

Product Change Notice

- Products : LM301B (SPMWHD32AMD*****)
CCTs : 27/30/35/40/50/57/6500K
- Change : Changed Chip version
- Remark : Change implemented after approval

1. Overview



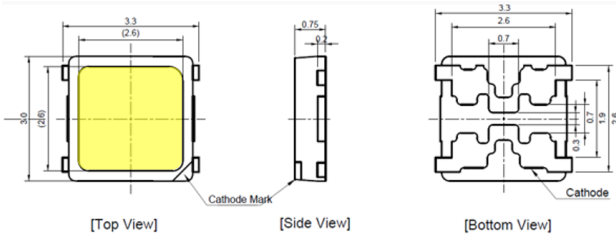
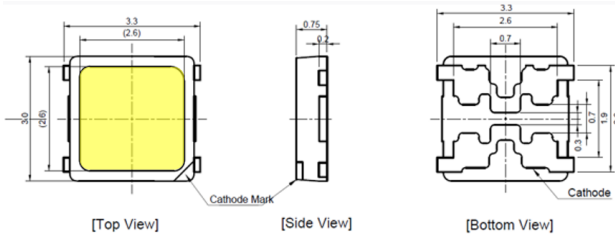
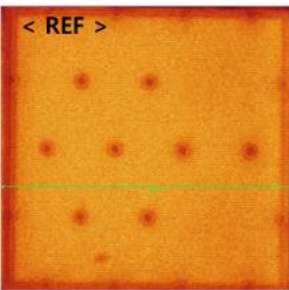
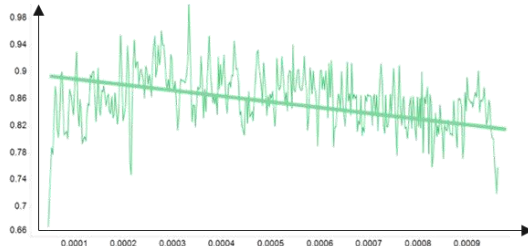
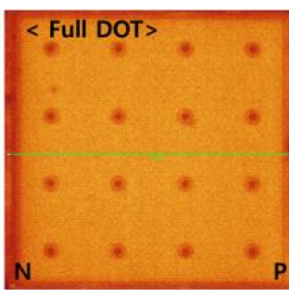
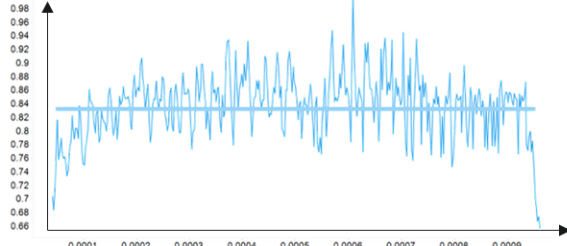
■ Overall performance and reliability stay the same

		Change (Before vs. After)	Remark
Material	L/F	Same as before	PCT
	Chip	Half dot → Full dot (Electrode shape change)	Same
Electrical Performance		Same as before	-
Mechanical		Same as before	-
Beam angle		Same as before	-
Electrical Characteristics		Current spreading improved	Expand Current Spreading Area Chip IQE (Internal Quantum Efficiency) ↑
Radiating Characteristics		Increasing about 1%	
Image			

2. Dimension



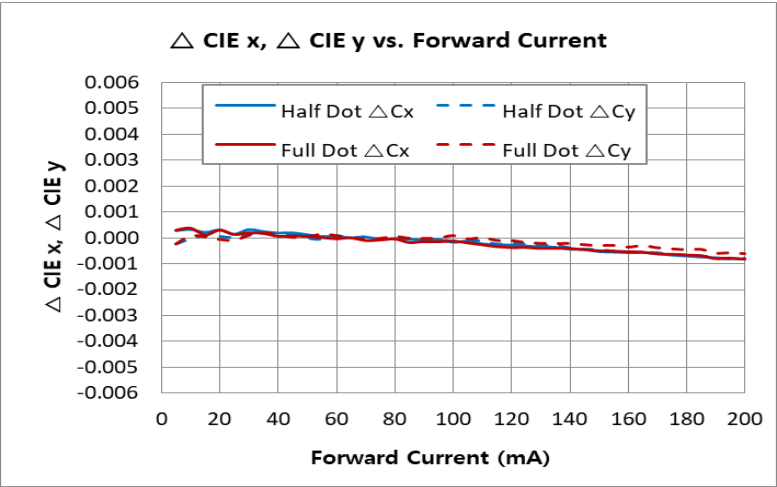
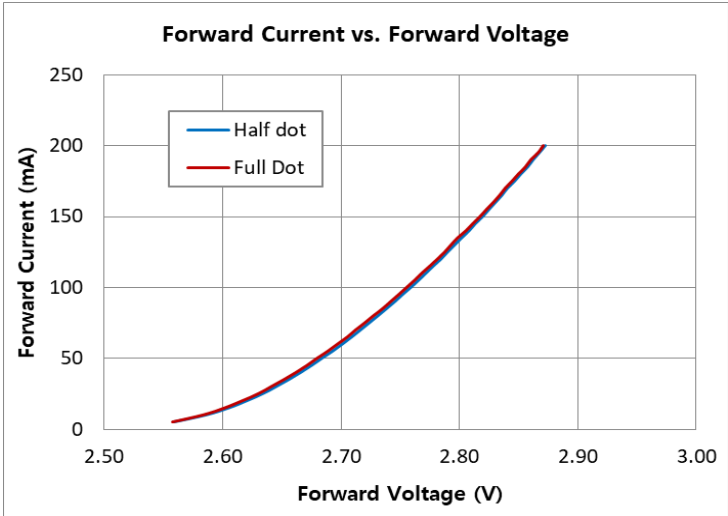
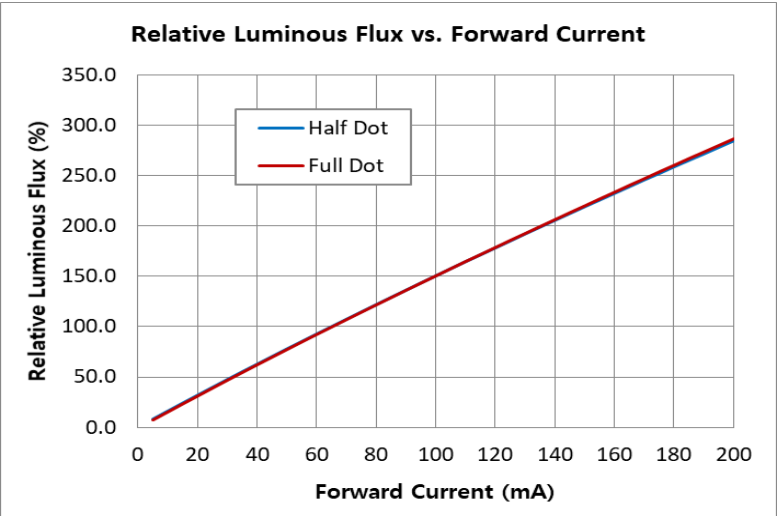
■ No change in PKG Dimension
but change the electrode shape of chip to Full dot type from Half dot type

	change	As-is (Half Dot chip electrode)	To-be (Full Dot chip electrode)
PKG Dimension	No Change		
Chip Visual image	Change	 Current Spreading 	 Current Spreading 

3-1. Sweep Performance



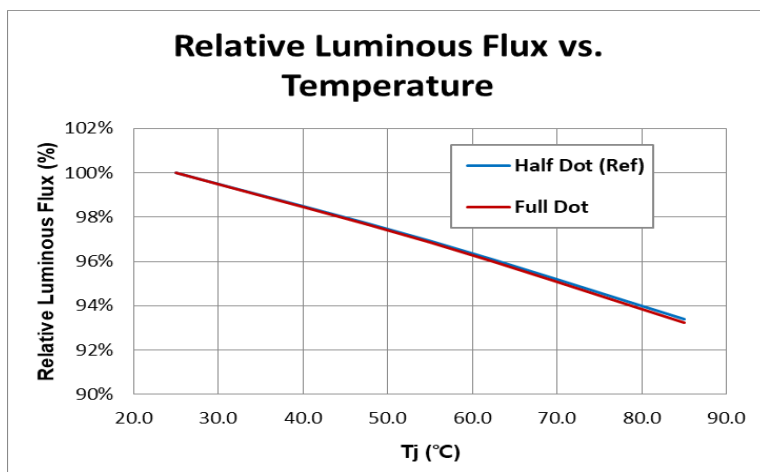
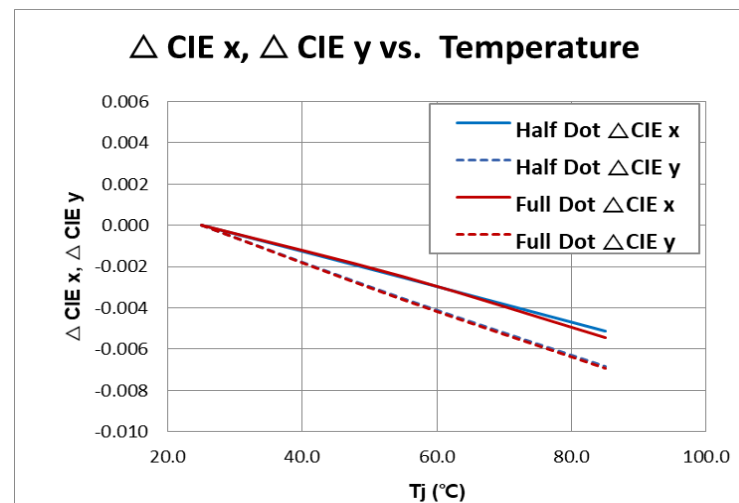
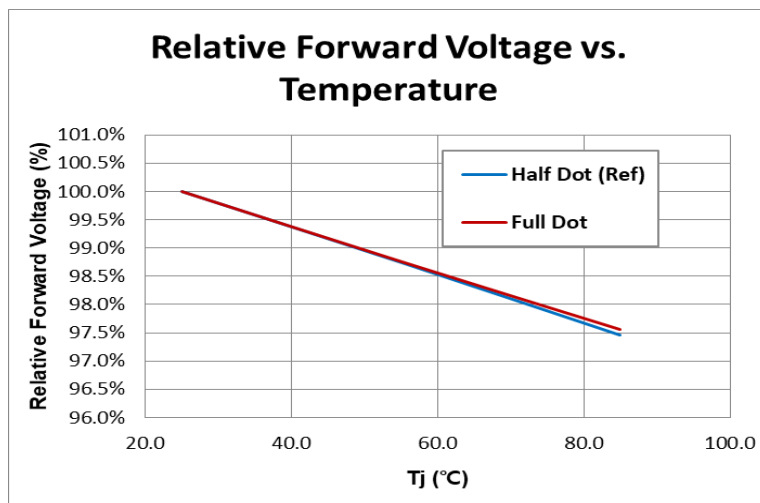
■ No change Characteristics with Current sweep





3-2. Temperature Performance

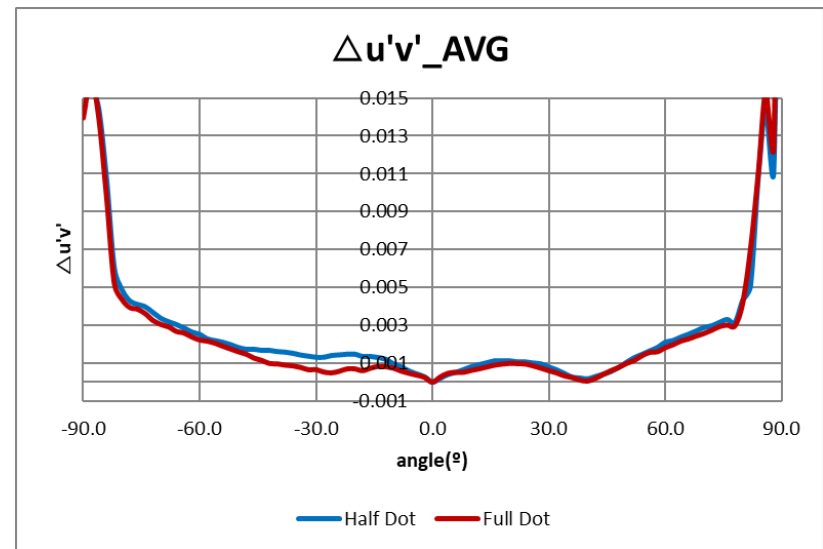
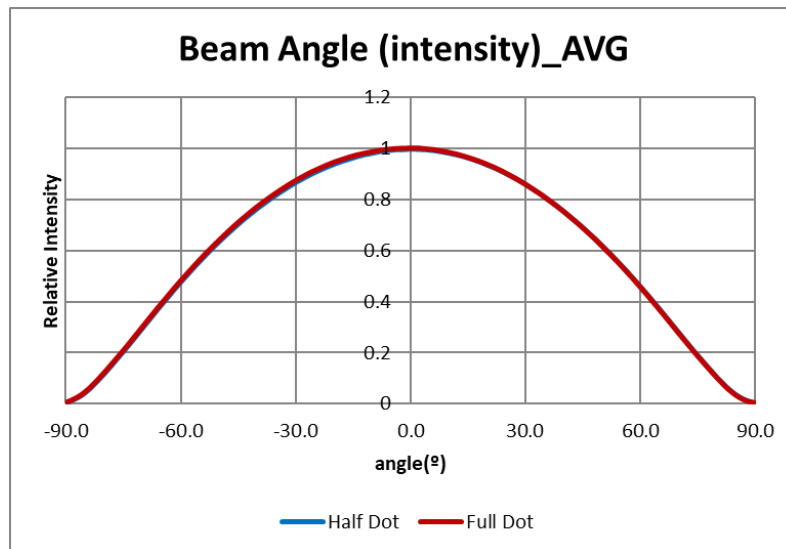
■ No change Characteristics with Temperature



3-3. Optical Performance



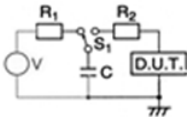
■ No change Optical Characteristics



4. Reliability



■ PASS all criteria in the specification

Test Item	Test Condition	Test Hour / Cycle	Sample No.
Room Temperature Life Test	25°C, DC 200 mA	1000 h	22
High Temperature Life Test	85°C, DC 200 mA	1000 h	22
High Temperature Humidity Life Test	85°C, 85 % RH, DC 200 mA	1000 h	22
Low Temperature Life Test	-40°C, DC 200 mA	1000 h	22
Powered Temperature Cycle Test	-40 °C ~ 85°C, each 10 min, On/Off 5min , Temp. Change Time 20min, DC 200 mA	100 cycles	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)	 R ₁ : 10 MΩ / R ₂ : 1.5 kΩ C: 100 Pf / V: ±5 kV	5 times	30
ESD (MM)	R ₁ : 10 MΩ / R ₂ : 0 C: 200 pF / V: ±0.5 kV	5 times	30
Vibration Test	20~2000~20 Hz, 200 m/s ² , sweep 4 min X, Y, Z 3 direction, each 1 cycle	4 cycles	11
Mechanical Shock Test	1500 g, 0.5 ms 3 shocks each X-Y-Z axis	5 cycles	11



Thank you

AFFECTED MPNS

SPMWHD32AMD3XAVSS0
SPMWHD32AMD3XAVKS0
SPMWHD32AMD3XAV0S0
SPMWHD32AMD3XAUSS0
SPMWHD32AMD3XAUKS0
SPMWHD32AMD3XAU0S0
SPMWHD32AMD3XATSS0
SPMWHD32AMD3XATKS0
SPMWHD32AMD3XAT0S0
SPMWHD32AMD3XARSS0
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