

Product Change Notice

- Change notification number: LED-2024-B0-0001
- Products : LM561B+ - SPMWHT541MP*****
LM561C – SPMWHT541ML*****
- Change : Changing of a manufacturing site
(Hwasung → Guangzhou)
- Remark : Scheduled to start manufacturing in July. 2024

CSS Team

Jan, 2024

1. Overview

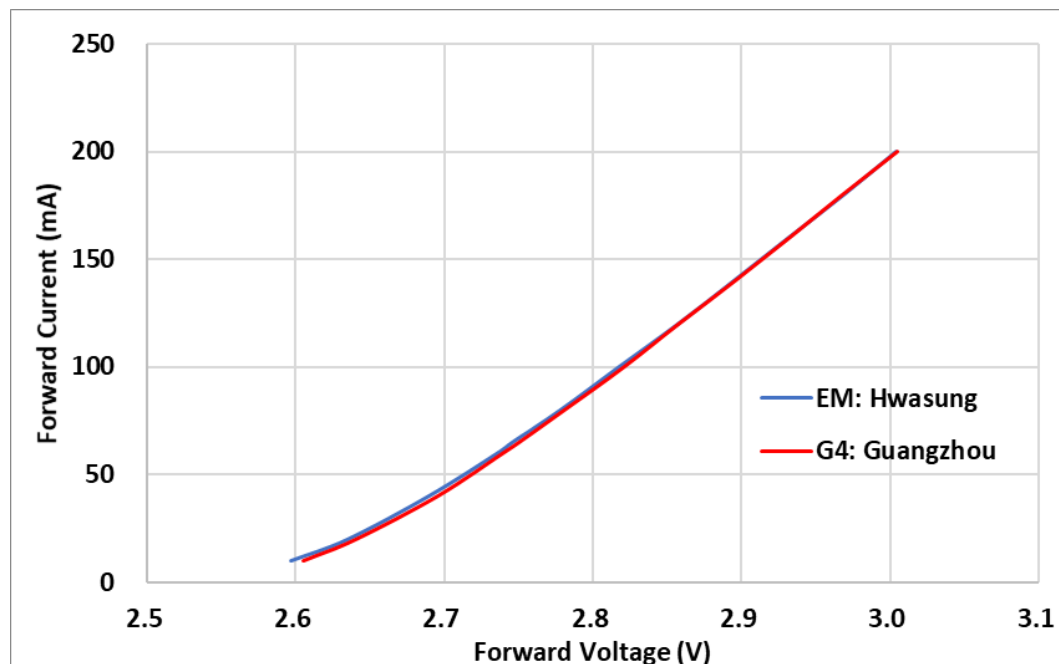
No change for overall performance and reliability

Item		EM: Hwasung, Korea	G4 : Guangzhou, China
Material	Chip	Epi-up LM561C 770×1300 μm^2 , LM561B+ 630×970 μm^2	Same
	L/F	PCT	Same
1. Electrical Performance		Same Performance	
2. Dimension		Same L/F	
3. Radiation diagram		120°	Same
4. Reliability		Pass all items in the specification	
5. Mass production results		Spec in	

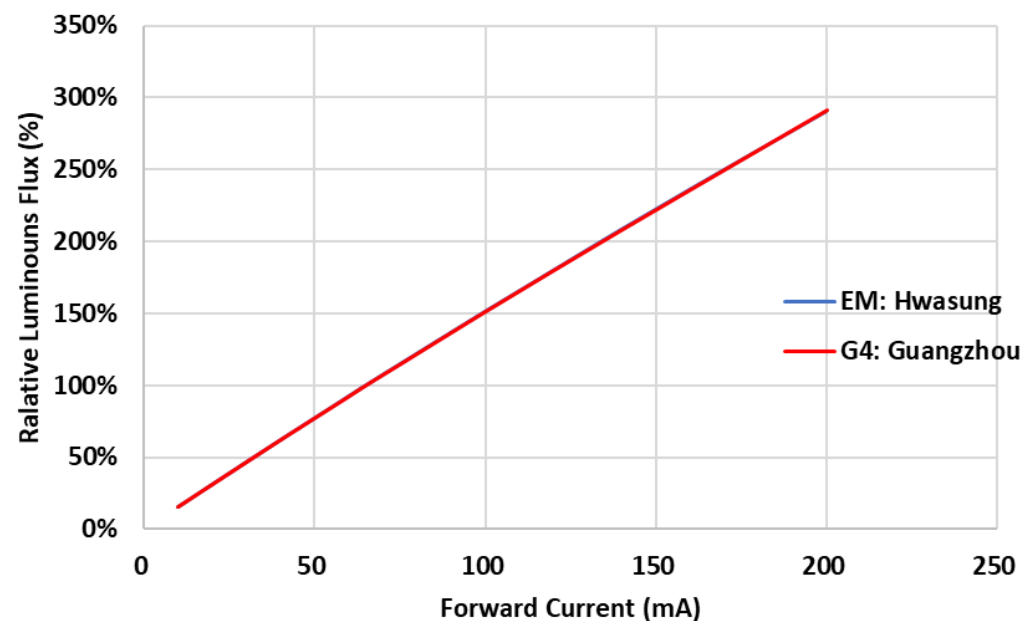
2. Electrical Performance

No change Electrical Performance (Same Chip, Same L/F)

Forward Current vs. Forward Voltage
(Hwasung, Korea / Guangzhou, China)

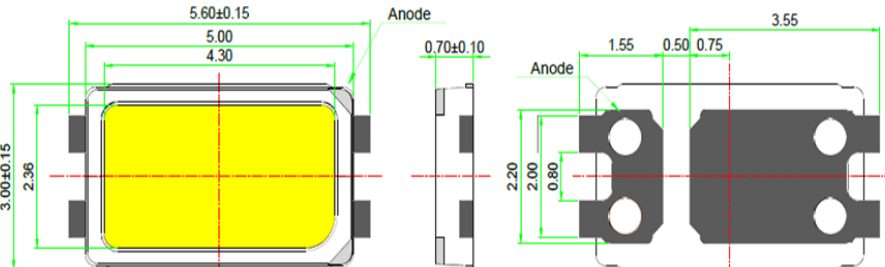
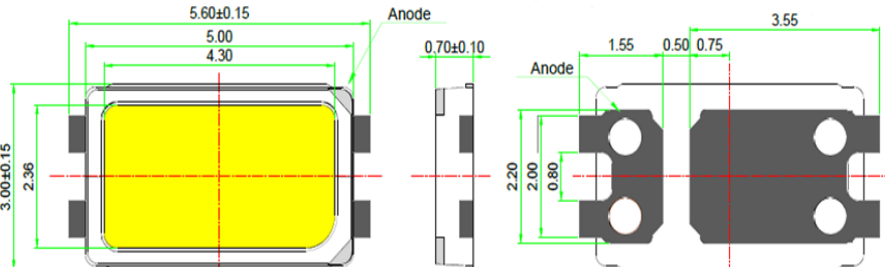
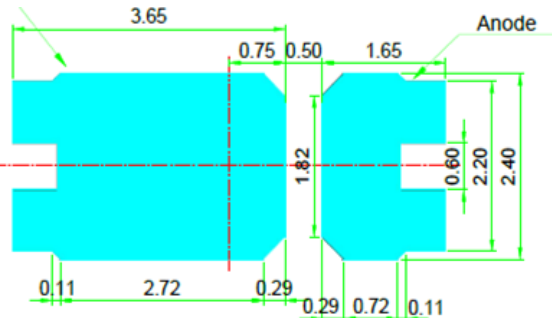
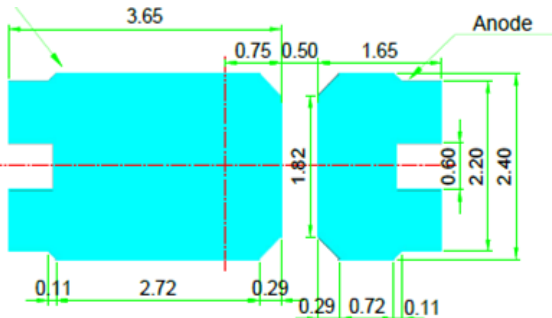


Relative Luminous vs. Forward Voltage
(65mA 100%)
(Hwasung, Korea / Guangzhou, China)



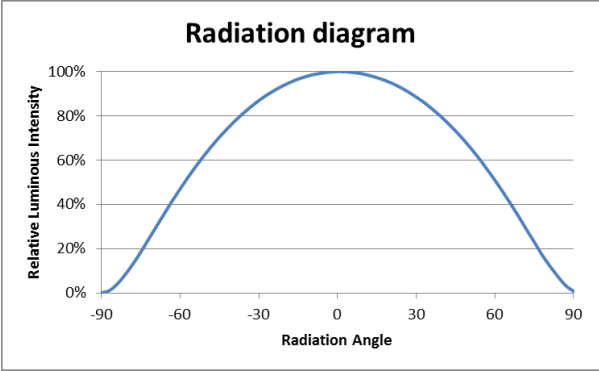
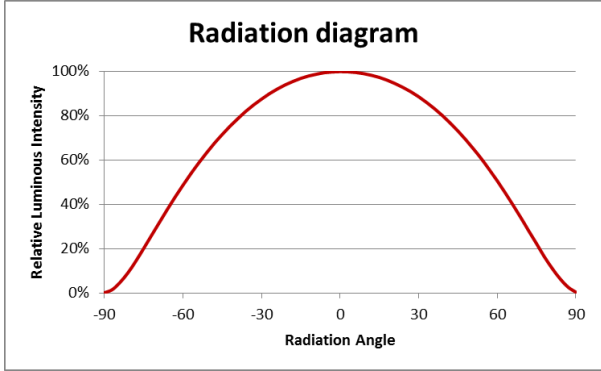
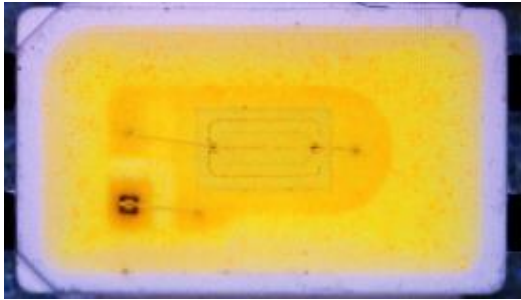
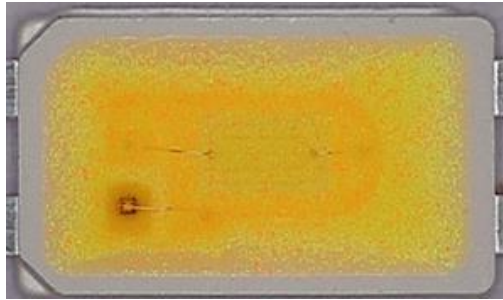
3. Dimension

No change in PKG Dimension (Same L/F)

	Hwasung, Korea	Guangzhou, China
PKG Size		
Foot Print		

4. Radiation diagram

No change Radiation diagram (Same L/F, Same Silicone)

	Hwasung, Korea	Guangzhou, China
Radiation diagram	 The radiation diagram for Hwasung, Korea, shows a blue curve representing the relative luminous intensity as a function of the radiation angle. The y-axis is labeled 'Relative Luminous Intensity' and ranges from 0% to 100% in 20% increments. The x-axis is labeled 'Radiation Angle' and ranges from -90 to 90 degrees in 30-degree increments. The curve is a smooth, symmetric arc peaking at 100% intensity at 0 degrees.	 The radiation diagram for Guangzhou, China, shows a red curve representing the relative luminous intensity as a function of the radiation angle. The y-axis is labeled 'Relative Luminous Intensity' and ranges from 0% to 100% in 20% increments. The x-axis is labeled 'Radiation Angle' and ranges from -90 to 90 degrees in 30-degree increments. The curve is a smooth, symmetric arc peaking at 100% intensity at 0 degrees, identical in shape to the one for Hwasung.
Apperance	 A photograph of the LED chip for Hwasung, Korea. The chip is rectangular with a yellowish-gold surface. A small, dark, circular feature is visible near the bottom left corner. The chip is mounted on a blue substrate.	 A photograph of the LED chip for Guangzhou, China. The chip is rectangular with a yellowish-gold surface. A small, dark, circular feature is visible near the bottom left corner. The chip is mounted on a grey substrate.

5. Reliability

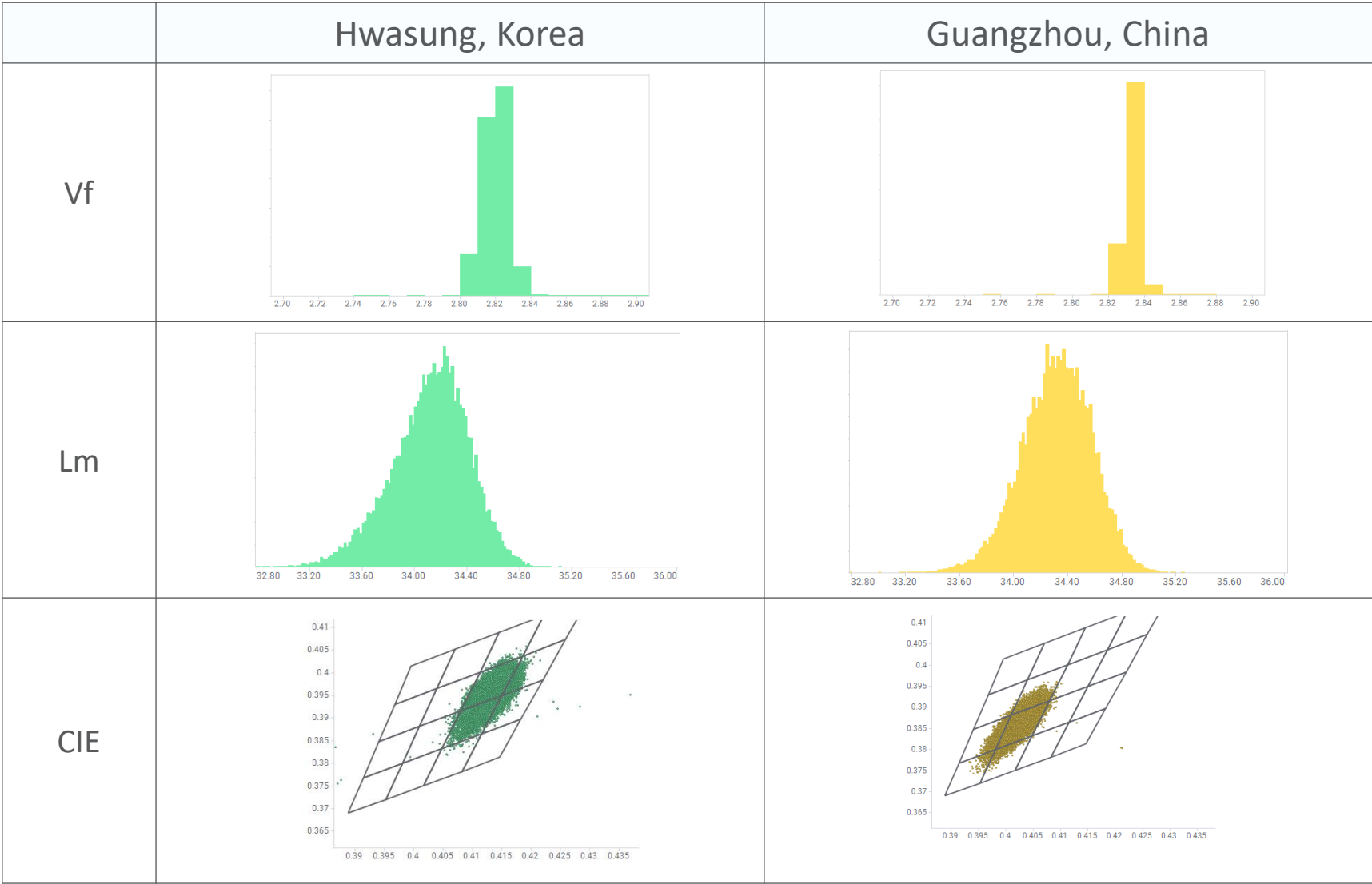
PASS all criteria in the specification

Test item	Test Condition	Test Time or cycle	Sample Q'ty
High Temperature Life Test	85 °C, max IF	1000 h	22
High Temperature Humidity Life Test	60 °C, 90 % RH, max IF	1000 h	22
Thermal Cycle	-45 °C / 15 min ↔ 125 °C / 15 min → Hot plate 180 °C	500 cycles	100
High Temperature Storage	120 °C	1000 h	11
Low Temperature Storage	-40 °C	1000 h	11
ESD (HBM)	R1:10 MΩ, R2:1.5 kΩ, C:100 pF, V: ±5 kV	5 times	30

6. Mass production results

No difference for distribution of Vf , Lm flux , CIE Bin

LM561B+ CRI 80 3500K



Thank you