



YJ-BC-400H-G01

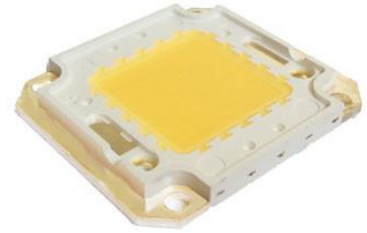
High CRI LED

PRODUCT:

100W CHIP ON BOARD LED

FEATURES:

46 mm x 40 mm x 3.3 mm chip-on-board LED
 120° emission angle
 95 min Ra



DESCRIPTION

Yuji LED's BC400H series high CRI COB provides high CRI, high luminous flux solution. Providing 95 CRI (typical) at 6000 lm, this high-power LED can be used in a variety of applications demanding high color quality and light output.



ELECTRICAL-OPTICAL CHARACTERISTICS (T _A = 25 °C)							
PARAMETER	SYMBOL	VALUE			UNIT	TOLERANCE	CONDITION
		MIN.	TYP.	MAX.			
Forward Voltage	V _f	28	--	31	V	±0.05	I _f = 3000mA
Luminous flux	Φ _{3200K}	5500	--	6500	lm	--	I _f =3000mA
	Φ _{5600K}	5800		6800			
Color temperature	CCT _{3200K}	3050	3200	3350	K	--	I _f =3000mA
	CCT _{5600K}	5300	5600	5900			
Color rendering index	R _a	95	--	--	--	±1	I _f =3000mA
TCS R9 (CRI Red)	R ₉	--	70	--	--	--	I _f =3000mA
Chromaticity coordinates	(X,Y)	--	--	--	--	±0.005	--
Reverse Current	I _r	--	--	100	μA	±0.1	V _r =50V
Viewing angle	2θ1/2	--	120	--	Deg	±5	I _f =3000mA

ORDERING INFORMATION			
PART NUMBER	EMISSION AREA	CCT	CHROMATICITY BINS
YJ-BC-400HS-G01-32	SQUARE	3200K ± 150K	F4-2, F7-2, F5-1, F8-1
YJ-BC-400HS-G01-56		5600K ± 300K	B8-2, B10-2, C3-1, C5-1
YJ-BC-400HS-G01-XX		CUSTOM	--
YJ-BC-400HC-G01-32	CIRCULAR	3200K ± 150K	F4-2, F7-2, F5-1, F8-1
YJ-BC-400HC-G01-56		5600K ± 300K	B8-2, B10-2, C3-1, C5-1
YJ-BC-400HC-G01-XX		CUSTOM	--



VOLTAGE BIN CODES	
Bin	V28
V _F	28-31

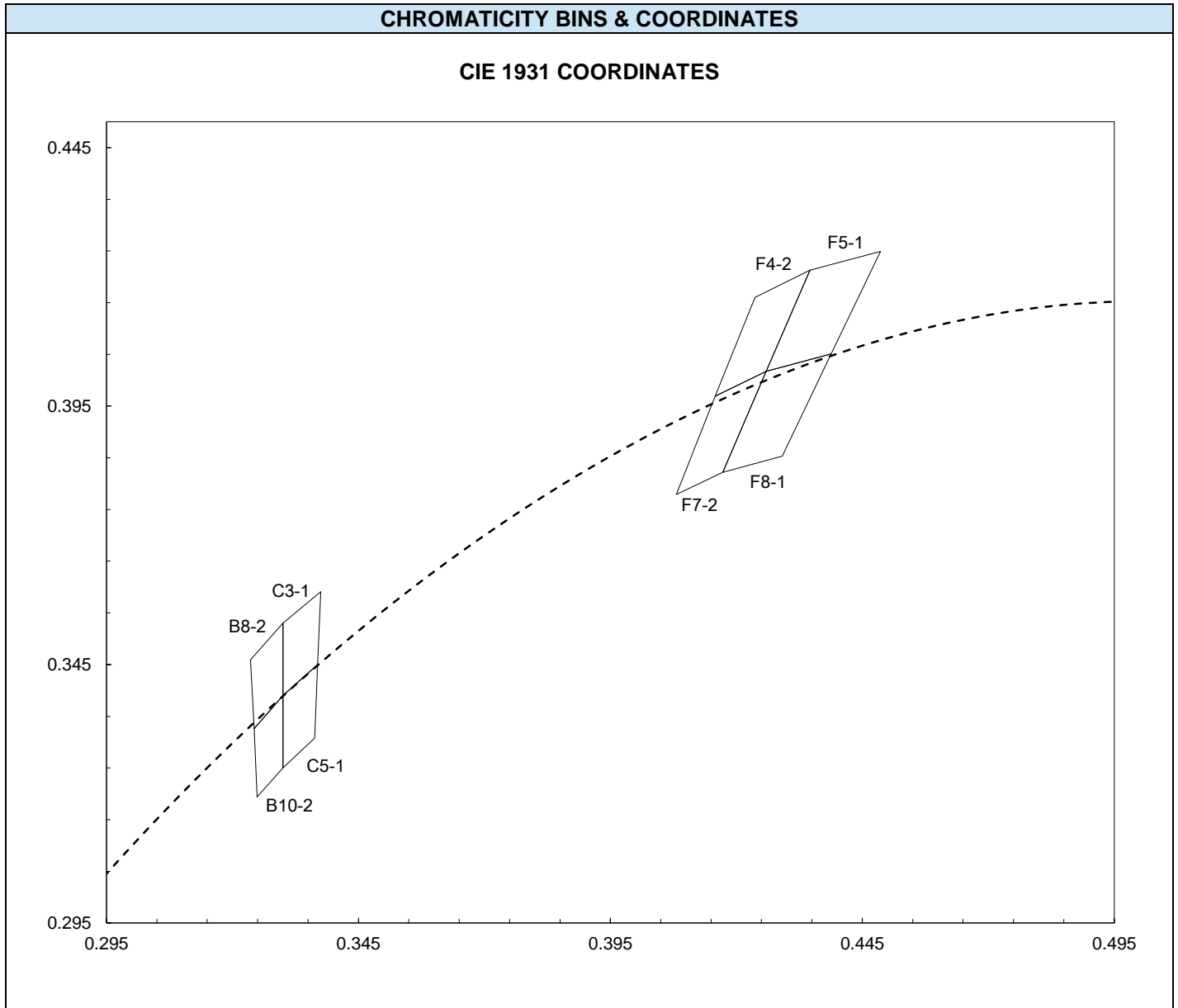
ABSOLUTE MAXIMUM RATING (T _C = 25 °C)			
PARAMETER	SYMBOL	LIMIT	UNIT
Power Consumption	P _D	350	W
DC Forward Current (pulsed)*	I _{Fp}	20000**	mA
DC Forward Current	I _F	10000	mA
Reverse Voltage	V _R	50	V
Junction Temperature	T _j	125	°C
Case Temperature***	T _C	65	°C
Operating Temperature	T _{opr}	-30 ~ +80	°C
Storage Temperature	T _{stg}	-30 ~ +80	°C
Soldering Temperature	T _{sol}	260 ± 5	°C
Reflow Cycles Allowed	--	2	--

* Pulse width ≤ 0.1ms, Duty ≤ 1/10.

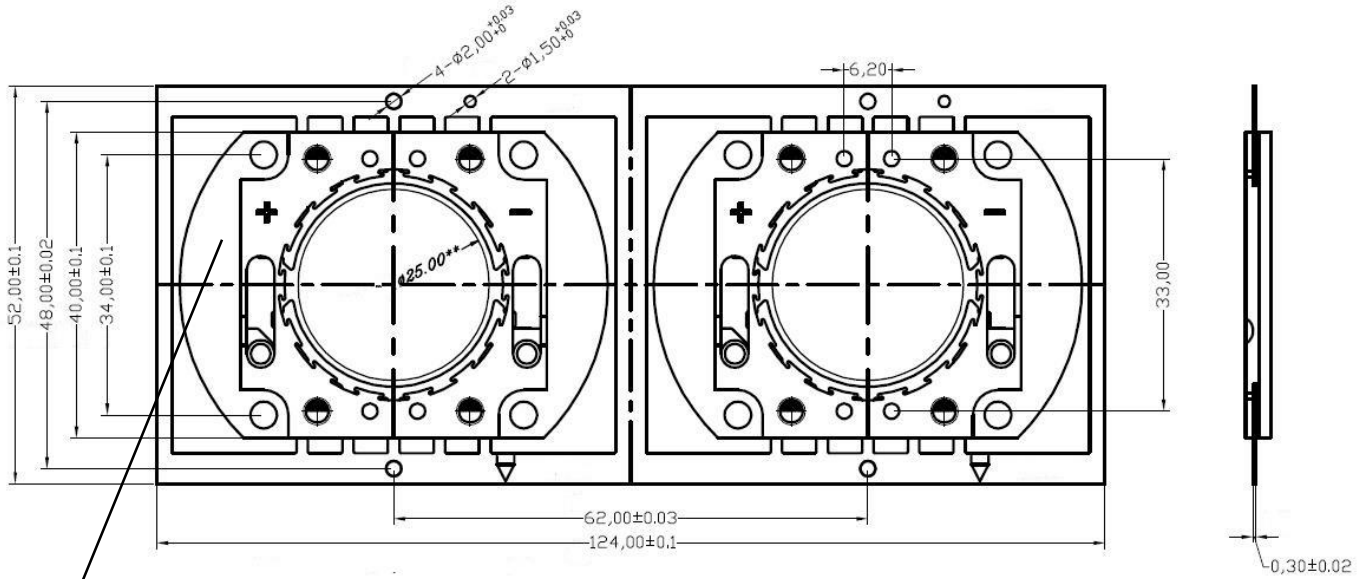
** Theoretical data.

*** See page 4 for solder point definition.

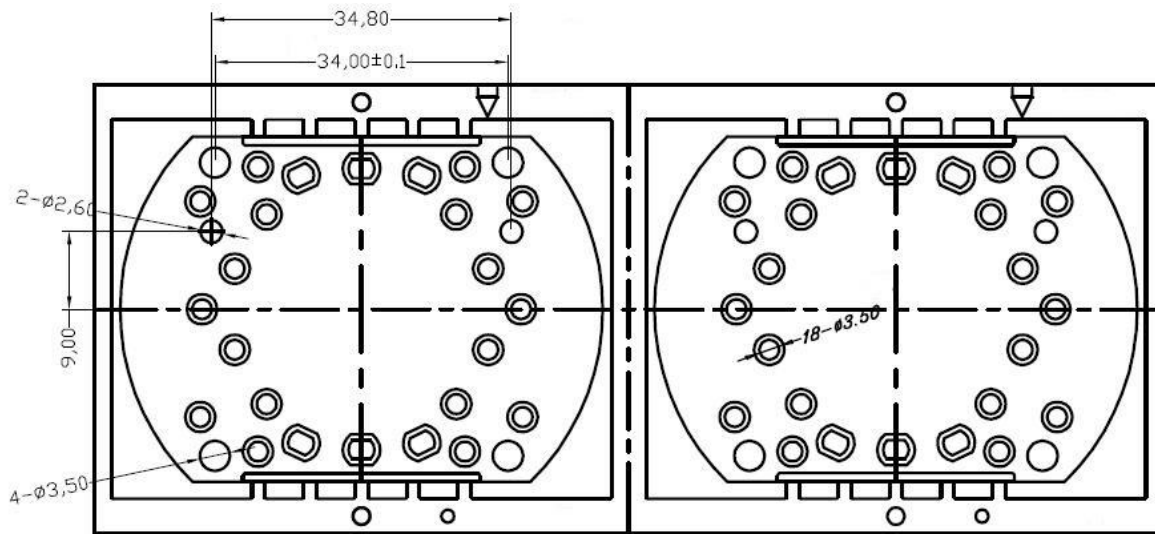
CHROMATICITY BINS & COORDINATES									
CCT	BIN	CIE 1931 COORDINATES							
		X0	Y0	X1	Y1	X2	Y2	X3	Y3
5600K	B8-2	0.3236	0.3459	0.3243	0.3326	0.3300	0.3390	0.3300	0.3530
	B10-2	0.3243	0.3326	0.3249	0.3194	0.3300	0.3250	0.3300	0.3390
	C3-1	0.3300	0.3530	0.3300	0.3390	0.3369	0.3450	0.3375	0.3591
	C5-1	0.3300	0.3390	0.3300	0.3250	0.3363	0.3308	0.3369	0.3450
3200K	F4-2	0.4237	0.4160	0.4158	0.3969	0.4259	0.4017	0.4346	0.4213
	F7-2	0.4158	0.3969	0.4081	0.3779	0.4173	0.3822	0.4259	0.4017
	F5-1	0.4346	0.4213	0.4259	0.4017	0.4388	0.4051	0.4486	0.4249
	F8-1	0.4259	0.4017	0.4173	0.3822	0.4291	0.3853	0.4388	0.4051

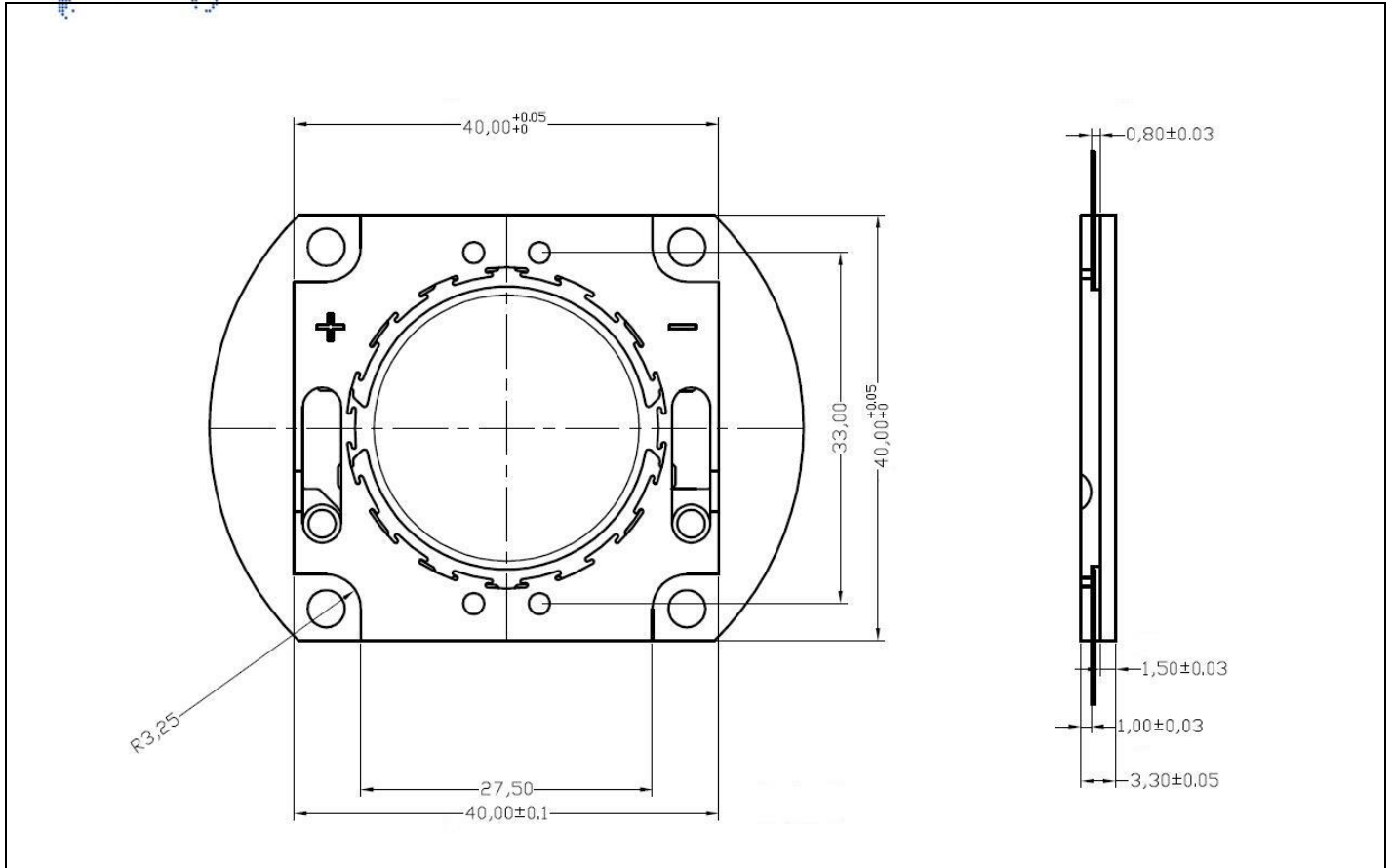


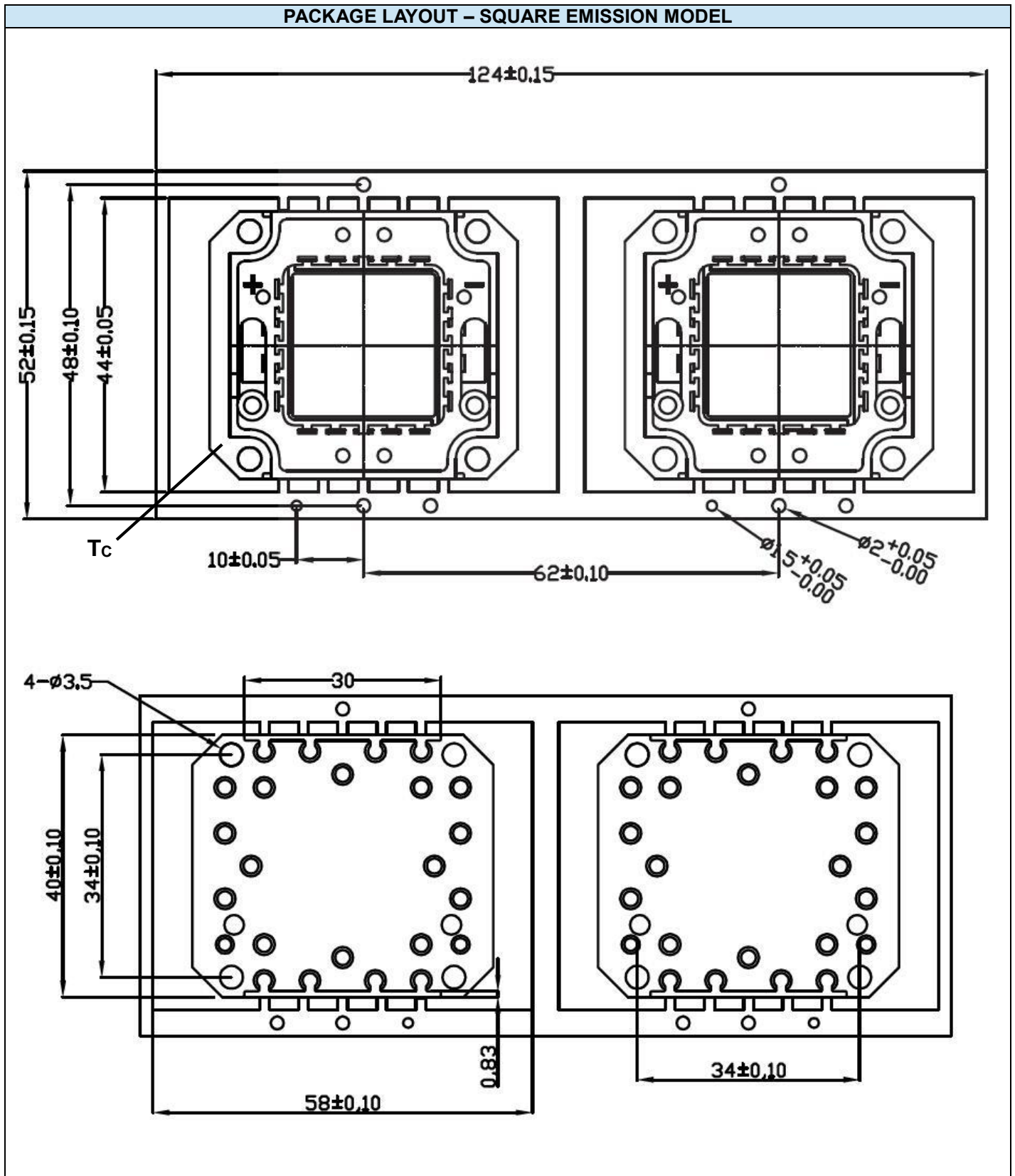
PACKAGE LAYOUT – CIRCULAR EMISSION MODEL

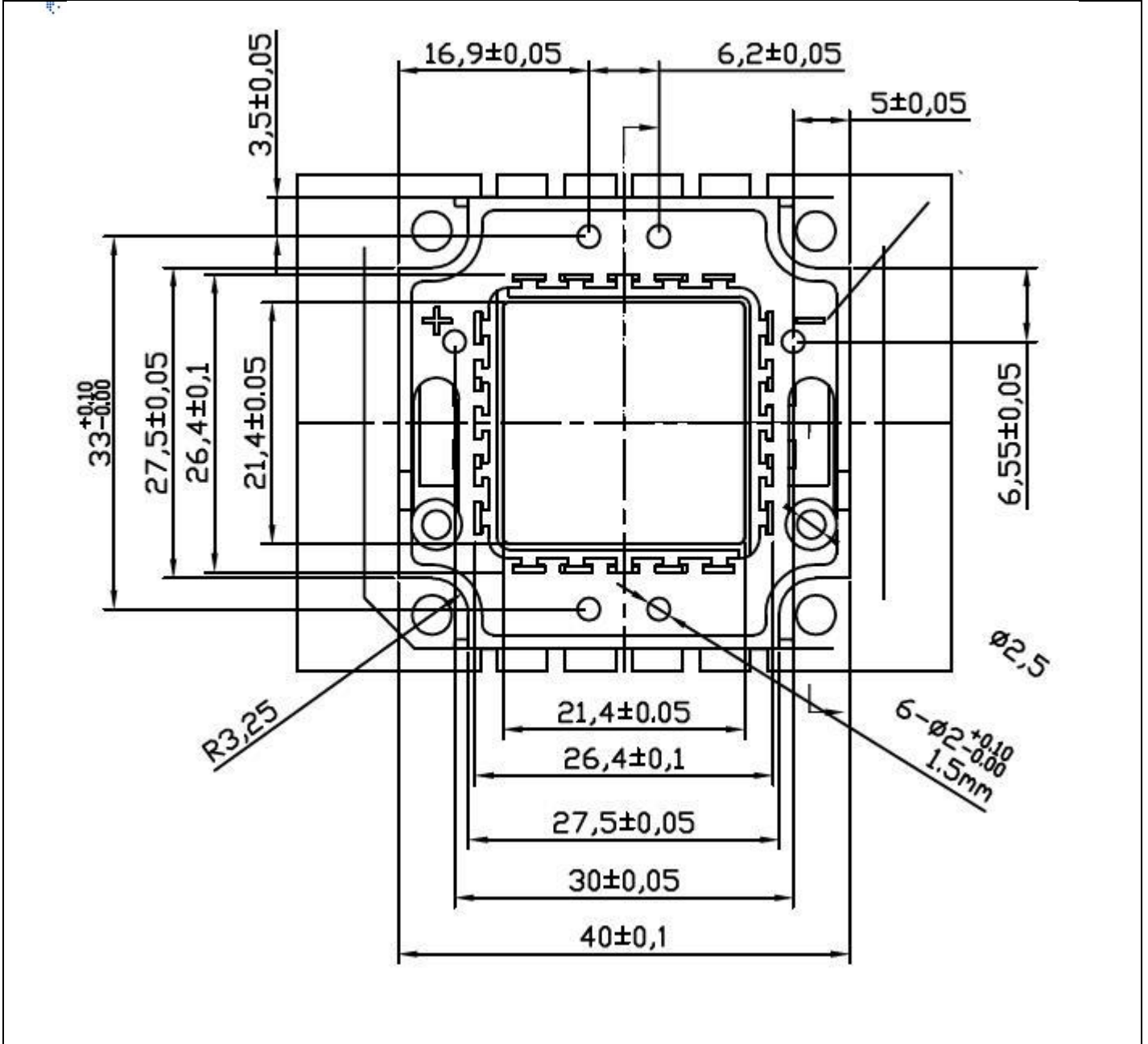


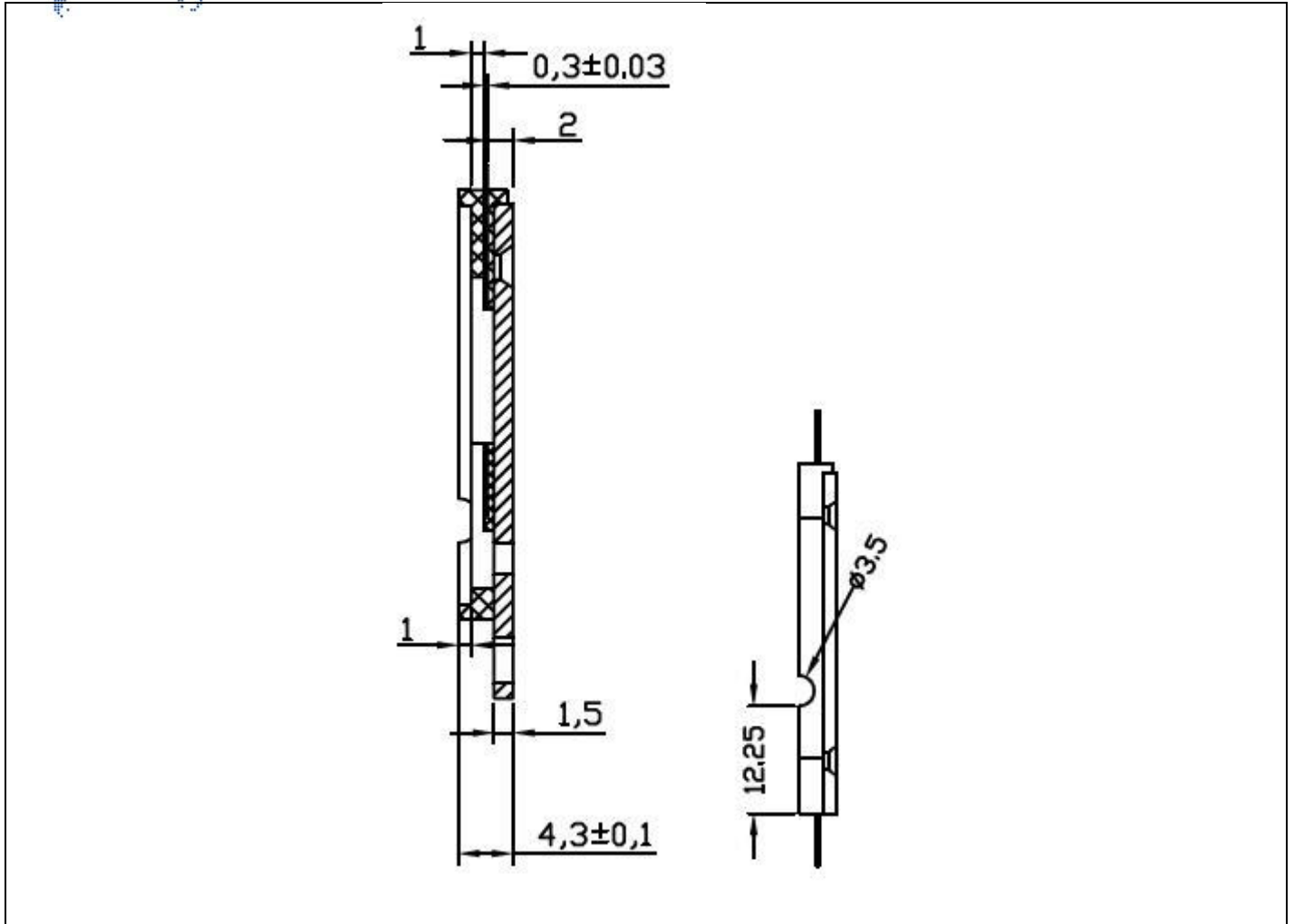
Tc









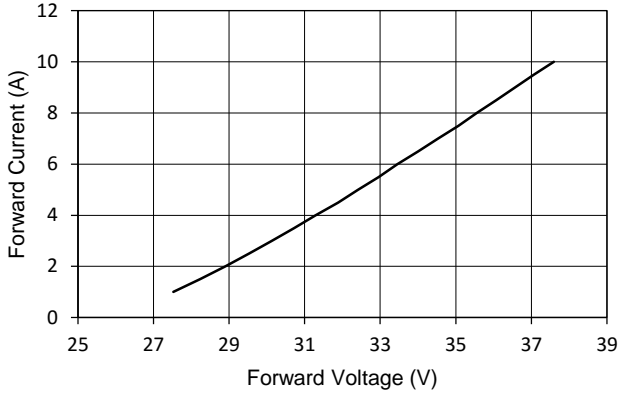


PACKAGE MATERIALS	
ITEM	DESCRIPTION
DIE MATERIAL	InGaN
LEAD FRAME MATERIAL	COPPER ALLOY
ENCAPSULANT RESIN MATERIAL	SILICONE
ELECTRODES MATERIAL	COPPER + SILVER ALLOY

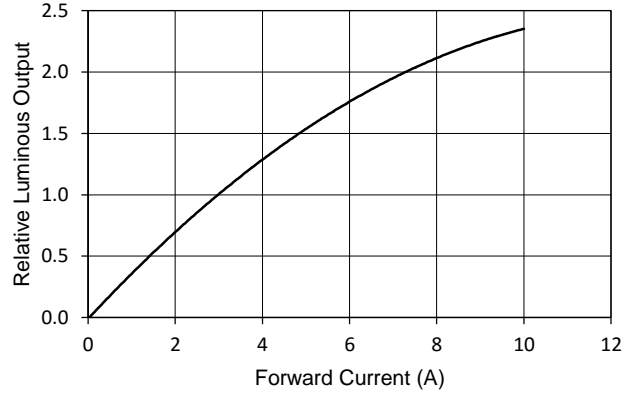
CHARACTERISTIC CURVES

ALL CHARACTERISTIC CURVES ARE FOR REFERENCE ONLY AND NOT GUARANTEED

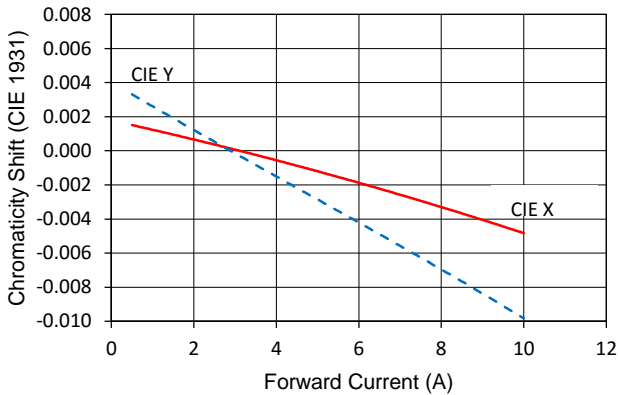
FORWARD CURRENT VS FORWARD VOLTAGE ($T_A=25^\circ\text{C}$)



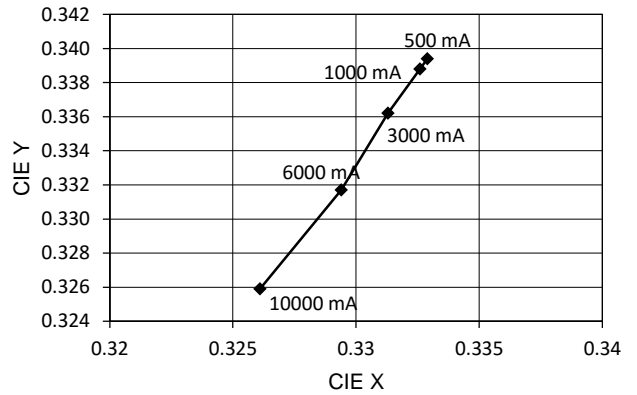
FORWARD CURRENT VS RELATIVE LUMINOUS OUTPUT ($T_A=25^\circ\text{C}$)



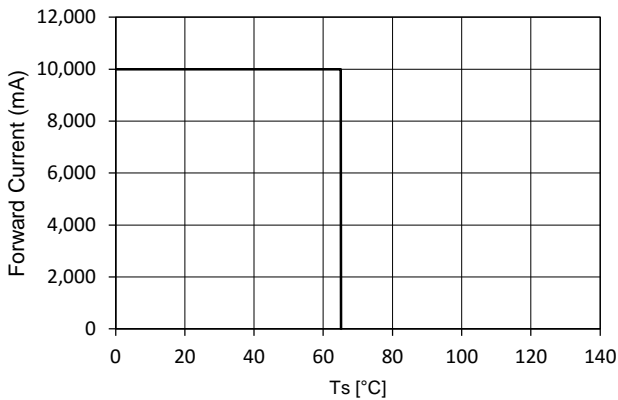
FORWARD CURRENT VS CHROMATICITY SHIFT (5600K, $T_A=25^\circ\text{C}$)



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

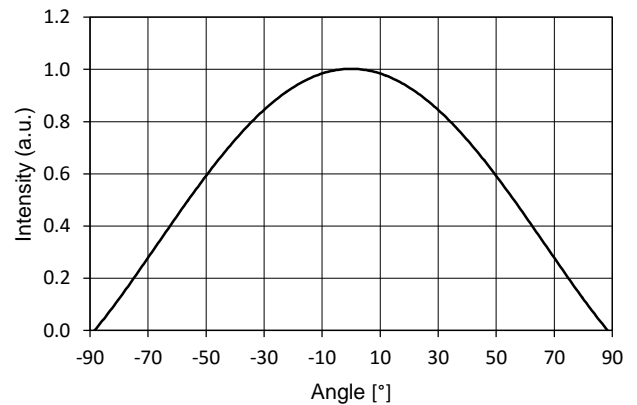


FORWARD CURRENT DERATING BASED ON SOLDER POINT

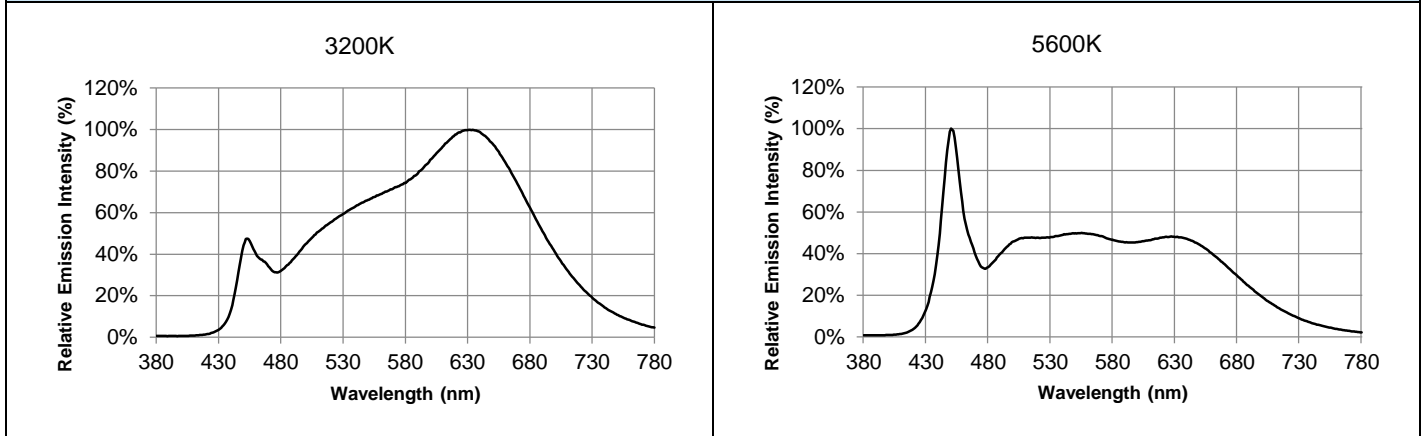


NOTE: DE-RATING CURVES ARE MEANT FOR RECOMMENDATION ONLY AND ARE NOT MEANT TO PROVIDE GUARANTEES OF PRODUCT STABILITY AND LONGEVITY

TYPICAL SPATIAL DISTRIBUTION ($T_A=25^\circ\text{C}$, $I_f = 3000\text{ mA}$)



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)