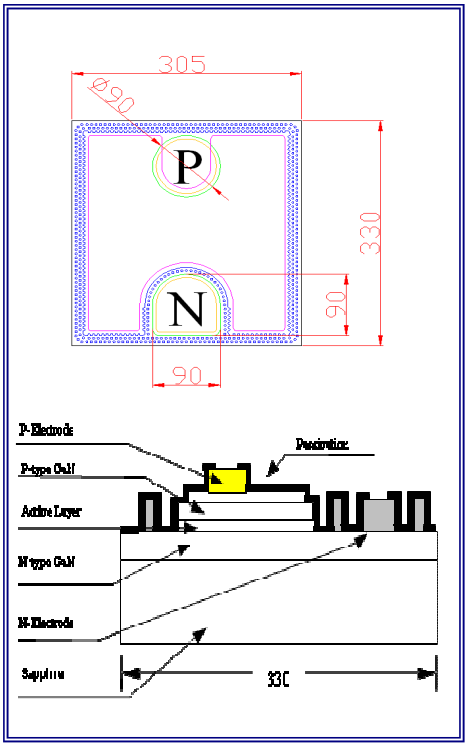
303-SB 20mA LED Chips



Product Description

The product model of 303-SB chip is designed for the applications of the backlight for the flat panel display, the car optoelectronics, the hand-held devices and the general lighting with the high optical and electrical performance of light-emitting diodes (LEDs) and with the excellent product quality. The product is using InGaN/GaN material grown by the metal-organic chemical vapor deposition (MOCVD) systems on sapphire substrates.

Material: InGaN/GaN/Sapphire

Electrode: P (Anode)—Au

N (Cathode)—Au

Chip Size: 330 um x305 um（12mil×13 mil）

Thickness : 90 ±10 um

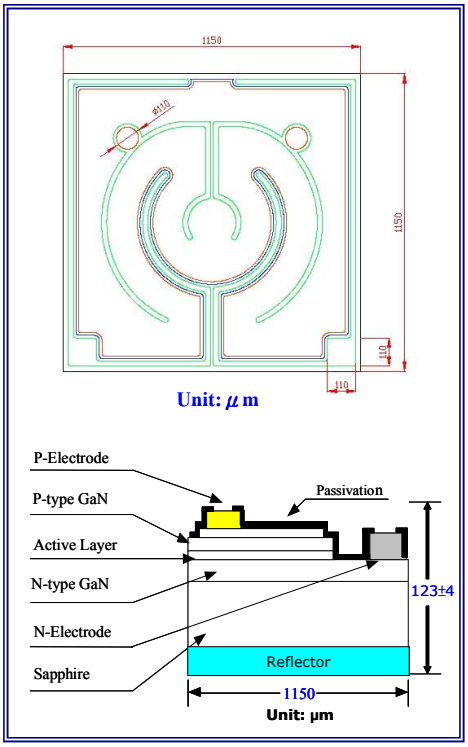
Electro-Optical Characteristics

	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_f	I_f= 20mA	3		3.4	V
Reverse Current	I_r	V_r= 8V			1	μA
Dominant Wavelength	λ_d	I_f= 20mA	445		475	nm
Luminous Intensity	I_v	I_f= 20mA		70		mcd

Example for Specifications

I_v (mcd) / λ_d (nm)	30≦I_v<40	40≦I_v<50	50≦I_v<60	60≦I_v<70	70≦I_v<90	90≦I_v<120	120≦I_v<160
445≦λ_d<450	PEFO						
450≦λ_d<455	PEGO	PFGO	PGGO	PHGO			
455≦λ_d<460		PFHO	PGHO	PHHO	PIHO		
460≦λ_d<465			PGIO	PHIO	PIIO	PJIO	
465≦λ_d<470					PIJO	PJJO	PKJO
470≦λ_d<475						PJKO	PKKO

745-SB-D 350mA LED Chips



Product Description

The product model of 745-SB-D chip is designed for general lighting applications such as home and office lighting, auto headlamps, and streetlights with the high optical and electrical performance of light-emitting diodes (LEDs) and with the excellent product quality. The product is using InGaN/GaN material grown by the metal-organic chemical vapor deposition (MOCVD) systems on sapphire substrates.

Material: InGaN/GaN/Sapphire

Electrode: P (Anode)—Au

N (Cathode)—Au

Chip Size: 1150um x 1150um

Thickness : 123 ± 4 um

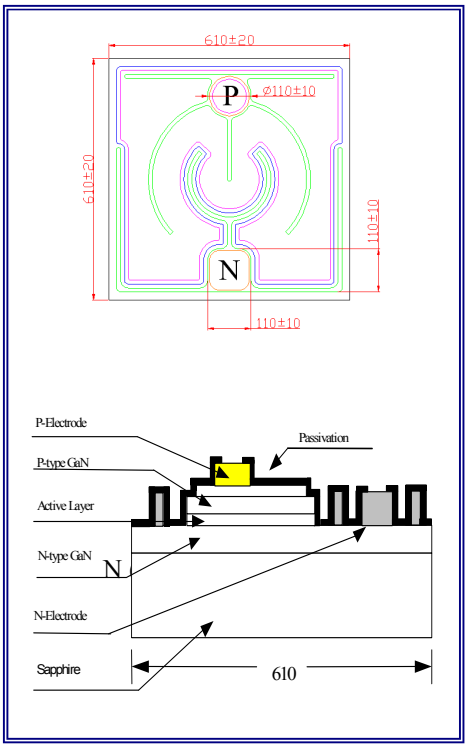
Electro-Optical Characteristics

	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_f	I_f= 350mA	3.2	3.5	3.8	V
Reverse Current	I_r	V_r= 8V			5	μA
Dominant Wavelength	λ_d	I_f= 350mA	447.5		642.5	nm
Luminous Intensity	Po	I_f= 350mA		230		mW

Example for Specifications

I_v (mcd) / λ_d (nm)	1000≦I_v＜1300	1300≦I_v＜1700	1700≦I_v＜2200	2200≦I_v＜2800	2800≦I_v＜3500
440≦λ_d＜442.5	PTED	PUED			
445≦λ_d＜450		PUFD	PVFD		
450≦λ_d＜455		PUGD	PVGD	PWGD	
455≦λ_d＜460				PWHD	PXHD
460≦λ_d＜465				PWID	PXID

724-SB-D 120mA LED Chips



Product Description

The product model of 724-SB-D chip is designed for general lighting applications such as home and office lighting, auto headlamps, and streetlights with the high optical and electrical performance of light-emitting diodes (LEDs) and with the excellent product quality. The product is using InGaN/GaN material grown by the metal-organic chemical vapor deposition (MOCVD) systems on sapphire substrates.

Material: InGaN/GaN/Sapphire

Electrode: P (Anode)—Au

Chip Size: 610 μm × 610 μm (24 mil × 24 mil)

Thickness : 123 ± 3 um

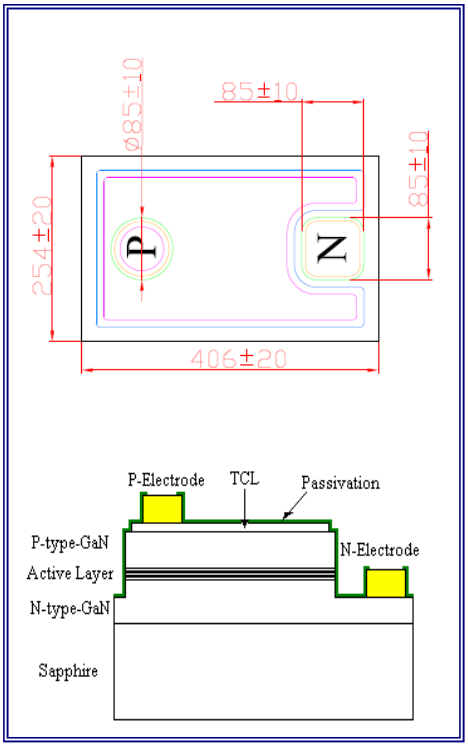
Electro-Optical Characteristic

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward voltage	V_{f2}	I_f= 120mA	3.0		3.6	V
Reverse Current	Ir	Vr=8V			5	μA
Dominant wavelength	λ_d	I_f= 120mA	445		475	nm
Luminous intensity @ 455 nm	I_v	I_f= 120mA		650		mcd
HBM ESD	ESD	HBM	1000			V

Example for Specifications

I_v (mcd) / λ_d (nm)	400≦I_v＜500	500≦I_v＜600	600≦I_v＜800	800≦I_v＜1000	1000≦I_v＜1300
445≦λ_d＜450	PPFO	*			
450≦λ_d＜455		PQGO	PRGO		
455≦λ_d＜460			PRHO	PSHO	
460≦λ_d＜465			PRIO	PSIO	
465≦λ_d＜470				PSJO	P

716-SB 20mA LED Chips



Product Description

The product model of 716-SB chip is designed for the applications of the backlight for the flat panel display, the car optoelectronics, the hand-held devices and the general lighting with the high optical and electrical performance of light-emitting diodes (LEDs) and with the excellent product quality. The product is using InGaN/GaN material grown by the metal-organic chemical vapor deposition (MOCVD) systems on sapphire substrates.

Material: InGaN/GaN/Sapphire

Electrode: P (Anode)—Au

N (Cathode)—Au

Chip Size: 406 um x 254 um

Thickness : 100 ±10 um

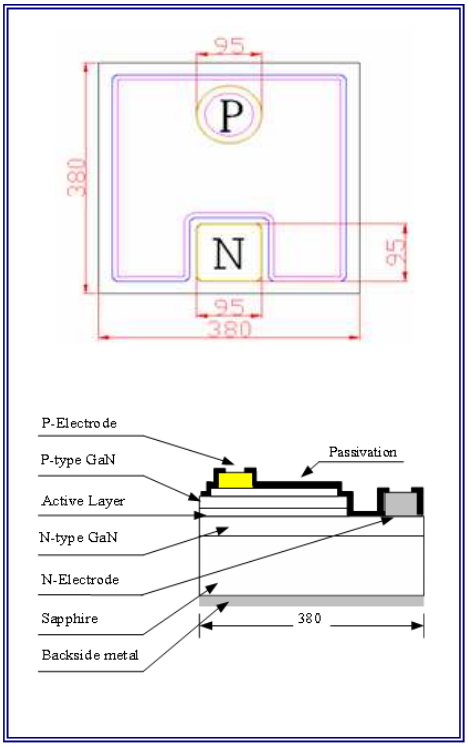
Electro-Optical Characteristics

	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_f	I_f= 20mA	2.8	3.2	3.6	V
Reverse Current	I_r	V_r=8V			1	μ A
Dominant Wavelength	λ_d	I_f= 20mA	445		475	nm
Luminous Intensity	I_v	I_f= 20mA	70		300	mcd

Example for Specifications

I_v (mcd) / λ_d (nm)	70≦I_v<90	90≦I_v<120	120≦I_v<160	160≦I_v<200	200≦I_v<260	260≦I_v<300
445≦λ_d<450	PIFO	PJFO	PKFO	-	-	-
450≦λ_d<455	PIGO	PJGO	PKGO	-	-	-
455≦λ_d<460	-	PJHO	PKHO	PLHO	-	-
460≦λ_d<465	-	-	PKIO	PLIO	PMIO	-
465≦λ_d<470	-	-	PKJO	PLJO	PMJO	PNJO
470≦λ_d<475	-	-	-	PLKO	PMKO	PNKO

715-SB-R 20mA LED Chips



Product Description

The product model of 715-SB-R chip is designed for the applications of the backlight for the flat panel display, the car optoelectronics, the hand-held devices and the general lighting with the high optical and electrical performance of light-emitting diodes (LEDs) and with the excellent product quality. The product is using InGaN/GaN material grown by the metal-organic chemical vapor deposition (MOCVD) systems on sapphire substrates.

Material: InGaN/GaN/Sapphire

Electrode: P (Anode)—Au

N (Cathode)—Au

Chip Size: 381 um x 381 um（15mil×15 mil）

Thickness : 90 ±10 um

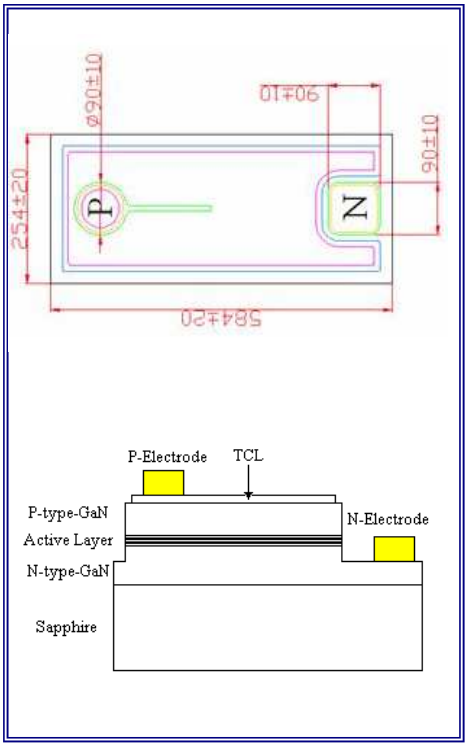
Electro-Optical Characteristics

	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_f	I_f= 20mA	2.8	3.2	3.6	V
Reverse Current	I_r	V_r=8V			1	μA
Dominant Wavelength	λ_d	I_f= 20mA	450		485	nm
Luminous Intensity	I_v	I_f= 20mA	140		600	mcd

Example for Specifications

I_v (mcd) / λ_d (nm)	120≦I_v＜160	160≦I_v＜200	200≦I_v＜260	260≦I_v＜320	320≦I_v＜400	400≦I_v＜500
450≦λ_d＜455	PKGR	PLGR	PMGR	-	-	-
455≦λ_d＜460	PKHR	PLHR	PMHR	PNHR	POHR	-
460≦λ_d＜465	-	PLIR	PMIR	PNIR	POIR	PPIR
465≦λ_d＜470	-	-	PMJR	PNJR	POJR	PPJR
470≦λ_d＜475	-	-	-	PNKR	POKR	PPKR
475≦λ_d＜480	-	-	-	PNLR	POLR	PPLR
480≦λ_d＜485	-	-	-	-	-	PPMR

710-SB 20mA LED Chips



Product Description

The product model of 710-SB chip is designed for the applications of the backlight for the flat panel display, the car optoelectronics, the hand-held devices and the general lighting with the high optical and electrical performance of light-emitting diodes (LEDs) and with the excellent product quality. The product is using InGaN/GaN material grown by the metal-organic chemical vapor deposition (MOCVD) systems on sapphire substrates.

Material: InGaN/GaN/Sapphire

Electrode: P (Anode)—Au

N (Cathode)—Au

Chip Size: 584 um x 254 um（23mil×10 mil）

Thickness : 90 ±10 um

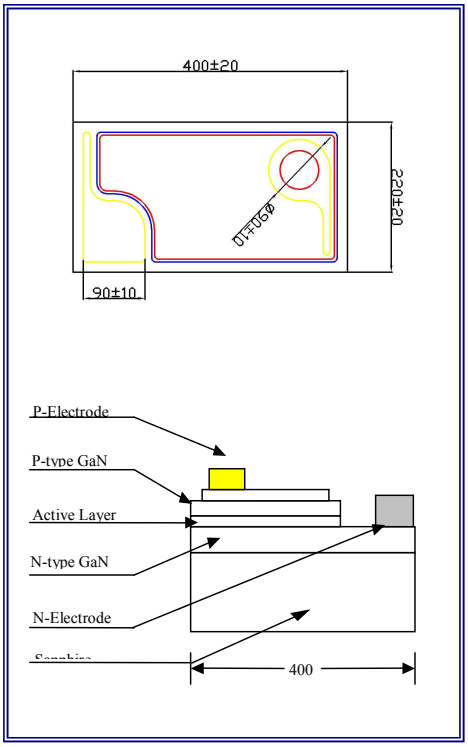
Electro-Optical Characteristics

	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_f	I_f= 20mA	2.8		3.6	V
Reverse Current	I_r	V_r= 8V			1	μA
Dominant Wavelength	λ_d	I_f= 20mA	445		465	nm
Luminous Intensity	I_v	I_f= 20mA	70		320	mcd

Example for Specifications

I_v (mcd) / λ_d (nm)	70≦I_v＜90	90≦I_v＜120	120≦I_v＜160	160≦I_v＜200	200≦I_v＜260	260≦I_v＜320
445≦λ_d＜450	PIFO	PJFO	PKFO	PLFO	PMFO	PNFO
450≦λ_d＜455	PIGO	PJGO	PKGO	PLGO	PMIGO	PNGO
455≦λ_d＜460	PIHO	PJHO	PKHO	PLHO	PMHO	PNHO
460≦λ_d＜465	PIIO	PJIO	PKIO	PLIO	PMIO	PNIO

708-SB 20mA LED Chips



Product Description

The product model of 710-SB chip is designed for the applications of the backlight for the flat panel display, the car optoelectronics, the hand-held devices and the general lighting with the high optical and electrical performance of light-emitting diodes (LEDs) and with the excellent product quality. The product is using InGaN/GaN material grown by the metal-organic chemical vapor deposition (MOCVD) systems on sapphire substrates.

Material: InGaN/GaN/Sapphire

Electrode: P (Anode)—Au

N (Cathode)—Au

Chip Size: 220 um x 400 um（8mil×15 mil）

Thickness : 90 ±10 um

Electro-Optical Characteristics

	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_f	I_f= 20mA			3.4	V
Reverse Current	I_r	V_r=8V			1	μA
Dominant Wavelength	λ_d	I_f= 20mA	447.5		470	nm
Luminous Intensity	I_v	I_f= 20mA		140(@460nm)		mcd

Example for Specifications

I_v (mcd) / λ_d (nm)	50≦I_v＜60	60≦I_v＜70	70≦I_v＜90	90≦I_v＜120	120≦I_v＜160	160≦I_v＜200	200≦I_v＜260	260≦I_v＜320
445≦λ_d＜450	PGFO	PHFO	PIFO					
450≦λ_d＜455			PIGO	PJGO	-	-	-	-
455≦λ_d＜460				PJHO	PKHO	-		
460≦λ_d＜465					PKIO	PLIO		
465≦λ_d＜470	-	-				PLJO	PMJO	PNJO-