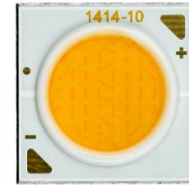


PRODUCT:

13.5 MM CHIP ON BOARD LED

FEATURES:

10W nominal 13.5 mm x 13.5 mm x 1.0 mm LED
 120° emission angle
 95 min Ra



DESCRIPTION

YUJILEDS® high CRI COB provides excellent color rendering in a ceramic form factor that allows for high light output density. Providing 95 CRI (min), this point-source LED can be used in a variety of applications demanding high color quality and performance.



ELECTRICAL-OPTICAL CHARACTERISTICS (T _A = 25 °C)							
PARAMETER	SYMBOL	VALUE			UNIT	TOLERANCE	CONDITION
		MIN.	TYP.	MAX.			
Forward voltage	V _f	32	--	39	V	±0.05	I _f = 300mA
Luminous flux	Φ _{3200K}	800	--	920	lm	--	I _f = 300mA
	Φ _{5600K}	900		1100			
Correlated color temperature	CCT _{3200K}	3050	3200	3350	K	--	I _f = 300mA
	CCT _{5600K}	5300	5600	5900			
Color rendering index	R _a	95	--	--	--	±1	I _f = 300mA
TCS R9 (CRI Red)	R ₉	--	90	--	--	--	I _f = 300mA
Chromaticity coordinates	(X,Y)	--	--	--	--	±0.005	--
Reverse current	I _r	--	--	10	μA	±0.1	V _r = 25V
Viewing angle	2θ _{1/2}	--	120	--	Deg	±5	I _f = 300mA

ORDERING INFORMATION		
PART NUMBER	CCT	CHROMATICITY BINS
YJ-BC-135L-G03-32	3200K ± 150K	32M
YJ-BC-135L-G03-56	5600K ± 300K	56M
YJ-BC-135L-G03-XX	CUSTOM	

VOLTAGE BIN CODES	
Bin	V32
V _F	32-39

ABSOLUTE MAXIMUM RATING (T _A = 25 °C)			
PARAMETER	SYMBOL	LIMIT	UNIT
Power Consumption	P _D	13500	mW
DC Forward Current (pulsed)*	I _{Fp}	900**	mA
DC Forward Current	I _F	450	mA
Reverse Voltage	V _R	60	V
Junction Temperature	T _j	125	°C
Case Temperature***	T _c	85	°C
Operating Temperature	T _{opr}	-45 ~ +85	°C
Storage Temperature	T _{stg}	-45 ~ +85	°C
Soldering Temperature	T _{sol}	260 ± 5	°C
Reflow Cycles Allowed	--	2	--

* Pulse width ≤ 0.1ms, Duty ≤ 1/10.

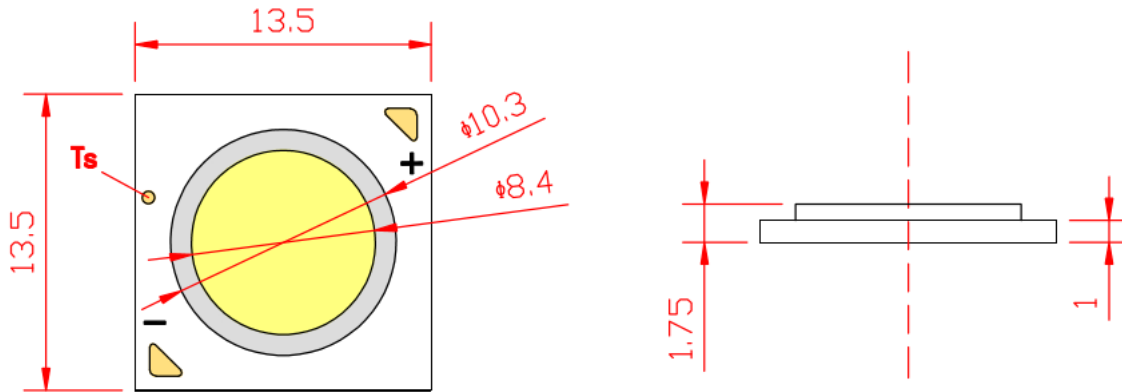
** Theoretical data.

*** See page 3 for case temperature point definition.

CHROMATICITY BINS & COORDINATES									
CCT	BIN	CIE 1931 COORDINATES							
		X0	Y0	X1	Y1	X2	Y2	X3	Y3
5600K	56M	0.3237	0.3401	0.3243	0.3269	0.3303	0.3320	0.3300	0.3460
3200K	32M	0.4207	0.4047	0.4143	0.3887	0.4263	0.3931	0.4334	0.4091

PACKAGE LAYOUT

All dimensions in mm, tolerance unless mentioned is ± 0.1 mm.



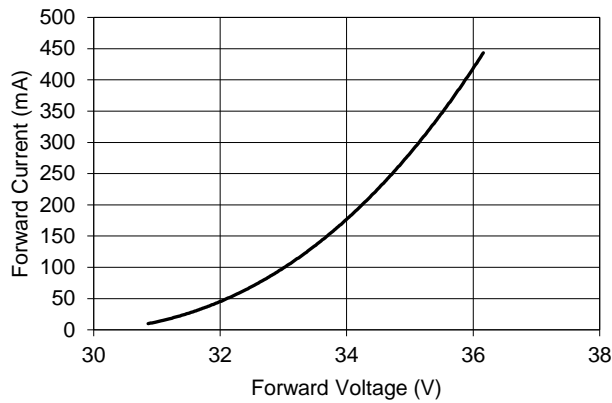
PACKAGE MATERIALS

ITEM	DESCRIPTION
DIE MATERIAL	InGaN
LEAD FRAME MATERIAL	MPCB
ENCAPSULANT RESIN MATERIAL	SILICONE + PHOSPHOR

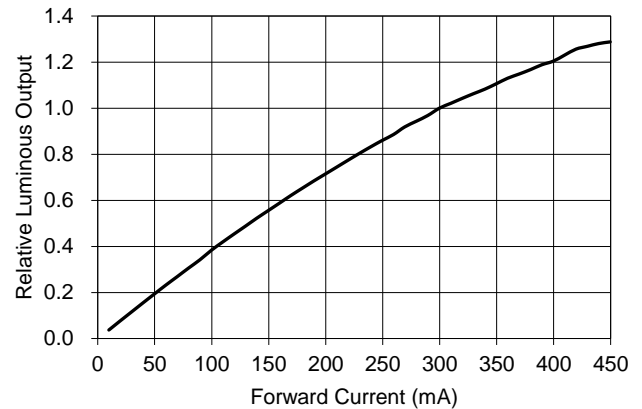
CHARACTERISTIC CURVES

ALL CHARACTERISTIC CURVES ARE FOR REFERENCE ONLY AND NOT GUARANTEED

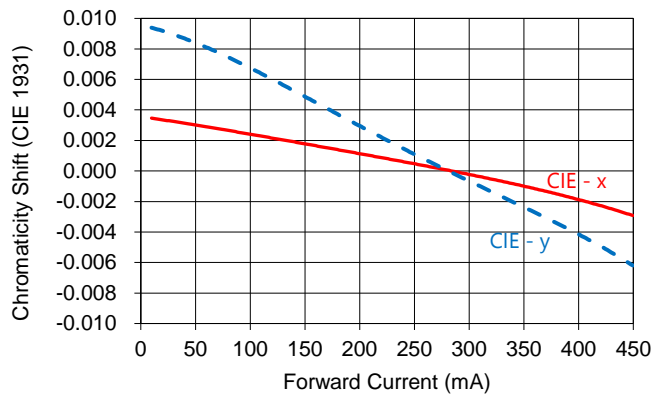
FORWARD CURRENT VS FORWARD VOLTAGE ($T_A = 25^\circ\text{C}$)



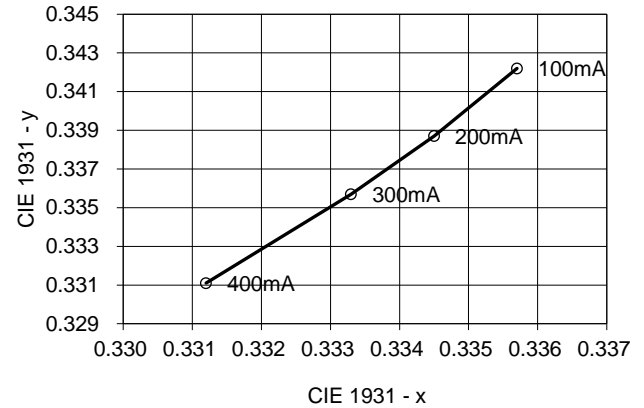
FORWARD CURRENT VS RELATIVE LUMINOUS OUTPUT ($T_A = 25^\circ\text{C}$)



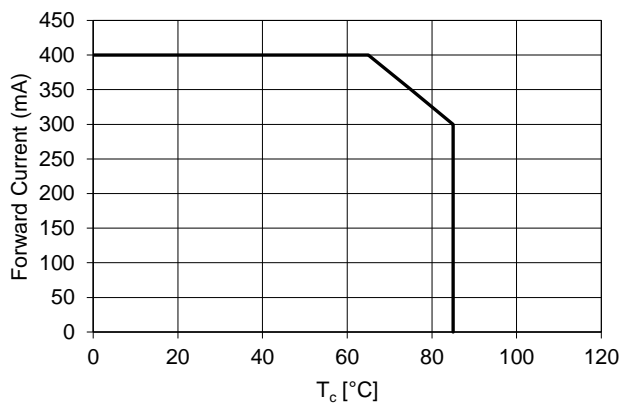
FORWARD CURRENT VS CHROMATICITY SHIFT (5600K, $T_A = 25^\circ\text{C}$)



FORWARD CURRENT VS CHROMATICITY SHIFT (5600K, $T_A = 25^\circ\text{C}$)

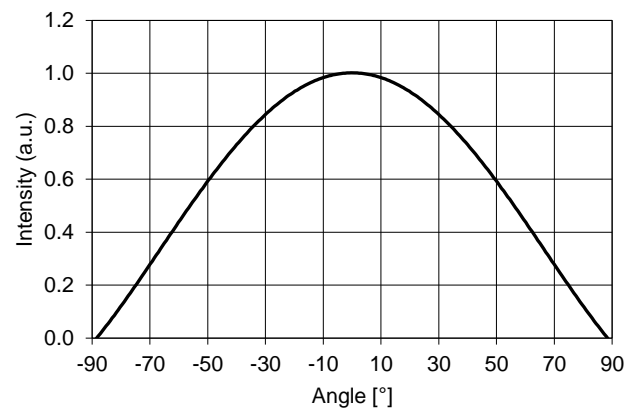


FORWARD CURRENT DERATING BASED ON CASE TEMPERATURE

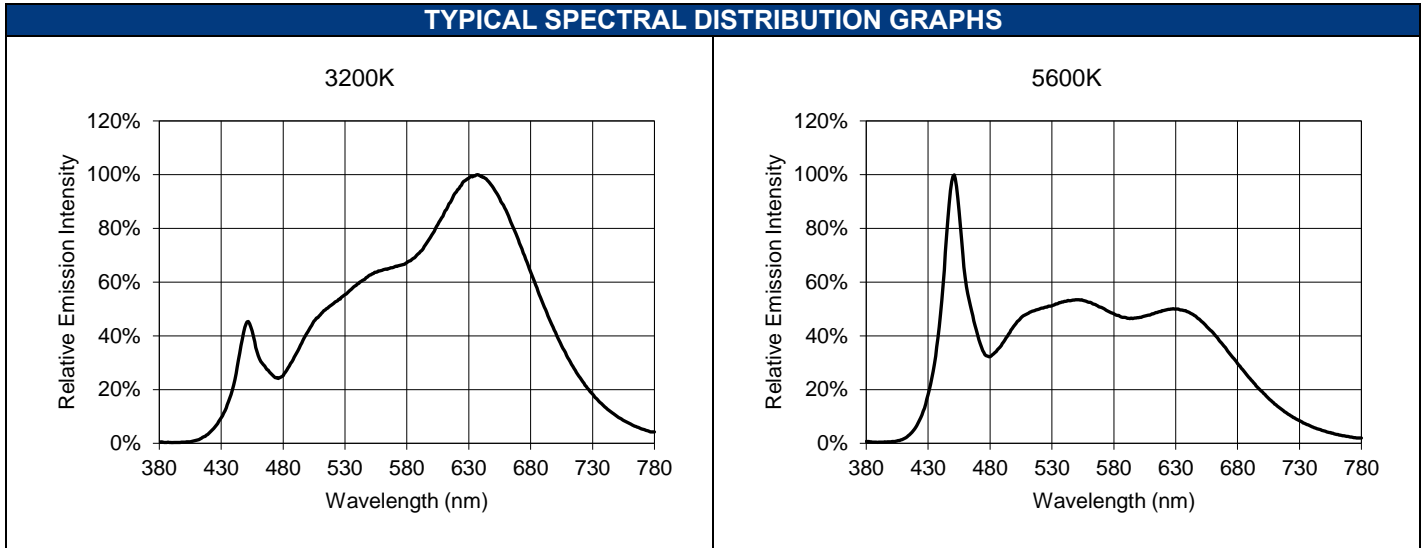


NOTE: DE-RATING CURVES ARE MEANT FOR RECOMMENDATION ONLY AND ARE NOT MEANT TO PROVIDE GUARANTEES OF PRODUCT STABILITY AND LONGEVITY

TYPICAL SPATIAL DISTRIBUTION ($T_A = 25^\circ\text{C}$, $I_F = 300\text{ mA}$)



TYPICAL SPECTRAL DISTRIBUTION GRAPHS



LOT NUMBERING SCHEME

Yuji LED uses two formats for lot numbering purposes:

1) YYYY-MM-XXX-Z

YYYY: 4-digit manufacturing year
 MM: 2-digit manufacturing month
 XXX: 3-digit inventory number (000 – 999)
 Z: internal alphanumeric code

2) YYYYMMXXX

YYYY: 4-digit manufacturing year
 MM: 2-digit manufacturing month
 XXX: 3-digit inventory number (000 – 999)