InGaN/GaN Blue Chip ---TK1030SBN

1. Scope

- The specification applies to LED chips for GaN Blue chip
- Type : TK1030SBN-G

2. Structure

- GaN/Sapphire Chip.
- P Electrode (anode) : Gold.
- N Electrode (cathode) : Gold.

3. Size

- Chip size : 10mil × 30mil (255um × 765um ± 25um)
- P/N Electrode(anode/cathode) : 80/80um ± 10um
- Thickness : 110um ± 10um
- Pattern drawing : per fig. 1

4. Electro-Optical Characteristics

(T_a = +25 ℃)

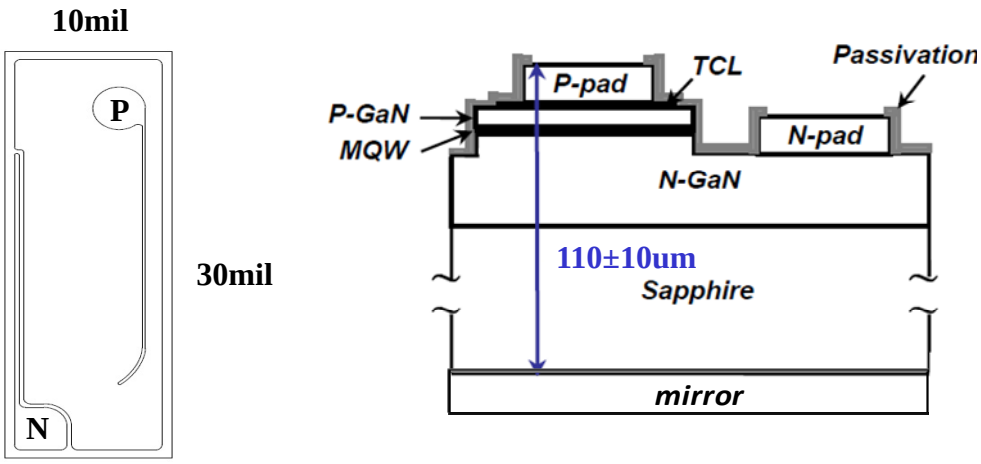
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Turn On Voltage	Vfin	1uA	2	--	3	V
Forward Voltage (1)	Vf	40mA	2.8	--	3.5	V
Reverse Current	Ir	-5V	--	--	1	uA
Dominant wavelength (2)	λd	40mA	445	--	465	nm
Spectral Half-Width	△λ	40mA	--	--	30	nm
Radiant flux (3)	Po	40mA	47	--		mW

Note:

(1) Voltage is 0.1 volt grouping； (2) WLD is 2.5nm grouping；

(3) Total power is grouping as follows:

Total Power Grouping(mW)	47~50	50~53	53~56	56~60



Unit：μm

fig. 1

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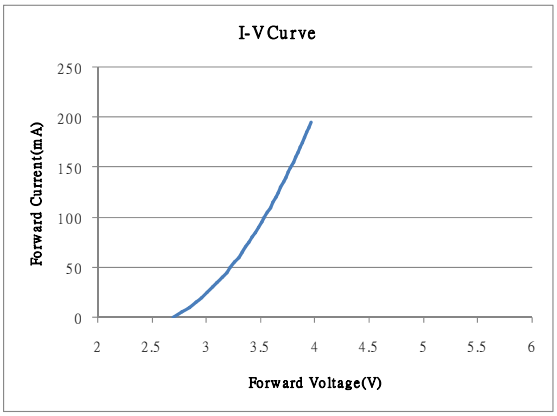
5. Absolute Maximum Ratings

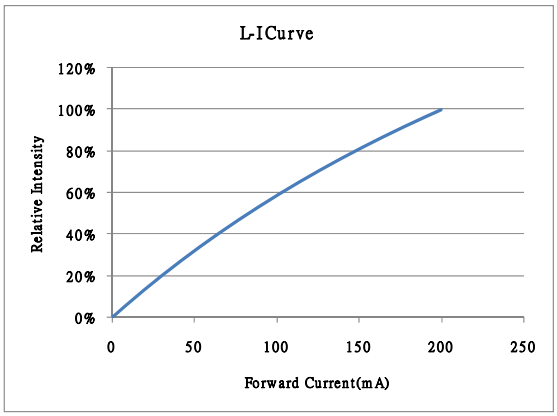
Parameter	Symbol	Condition	Rating	Unit
Forward DC Current	If	Ta=25℃	≦60	mA
Reverse voltage	Vr	Ta=25℃	≦5	V
Junction temperature	Tj	---	≦115	℃
Storage temperature	T	Chip	-40 ~ +85	℃
		Chip-on-tape storage	0~40	℃
		chip-on-tape transportation	-20 ~ +65	℃

6. Typical Electrical and Optical characteristic curves

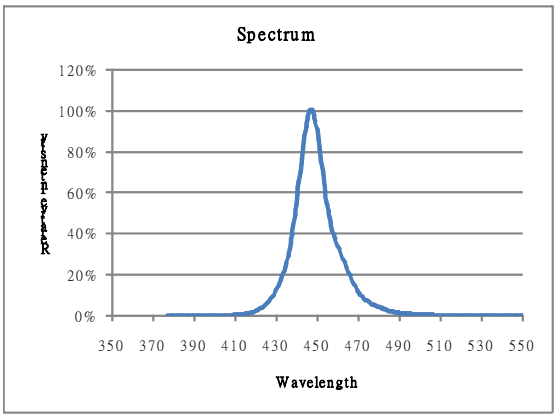
I-V curve at forward bias



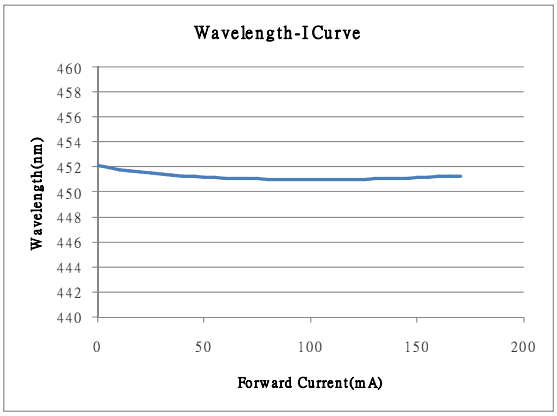
Relative Intensity vs. Forward Current



Photometric spectrum at RT



Dominant wavelength vs. Forward Current



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