

Absolute Maximum Ratings

Item	Symbol	Absolute Maximum Rating	Unit
Forward current	If	2880	mA
Reverse Current	Ir	1	mA
Peak Power	-	146.9	W
Operating Temperature	Topr	-30~85	°C
Storage Temperature	Tstg	-40~100	°C
Hand soldering condition	Tsld	3.5sec@350°C	sec
Case Temperature	Tc	100	°C
LED Junction Temperature	Tj	125	°C
Temperature of central silicon Surface	Ts	125@IRDA Test	°C

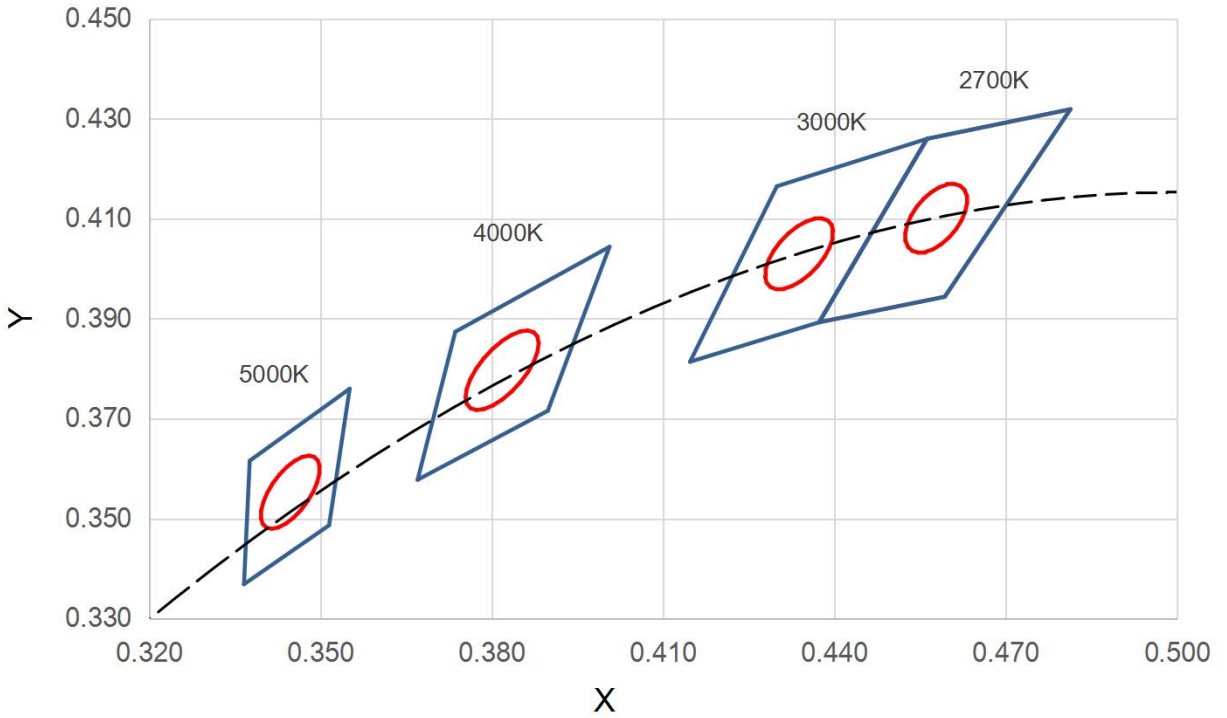
Characteristics (Tc=25°C)

Part Number	Nominal CCT	CRI(Ra)		Luminous flux (lm)		Forward Current (mA)	Voltage (V)			Thermal Resistance Rj-c (°C/W)
		Min.	Typ.	Min.	Typ.		Min.	Typ.	Max.	
MC-38AA-270-H-1716-B	2700K	80		10740	11932	1920	47.6		57.8	0.20
MC-38AA-300-H-1716-B	3000K	80		11300	12560					
MC-38AA-400-H-1716-B	4000K	80		11640	12937					
MC-38AA-500-H-1716-B	5000K	80		11980	13314					
MC-38AA-570-H-1716-B	5700K	80		12040	13376					

Notes:

- Luminous flux is measured with an accuracy of +/- 5 %.
- CRI is measured with an accuracy of +/- 1
- Some color and CRI bins may have limited availability, please contact us before ordering.
- All measurements were made under the standardized environment of Shineon.

Chromaticity Bins(ANSI)

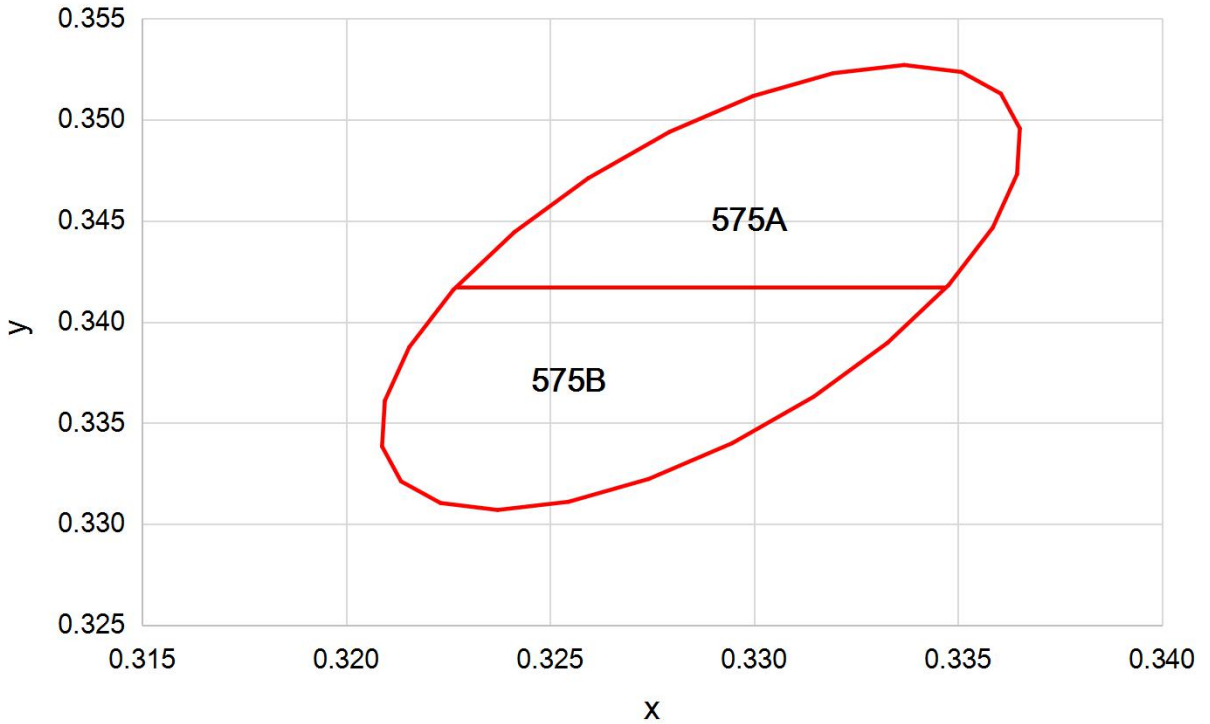


BIN CODE	CCT	Center		Oval parameter		
		x	y	a	b	Theta°
273	2700K (3-step)	0.4578	0.4101	0.00774	0.00411	57.28
303	3000K (3-step)	0.4338	0.403	0.00834	0.00408	53.17
403	4000K (3-step)	0.3818	0.3797	0.0094	0.004	54.00
503	5000K (3-step)	0.3447	0.3553	0.00822	0.00354	59.62

Notes:

1. 5% tolerance for luminous intensity may be caused by measurement inaccuracy.
2. Measurement Uncertainty of the Forward Voltage : +/-3%
3. Chromaticity coordinate bins are measured with an accuracy of +/-0.005.

Chromaticity Bins(ANSI)

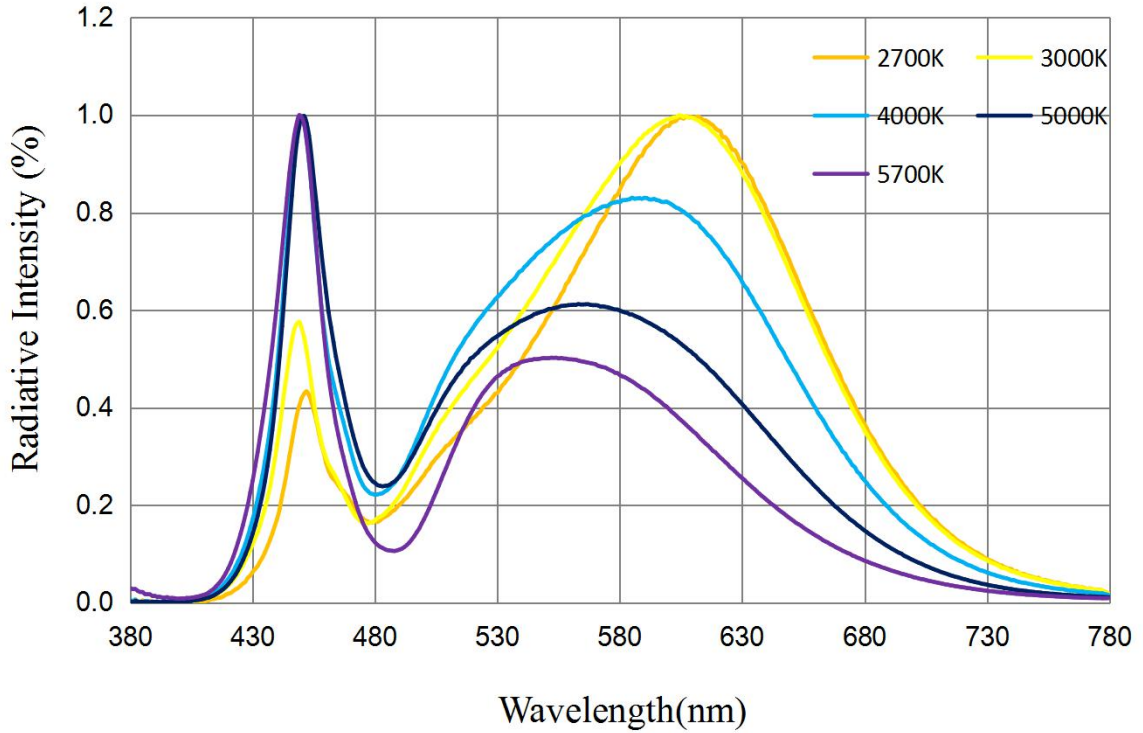


BIN CODE	CCT	Color Coordinates(x,y)				
		Center		Oval parameter		
575A	5700K(5-step)	x	y	a	b	Theta°
		0.3287	0.3417	0.01243	0.00533	59.09
Cuttingline			x	y		
		Point1	0.3227	0.3417		
		Point2	0.3347	0.3417		
575B						

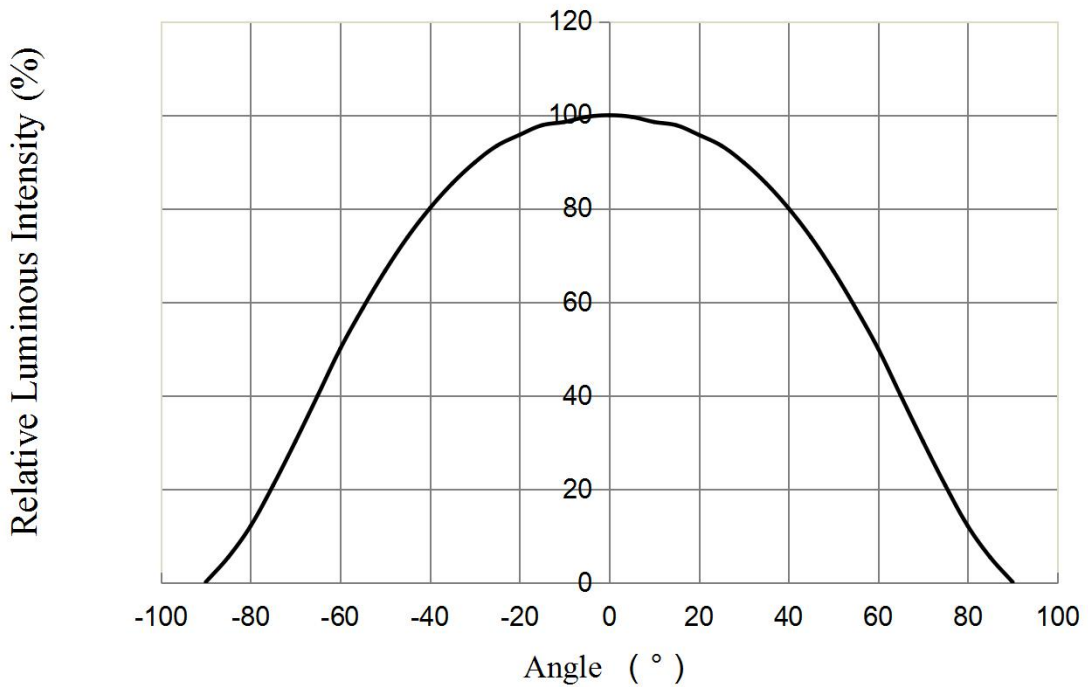
Notes:

1. 5% tolerance for luminous intensity may be caused by measurement inaccuracy.
2. Measurement Uncertainty of the Forward Voltage : +/-3%
3. Chromaticity coordinate bins are measured with an accuracy of +/-0.005.

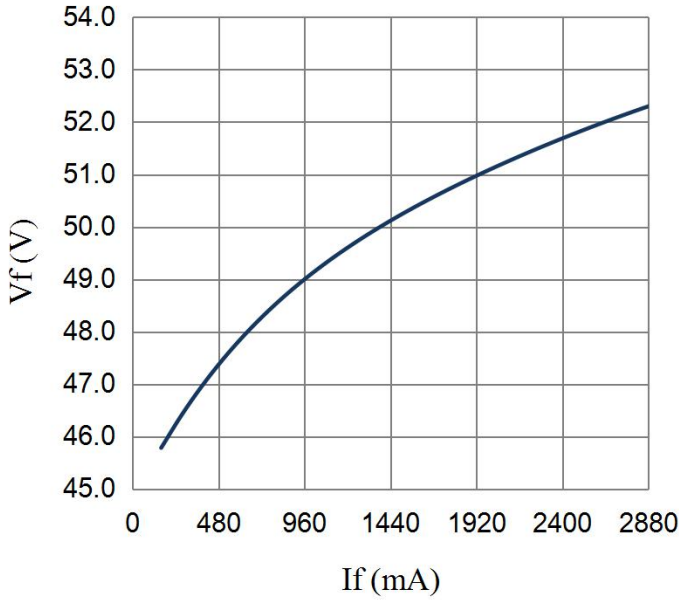
Typical Relative Spectral Power Distribution (Tc=25°C, If=1920mA)



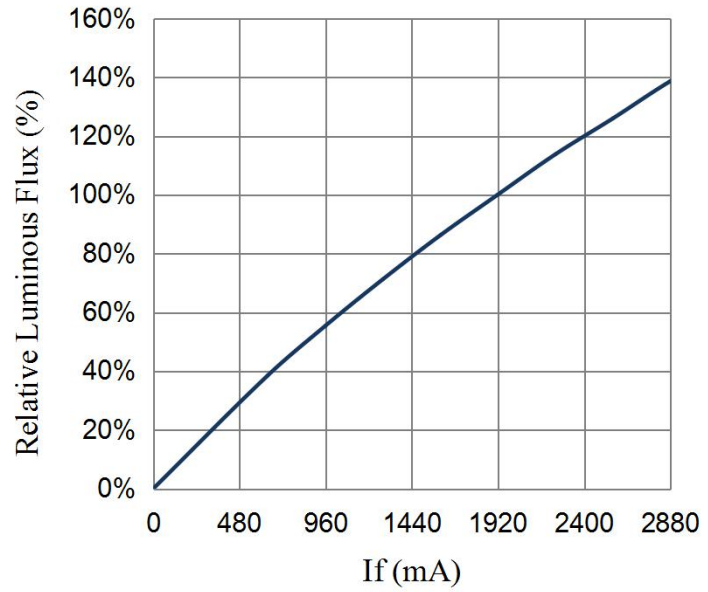
Typical Spatial Distribution (Tc=25°C, If=1920mA)



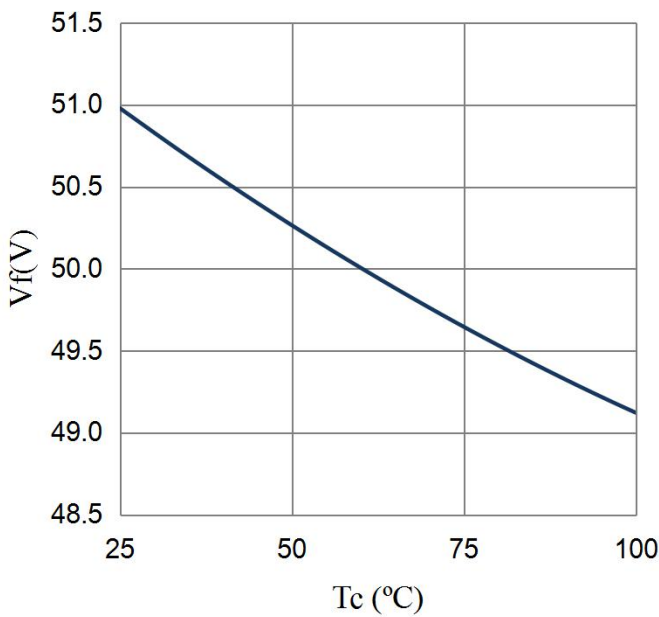
Forward Current vs. Forward Voltage
($T_c=25^\circ\text{C}$)



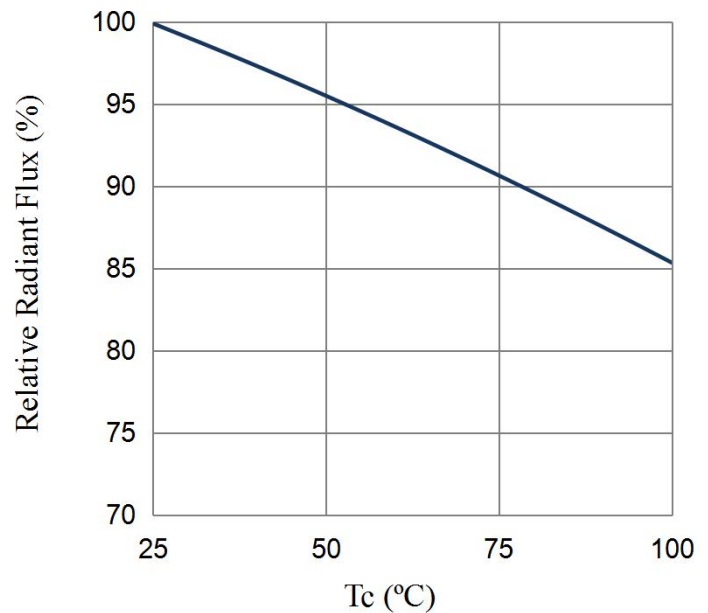
Forward Current vs. Relative Luminous Flux
($T_c=25^\circ\text{C}$)



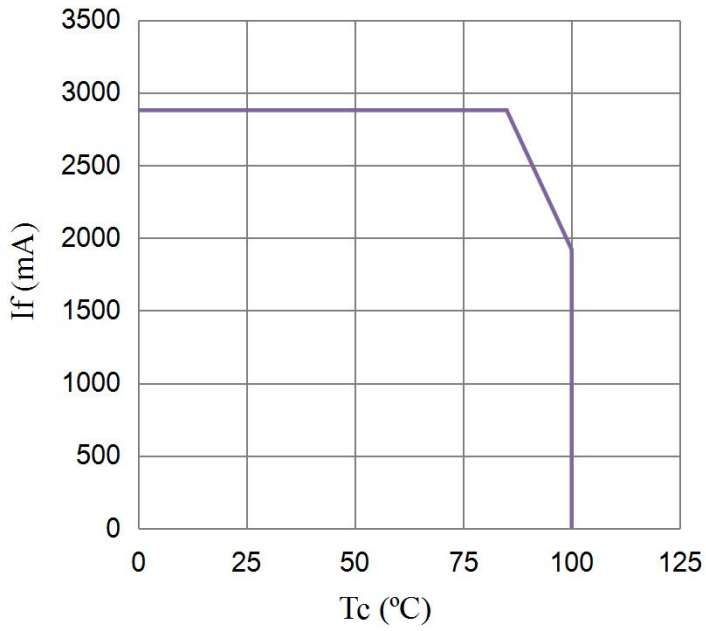
Case Temperature vs. Forward Voltage
($I_f=1920\text{mA}$)



Case Temperature vs. Relative Radiant Flux
($I_f=1920\text{mA}$)



Case Temperature vs. Allowable Forward Current



Reliability

(1)Details of the tests

No.	Test Item	Reference Standard	Test Condition	Test Duration	Defective	Sample Size
1	High Temperature Operating Life	JESD22-A108	Tc=85°C, Typical IF	1000hr	0	10
2	Low Temperature Operating Life	JESD22-A108	Ta=-40°C, Typical IF	1000hr	0	10
3	Temperature Shock	MIL-STD-202G Method 107G	-40°C ↔ 100°C	100cycles	0	10
4	High Temperature Storage	JESD22-A103	100°C	1000hr	0	10
5	Temperature Humidity Storage	JEITA ED-4701 100 103	60°C, 90%RH	1000hr	0	10

(2)Judgment Criteria of Failure for Reliability Test

(Ta=25°C)

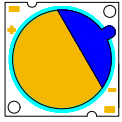
NO.	Measuring Item	Symbol	Measuring Condition	Judgment Criteria for Failure
1	Forward Voltage	Vf	IF=1920mA	>U X 1.1
2	Total Luminous Flux	∅v	IF=1920mA	<S X 0.85

Notes:

U defines the upper limit of the specified characteristics. S defines the initial value.

PACKING

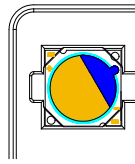
COB 38AA



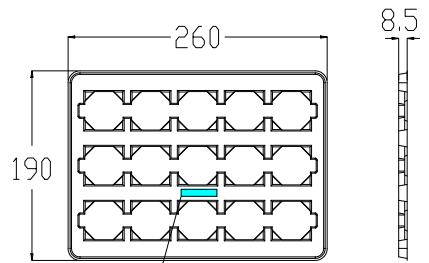
Protective film
on LES



COB 38AA

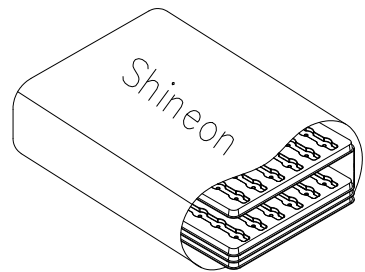


15 pcs of device
per tray



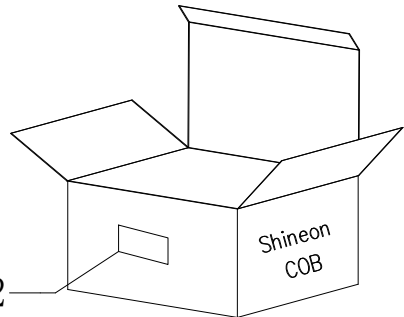
Label 1

6 trays in an anti-static bag, with
one empty tray on top.
The set of 6 trays is packed up
with a vaccumed bag.



7 bags per box

Notes:
Remove the protective film
before use in the first time.



Label 2

525 pcs of device per box