MF-12SA-2032-SS-A1C2-K7 COB Series Datasheet

Applications

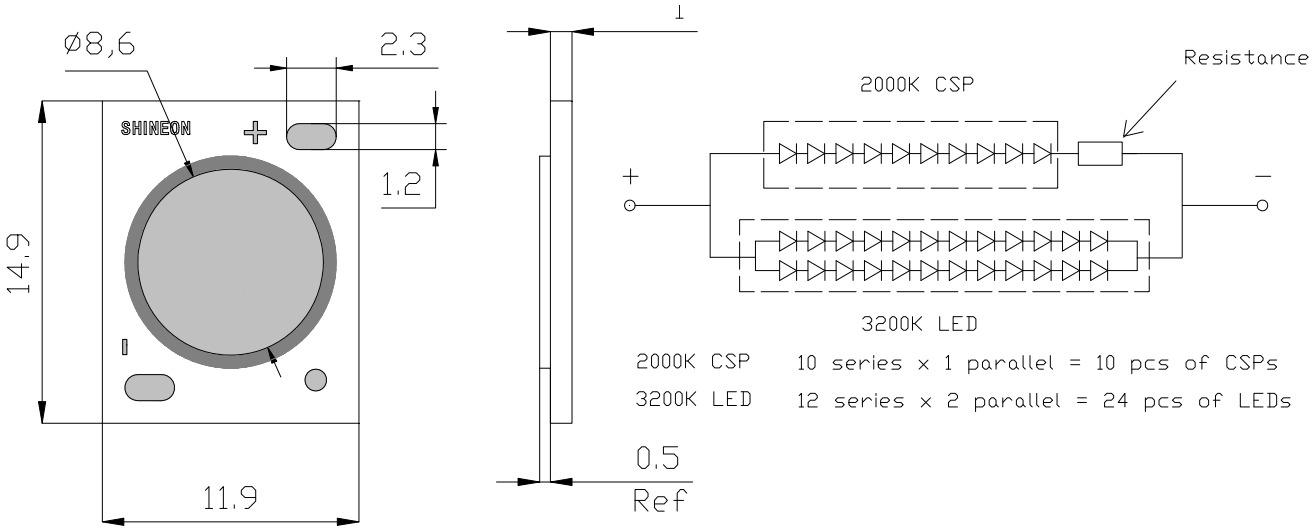
- Spot lighting
- Down lighting

Naming Conventions

MF-12SA - 2032 – SS – A1C2 – K7
(1) (2) (3) (4)

(1) COB Series
(2) CCT Range
(3) CRI Range
(4) Chip Array

Package Dimensions



1. All dimensions in millimeters.
2. Tolerance is +/-0.3mm unless otherwise noted.
3. The information in this document is subject to change without notice.

Absolute Maximum Ratings

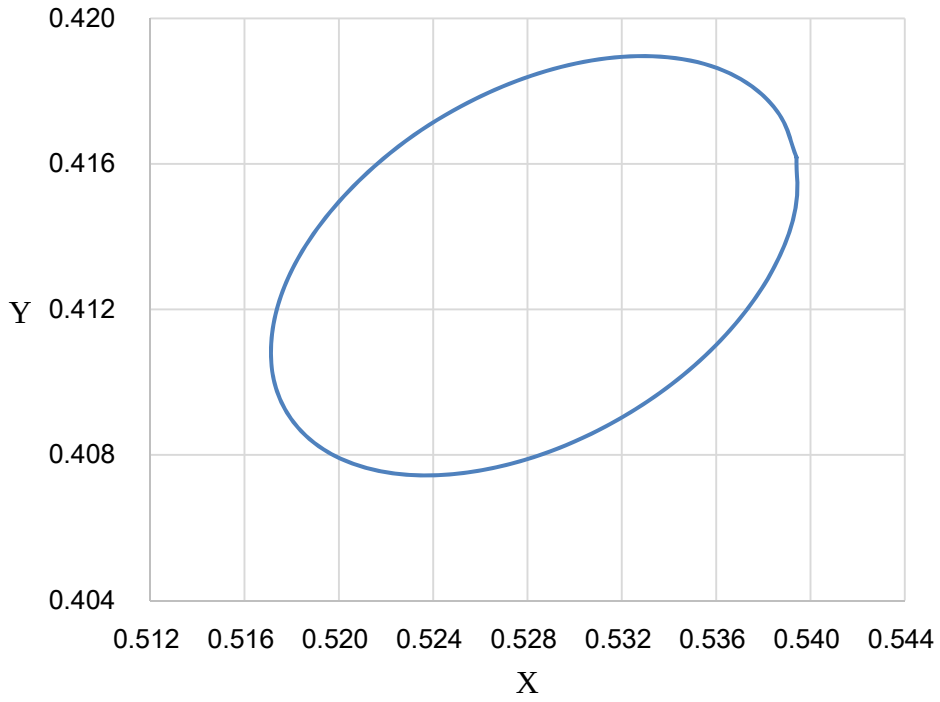
Item	Symbol	Absolute Maximum Rating	Unit
Forward current	If	420	mA
Peak Power	P	16.9	W
Reverse Voltage	vr	-15	V
Operating Temperature	Topr	-30~+100	℃
Storage Temperature	Tstg	-40~100	℃
Hand soldering condition	Tsld	3.5sec@350℃	sec
Case Temperature	Tc	100	℃
LED Junction Temperature	Tj	125	℃
Temperature of central silicon Surface	Ts	125@IRDA Test	℃

Characteristics (Tc=25℃)

CCT	Item	Symbol	Condition	MIN.	TYP.	MAX.	Unit
2000K	Forward Voltage	VF	I =50mA	28	(32.0)	36	V
	Luminous Flux	Φ		110	-	-	lm
	Chromaticity Coordinates	x		-	(0.5283)	-	-
		y		-	(0.4132)	-	-
	General Color Rendering Index	Ra		90	-	-	-
3200K	Forward Voltage	VF	I =350mA	31	(35)	39	V
	Luminous Flux	Φ		1070	-	-	lm
	Chromaticity Coordinates	x		-	(0.4239)	-	-
		y		-	(0.3996)	-	-
	General Color Rendering Index	Ra		90	-	-	-

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

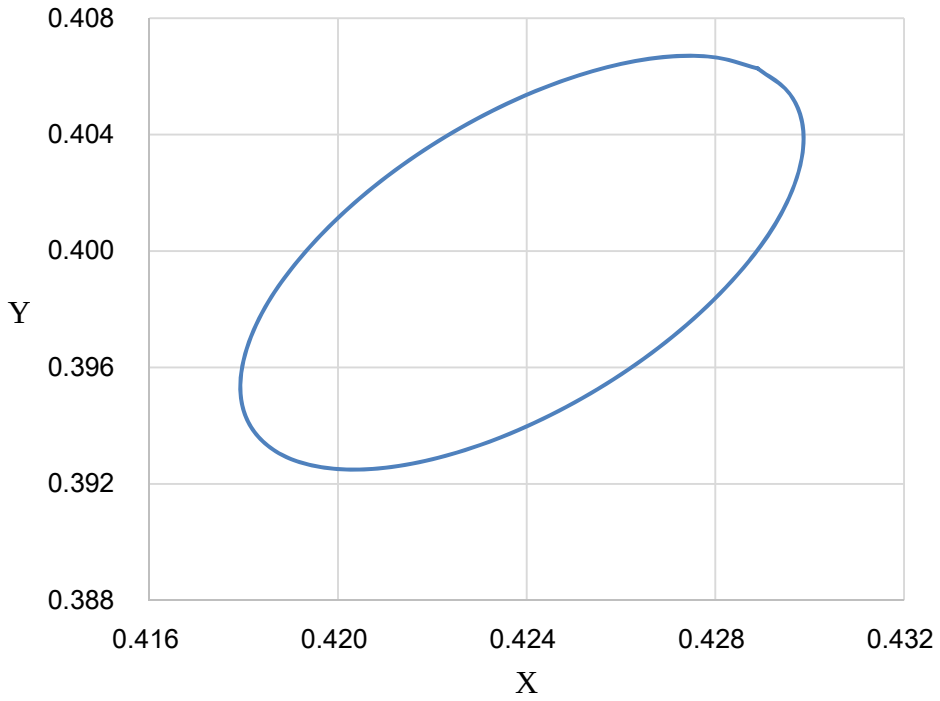
Chromaticity Characteristics (Tc=25℃)



Bin Code	Nominal CCT	Center Point		Oval parameter		
		x	y	a	b	Theta°
203	2000K(3-step)	0.5283	0.4132	0.0115	0.00511	15

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.

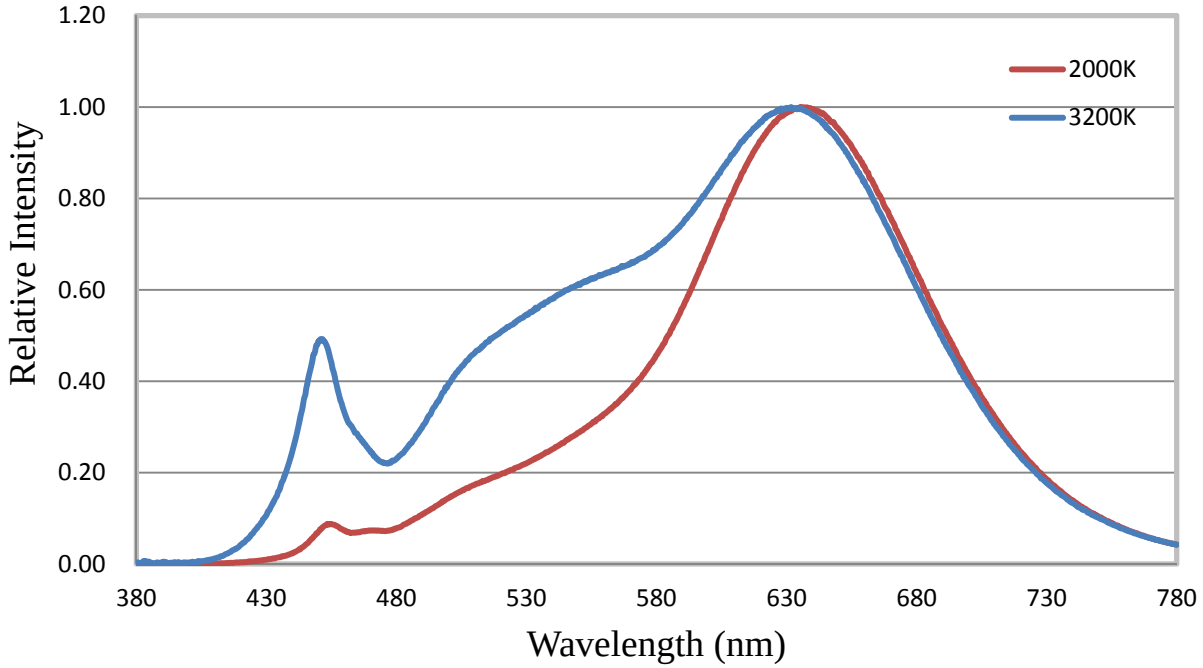
Chromaticity Characteristics (Tc=25℃)



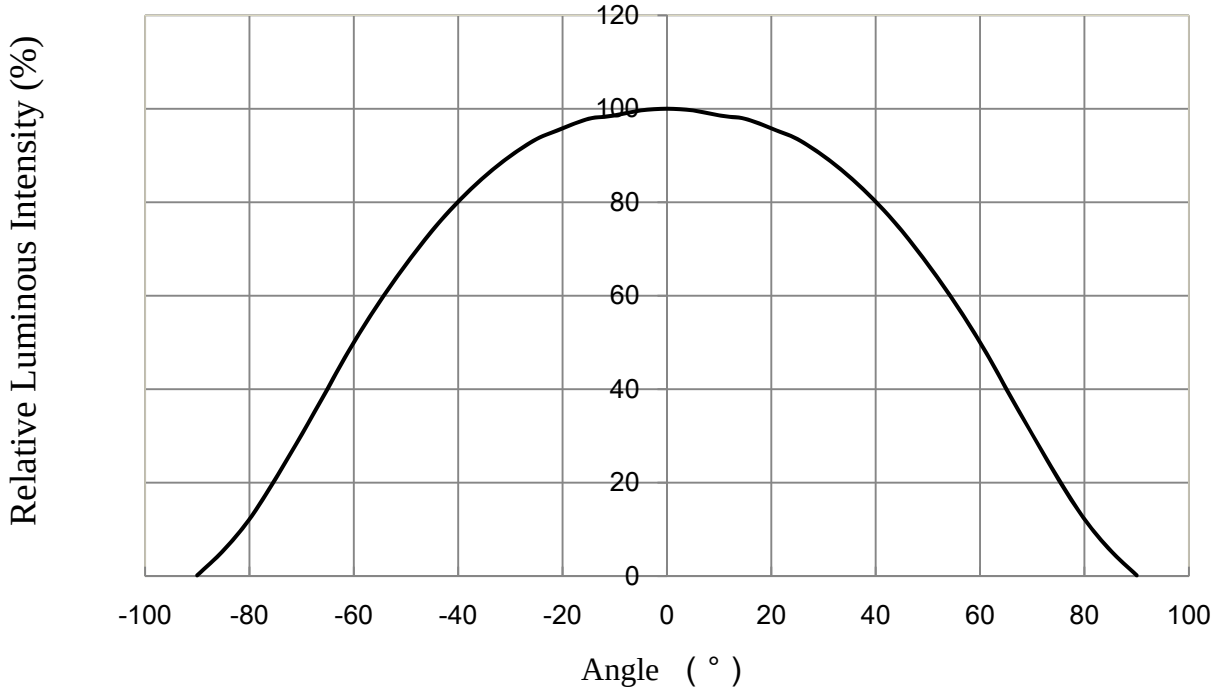
Bin Code	Nominal CCT	Center Point		Oval parameter		
		x	y	a	b	Theta°
323	3200K (3-step)	0.4239	0.3996	0.00834	0.00408	53.17

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℃)



Typical Spatial Distribution (Tc=25℃)



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℃, Typical IF	1000hr	0	10
2	Low Temperature Operating Life	JESD22-A108	Ta=-40℃, Typical IF	1000hr	0	10
3	Temperature Shock	MIL-STD-202G Method 107G	-40℃ ~ 100℃	100cycles	0	10
4	High Temperature Storage	JESD22-A103	100℃	1000hr	0	10
5	Temperature Humidity Storage	JEITA ED-4701 100 103	60℃, 90%RH	1000hr	0	10

(2)Judgment Criteria of Failure for Reliability Test

(Ta=25℃)

NO.	Measuring Item	Symbol	Judgment Criteria for Failure
1	Forward Voltage	Vf	>U X 1.1
2	Total Luminous Flux	Øv	<S X 0.85

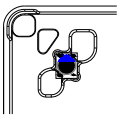
Notes:
U defines the upper limit of the specified characteristics. S defines the initial value.

PACKING

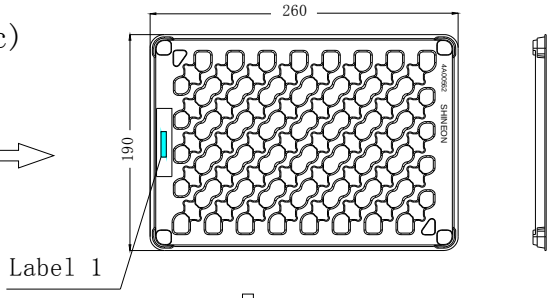
COB 12SA(Ceramic)

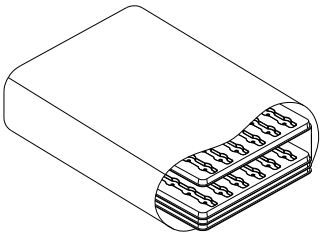
Protective film on LES

COB 12SA(Ceramic)



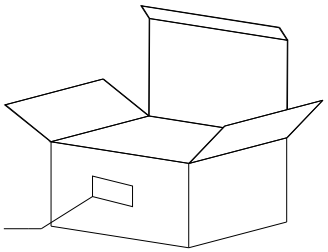
40 pcs of device per tray





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



1400 pcs of device per box

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