Temperature	T_{OPR}	-40~+85	°C
Storage Temperature	T_{STG}	-40~+100	°C
Soldering Temperature	T_{SOL}	260	°C

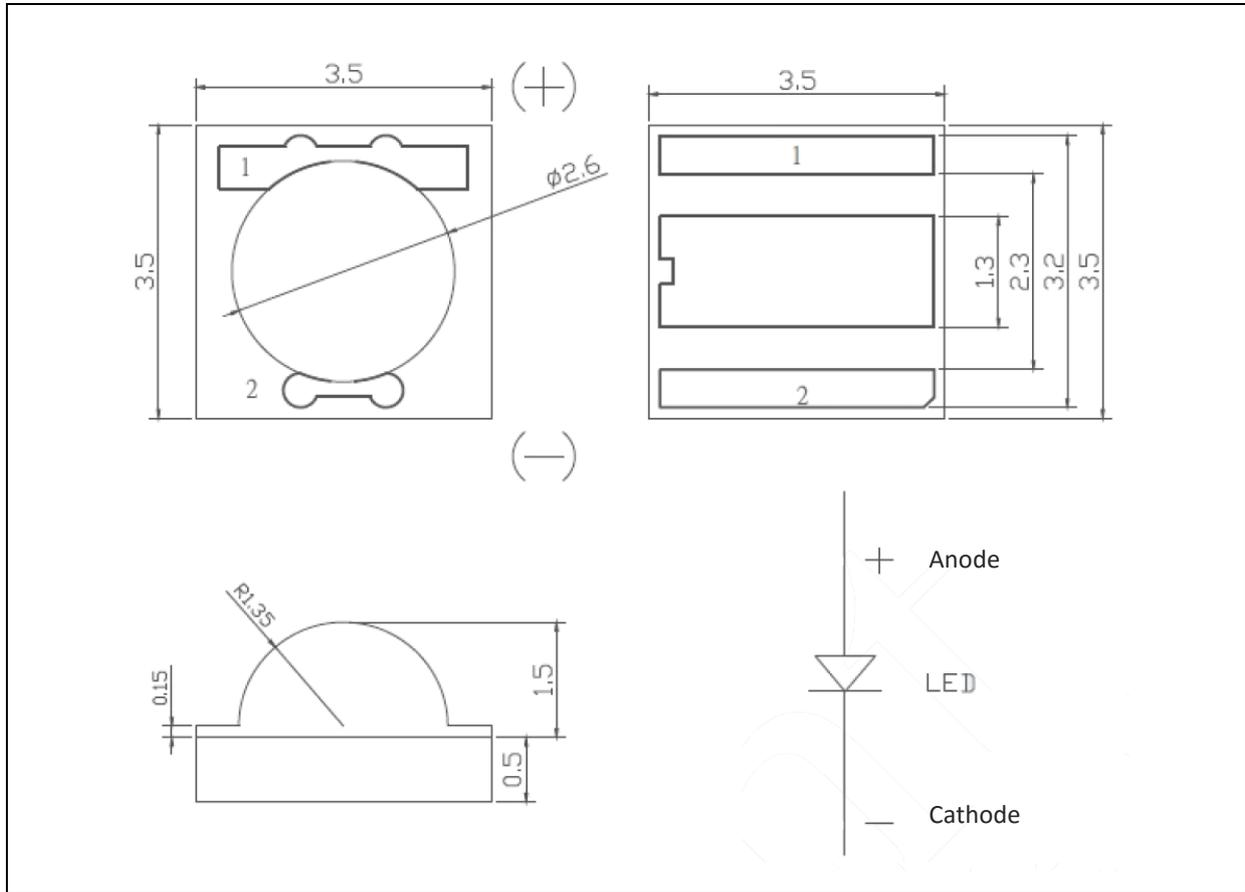
Electrical & Optical Characteristics (Ta=25°C)

Parameter	Symbol	Values			Unit	Test Condition
		Min.	Typ.	Max.		
Forward Voltage	V_F	1.8	---	2.4	V	$I_F=350mA$
Luminous Flux	Φ_V	50	60	70	lm	$I_F=350mA$
		85	102	118		$I_F=700mA$
Dominant Wavelength	λ_D	585	---	595	nm	$I_F=350mA$
Viewing Angle	$2\theta_{1/2}$	---	120	---	deg	$I_F=350mA$

1. Luminous flux (Φ_V) $\pm 7\%$, Forward Voltage (V_F) $\pm 0.05V$, Viewing angle($2\theta_{1/2}$) $\pm 10^\circ$
2. IS standard testing

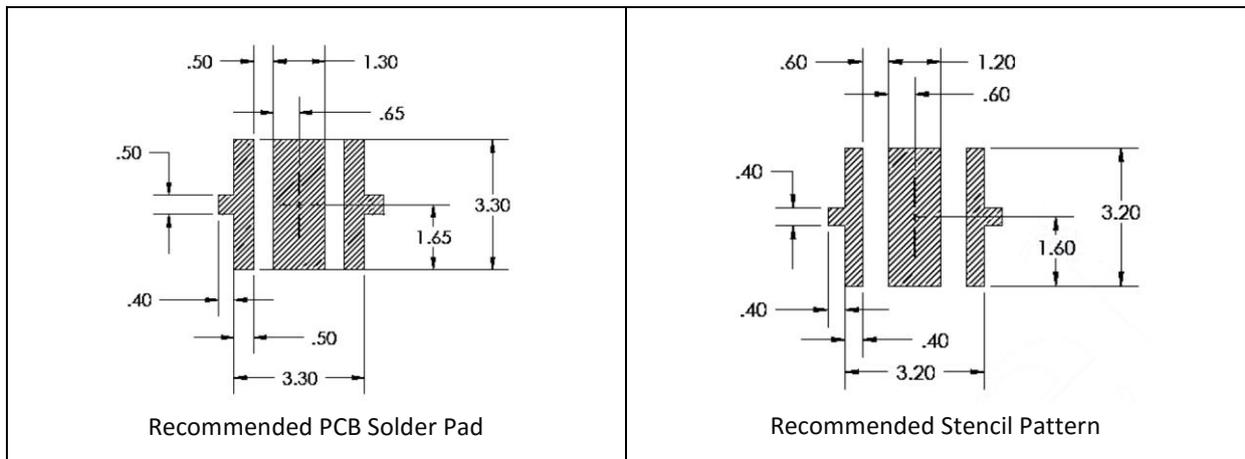
OUTLINE DIMENSION:

Package Dimension:



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

Recommended Soldering Pad Dimension:



1. Dimensions are in millimetre (mm).
2. Tolerance ± 0.12 mm with angle tolerance $\pm 0.5^\circ$.

BINNING GROUPS:

 Forward Voltage Classifications ($I_F = 350\text{mA}$):

Code	Min.	Max.	Unit
V1820	1.8	2.0	V
V2022	2.0	2.2	
V2224	2.2	2.4	

 Luminous Flux Classifications ($I_F = 350\text{mA}$):

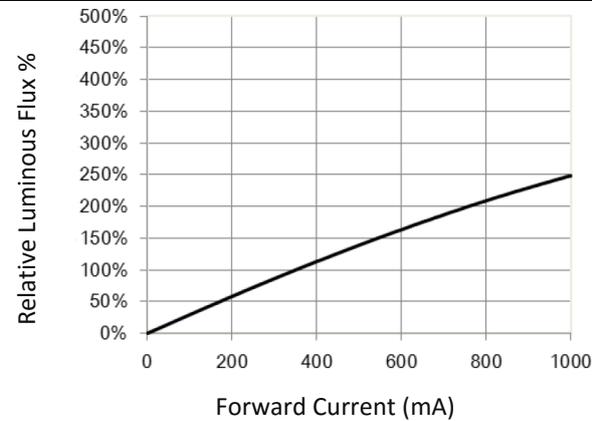
Code	Min.	Max.	Unit
B25	50	55	lm
B26	55	60	
B27	60	65	
B28	65	70	

 Dominant Wavelength Classifications ($I_F = 350\text{mA}$):

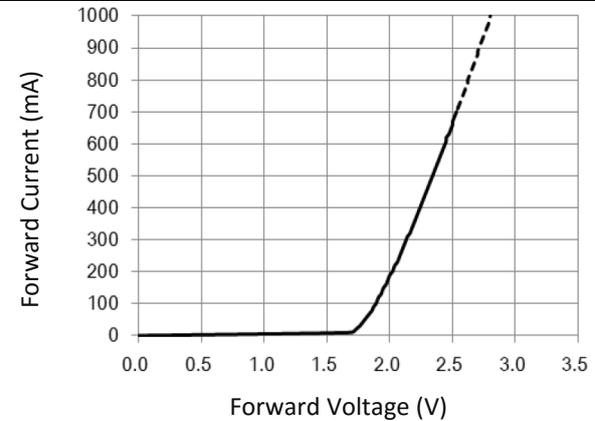
Code	Min.	Max.	Unit
Y585	585	590	nm
Y590	590	595	

ELECTRO-OPTICAL CHARACTERISTICS:

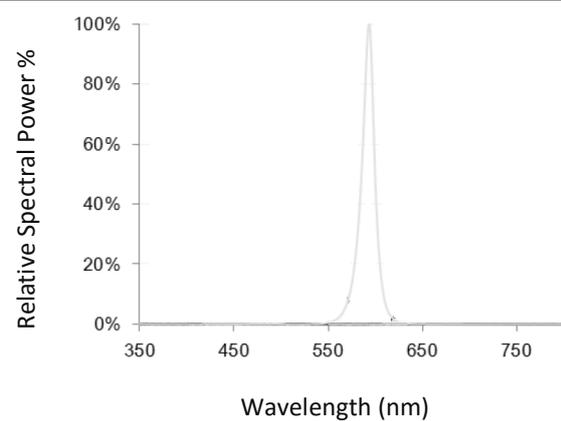
Relative Luminous Flux v.s. Forward Current



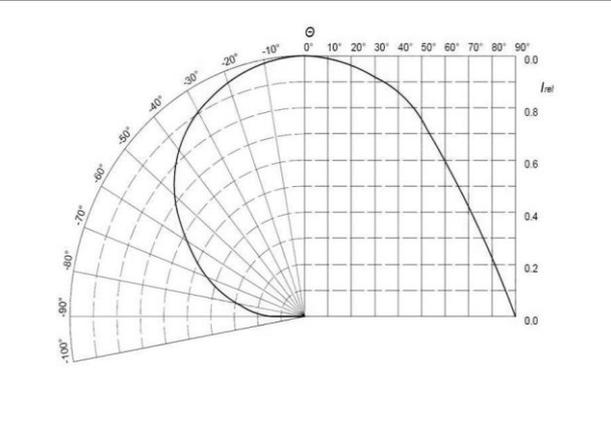
Forward Current v.s. Forward Voltage



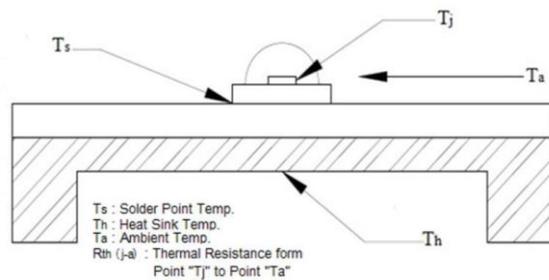
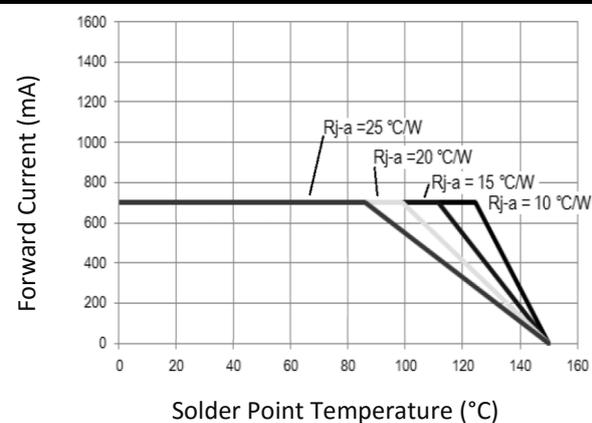
Relative Spectral Power v.s. Wavelength



Directive Radiation

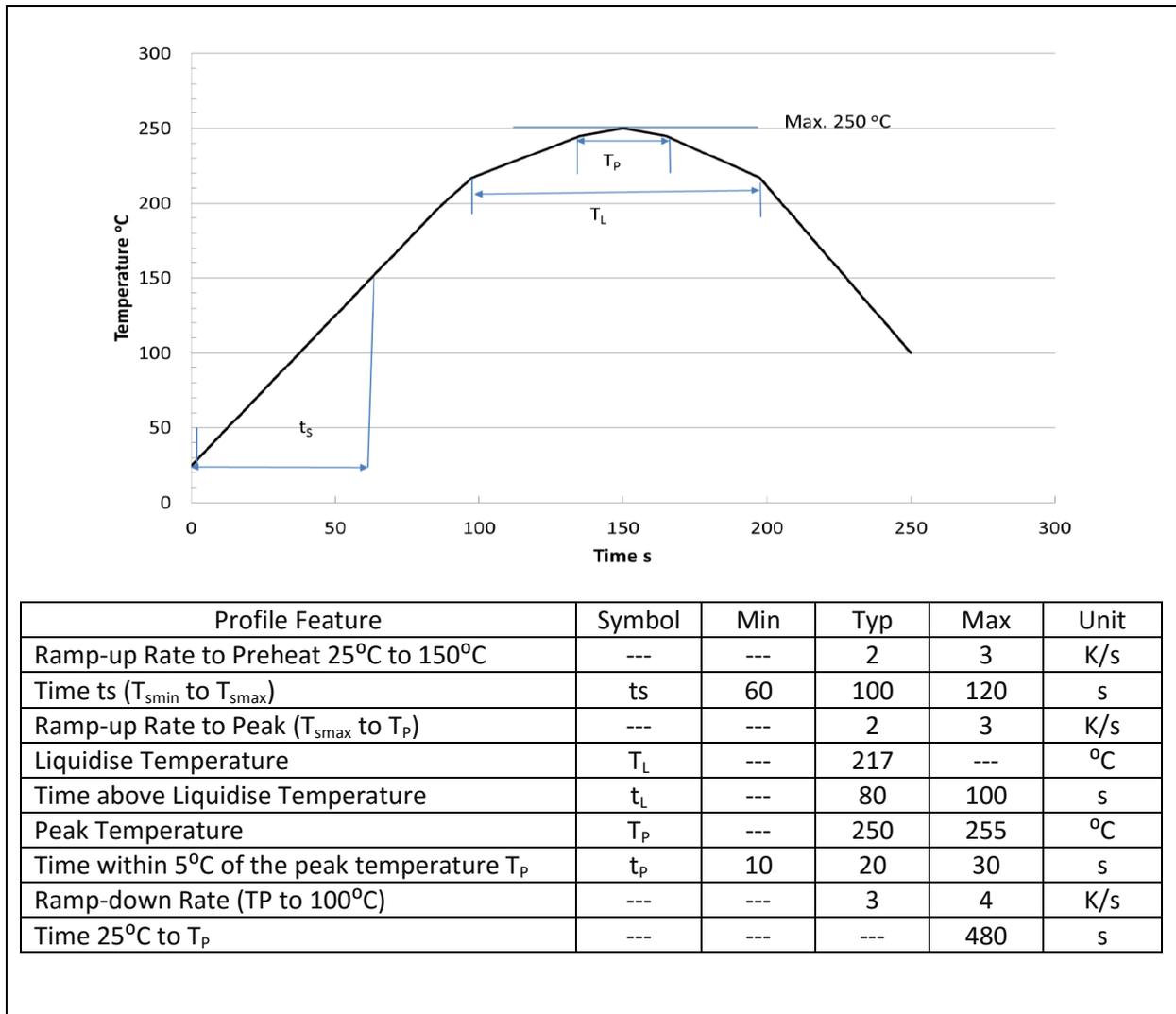


Forward Current Derating Curve



RECOMMENDED SOLDERING PROFILE:

Reflow Lead-free Solder:



Note:

1. Maximum reflow soldering: 3 times.
2. The recommended reflow temperature is 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.

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 month 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 and apply baking at 60°C±5°C for 15hrs before use.

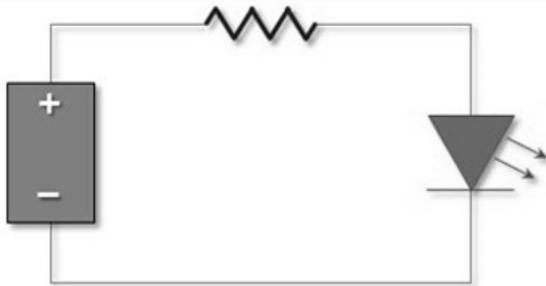
Baking:

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 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	07/08/2016	Datasheet set-up.