PRODUCT DATASHEET
LVCOB VAL-085-1213

COB LED PERFORMANCE 85W 1213

AREAS OF APPLICATION

- Tracking Light
- Spot Light
- Par Light
- Bulb Light
- Down Light

PRODUCT BENEFITS

- High color quality, high-flux, high-efficacy
- Low thermal resistance
- Easy for assemble
- Long lifetime
- RoHS compliant
- Available white chromaticity bins form ANSI

TECHNICAL DATA

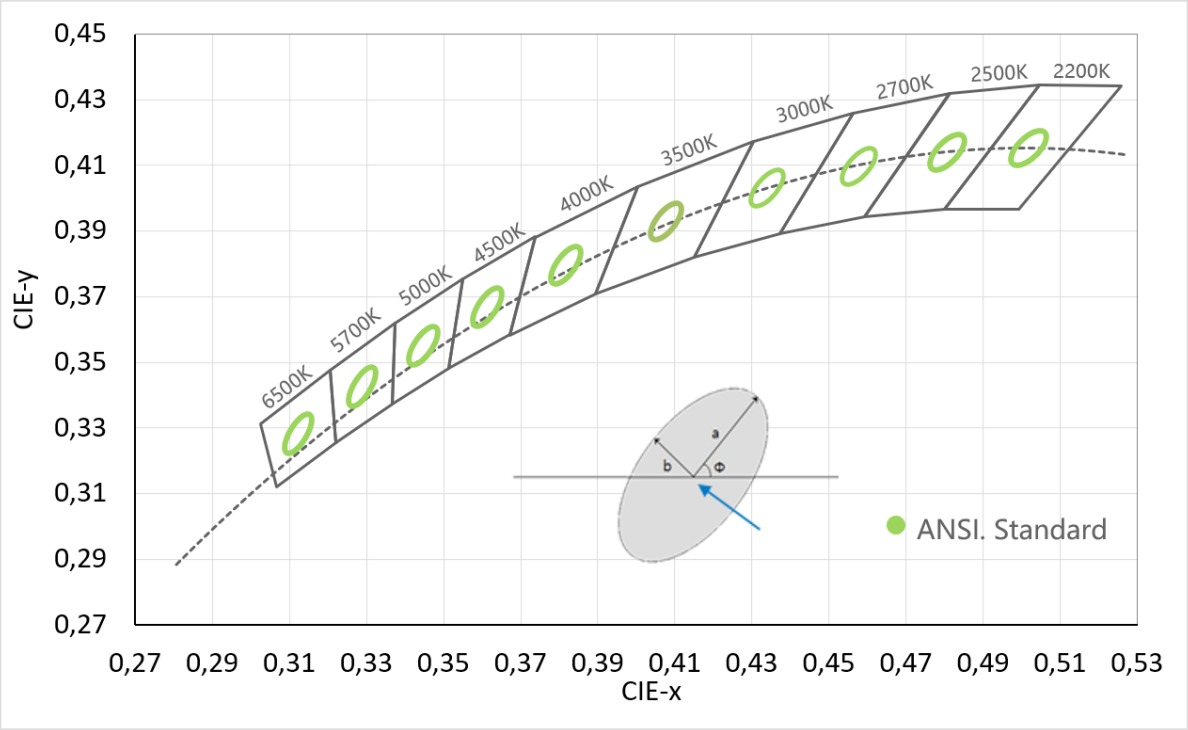
Electrical and Thermal Characteristics

Item	Symbol	Min	Max	Unit
Forward Current	I_F	/	2400	mA
Forward Voltage	V_F	28.8	39.6	V
Operating Temperature	T_{opr}	-40	+105	°C
Storage Temperature	T_{stg}	-40	+120	°C
Soldering Temperature	T_{sol}	/	280	°C
Junction Temperature	T_j	/	150	°C
Case Temperature	Tc	/	115	°C
Thermal Resistance	$R_{j\text{-}c}$	/	0.62	°C/W
Antistatic Ability	ESD	2000	/	V

The using temperature is less than 105°C; please reduce the using current or contact with us if using temperature is more than 105°C.

When hand soldering,keep the temperature of iron below less 280°C less than 5 seconds.

Chromaticity Coordinate Groups



Standard Type	ANSI/A		2-step		3-step		θ
Center Point	CIE-X	CIE-Y	a	b	a	b	
2200K	0.5018	0.4153	0.0050	0.0028	0.0075	0.0042	52.78
2500K	0.4806	0.4141	0.0052	0.0028	0.0078	0.0042	53.10
2700K	0.4578	0.4101	0.0054	0.0028	0.0081	0.0042	53.42
3000K	0.4339	0.4033	0.0056	0.0027	0.0083	0.0041	53.13
3500K	0.4078	0.3930	0.0063	0.0028	0.0095	0.0042	52.58
4000K	0.3818	0.3797	0.0063	0.0027	0.0094	0.0040	53.43
4500K	0.3613	0.3670	0.0059	0.0025	0.0088	0.0038	56.4
5000K	0.3446	0.3551	0.0055	0.0024	0.0082	0.0035	59.37
5700K	0.3287	0.3425	0.0050	0.0021	0.0075	0.0032	58.86
6500K	0.3123	0.3283	0.0045	0.0019	0.0067	0.0029	58.34

LEDVANCE maintains chromaticity (x, y) ±0.005, color region stay within MacAdam 2-step ellipse from the chromaticity center.

The ANSI standard is A standard for short, reference standard is ANSI-C78.377-2015.

The using current should be consistent with the label,and chromaticity will change if working current is outside this rage of the label.

Product Selection Guide

If=1200mA Tj= 85°C

Product Code	CCT	CRI Min.	Luminous Flux (lm)		147Efficacy (lm/w)	Voltage (V)
			Min.	Typ.	Typ.	Typ.
LVCOB-VAL-085-1213-V3070	3000K	70	5648	6075	151	33.5
LVCOB-VAL-085-1213-V4070	4000K	70	5843	6293	156	33.5
LVCOB-VAL-085-1213-V4070	5000K	70	5947	6401	159	33.5
LVCOB-VAL-085-1213-V2780	2700K	80	4970	5345	133	33.5
LVCOB-VAL-085-1213-V3080	3000K	80	5230	5625	140	33.5
LVCOB-VAL-085-1213-V3580	3500K	80	5410	5825	145	33.5
LVCOB-VAL-085-1213-V4080	4000K	80	5520	5945	148	33.5
LVCOB-VAL-085-1213-V5080	5000K	80	5560	5985	149	33.5
LVCOB-VAL-085-1213-V5780	5700K	80	5560	5985	149	33.5
LVCOB-VAL-085-1213-V6580	6500K	80	5520	5946	148	33.5
LVCOB-VAL-085-1213-V2790	2700K	90	4250	4580	114	33.5
LVCOB-VAL-085-1213-V3090	3000K	90	4480	4820	120	33.5
LVCOB-VAL-085-1213-V3590	3500K	90	4630	4980	124	33.5
LVCOB-VAL-085-1213-V4090	4000K	90	4710	5065	126	33.5
LVCOB-VAL-085-1213-V5090	5000K	90	4780	5145	128	33.5

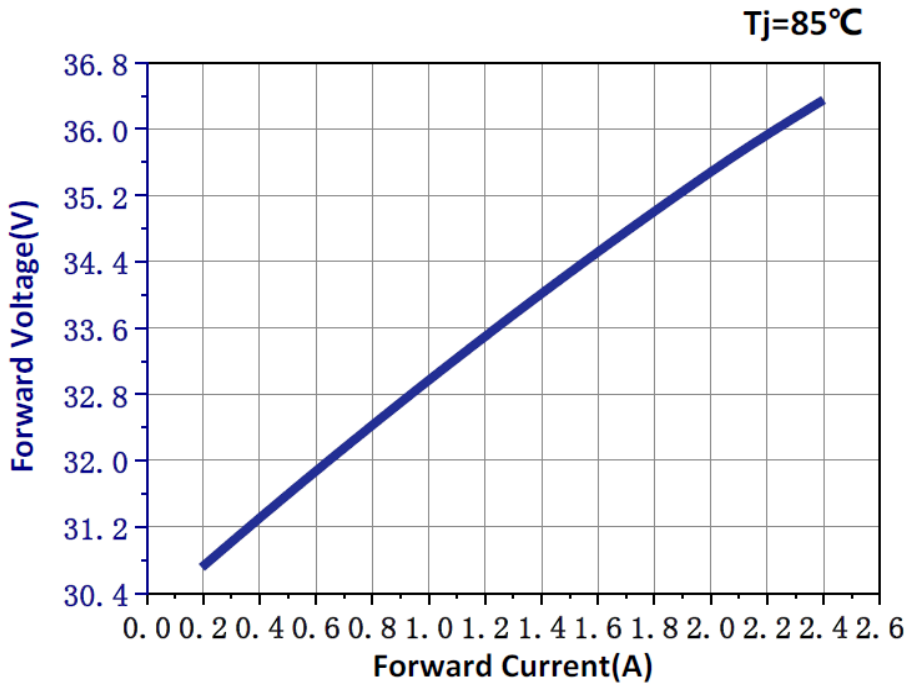
The tolerance of measurement at our tester is voltage±5%, luminous flux±7% and Ra±1.

Luminous flux inside the integrating sphere measurements. (Tj=Tc=85°C)

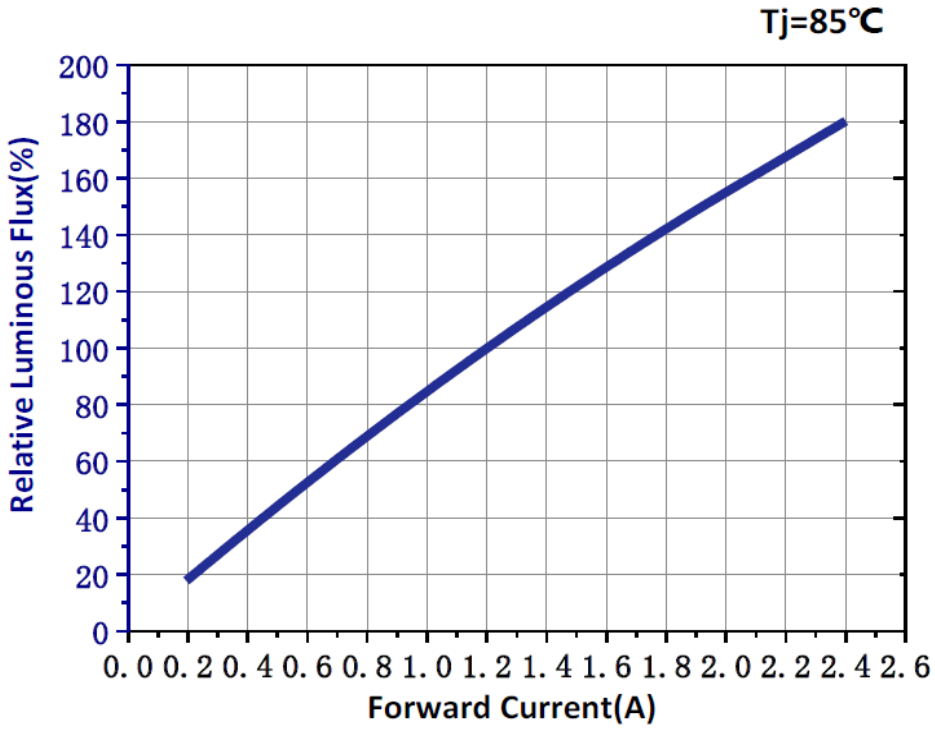
CHARACTERISTIC CURVES

Forward Current Characteristics

Forward Voltage vs Forward Current

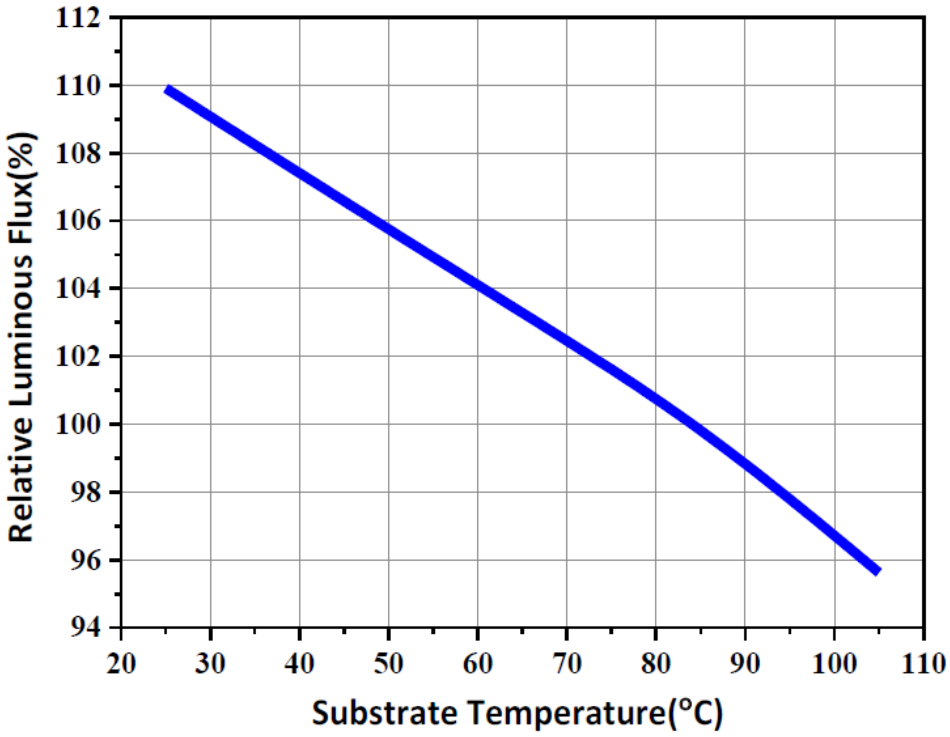


Forward Current vs Relative Luminous Flux

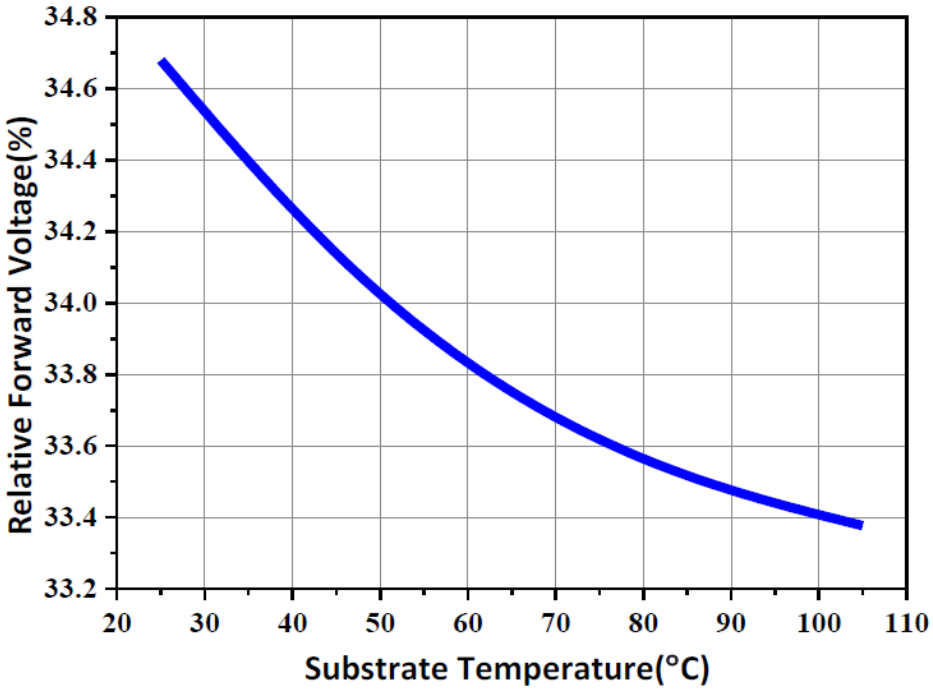


Temperature Characteristics

Relative Luminous Intensity vs Substrate Temperature If=1200mA

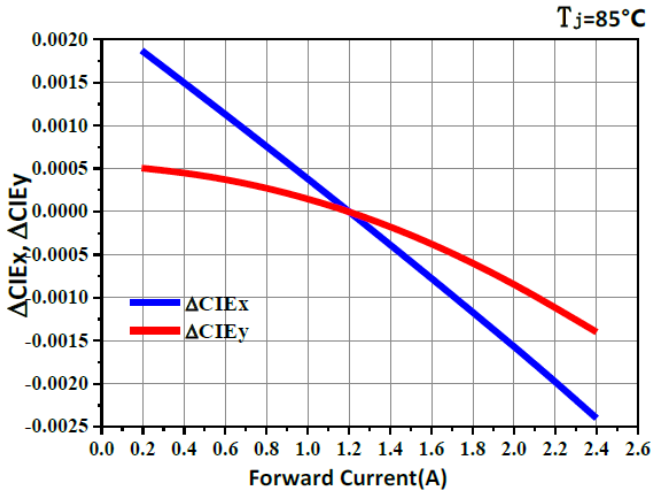


Forward Voltage vs Substrate Temperature If=1200mA

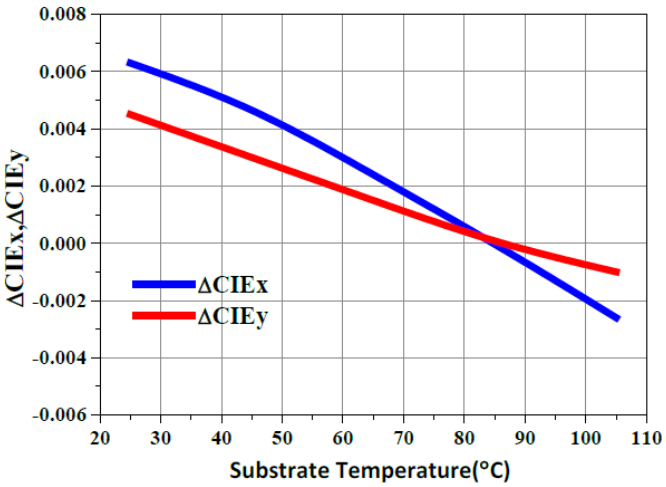


Color Shift Characteristics

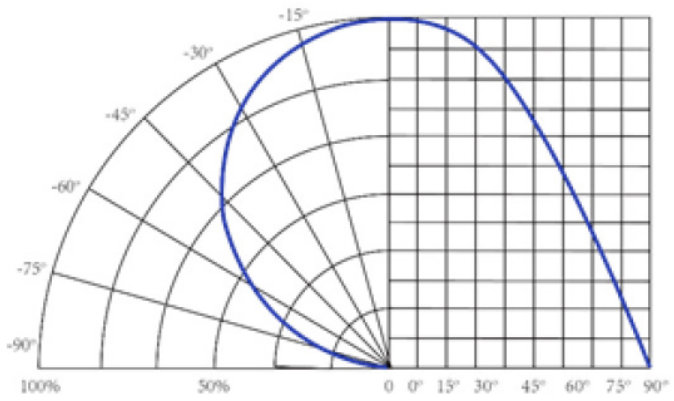
△CIE x,△CIEy vs Forward Current
CRI(Ra)=80 Tj=85°C If =1200mA



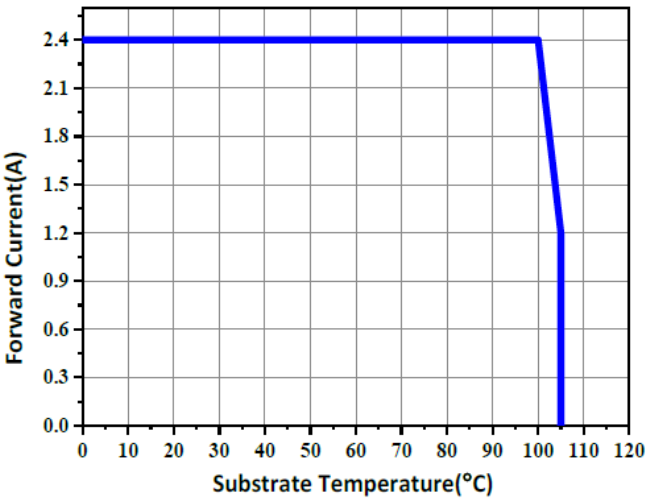
△CIE x,△CIEy vs Substrate Temperature
CRI(Ra)=80 Tj=85°C If =1200mA



Radiation Angle



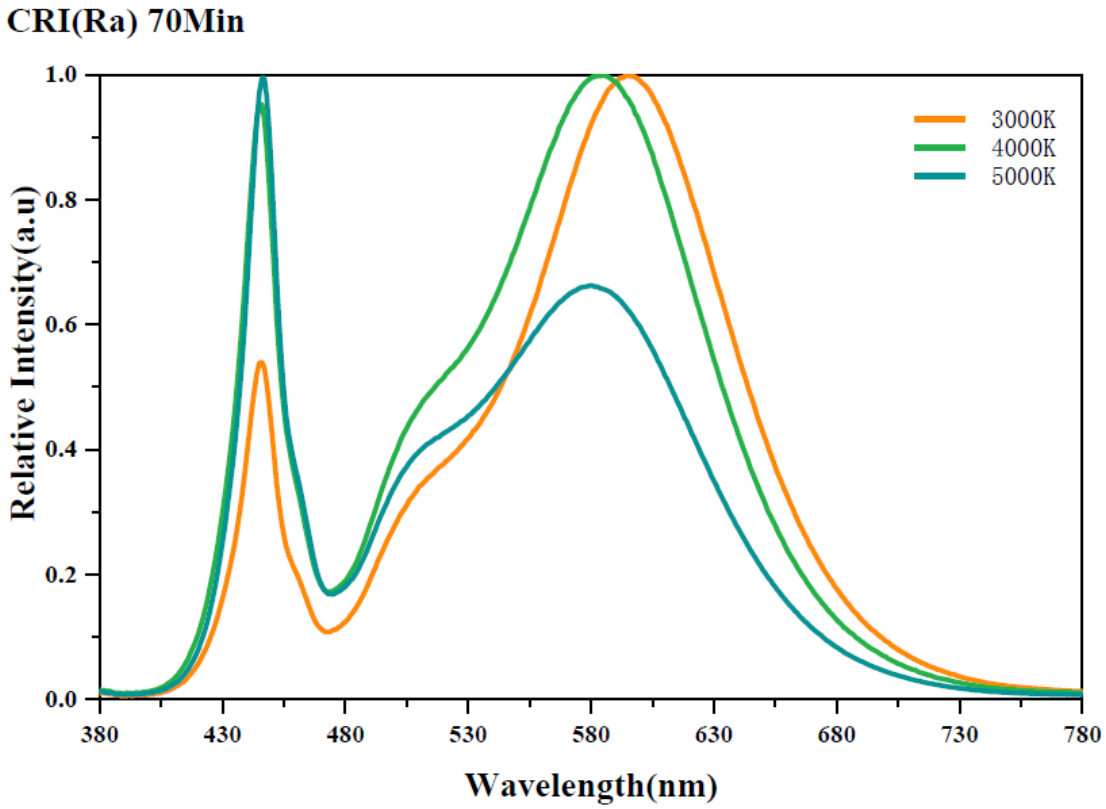
Maximum Forward Current vs Case Temperature Graph

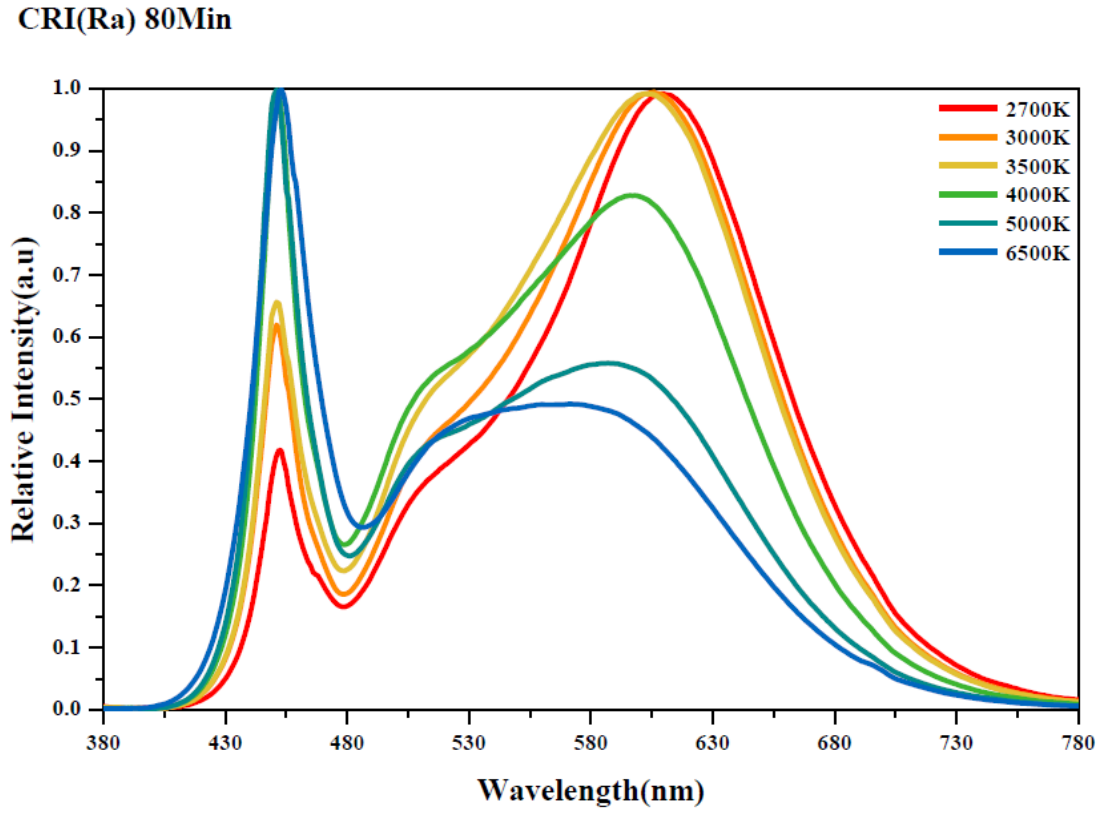


Spectrum Distribution

Relative Intensity vs Wavelength

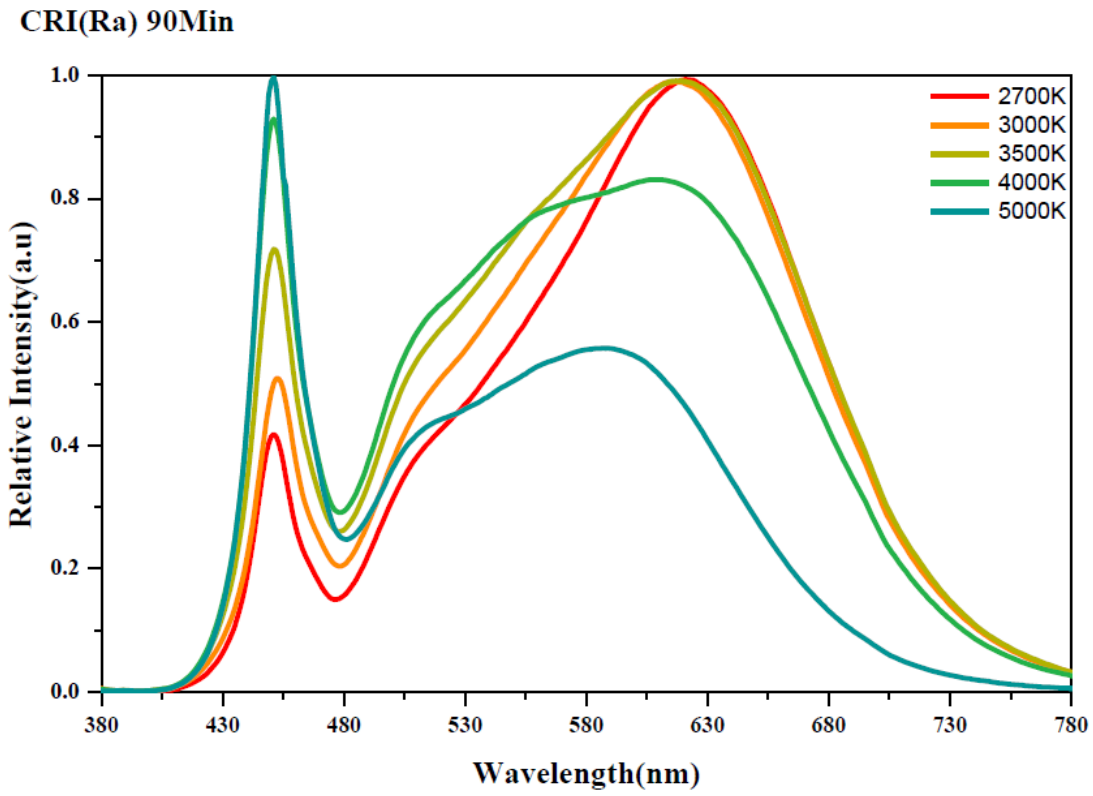
Tj=85°C If =1200mA



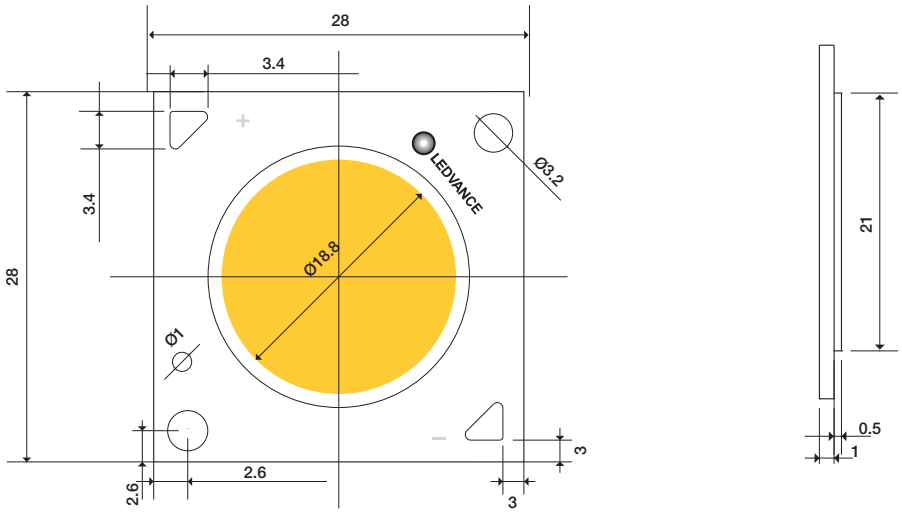


Characteristic Curves

Spectrum Distribution



MECHANICAL DIMENSION



ENCODING

LVCOB - PFM - 040 - 1206 - P3070

- CRI: 70:70 CRI /.../ 90:90C
- Kelvin: 30:3000K /.../ 65:6500K
- P: Performance
  V: Value
- Series - Paralel Numbers
  1206:1206 / 1208:1208 etc.
- Watt: 40W - 040 / 50W - 050 / 54W - 054 etc.
- Product Series: VAL - Value / PFM - Performance
- Product Family: LEDVANCE COB

PACKING SPECIFICATION / EAN CODES

RoHS Qty:XXX

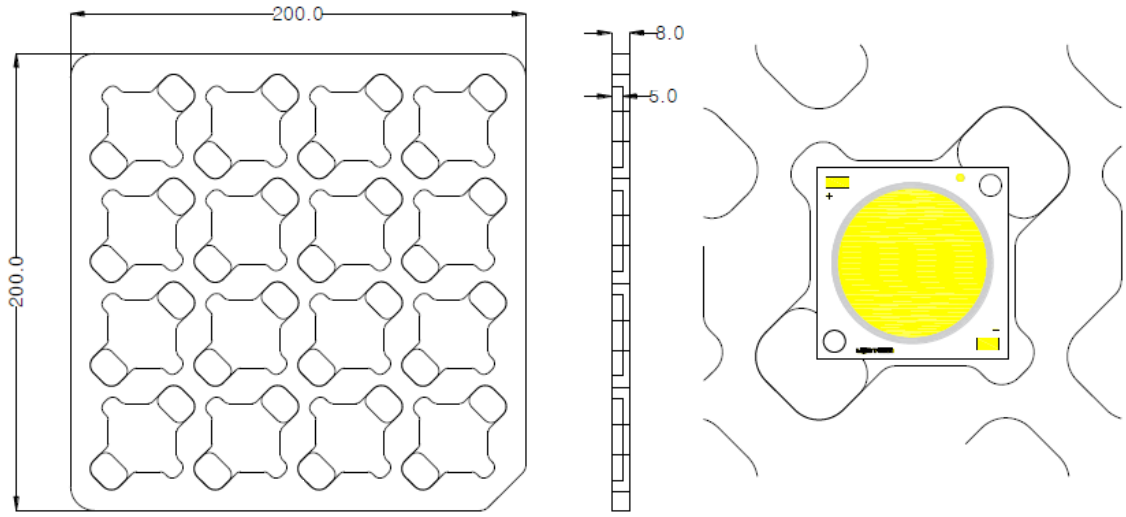
PN: LVCOB VAL-085-1213-V3080
Des: COB LED VALUE 85W 1213 3000K 80CRI

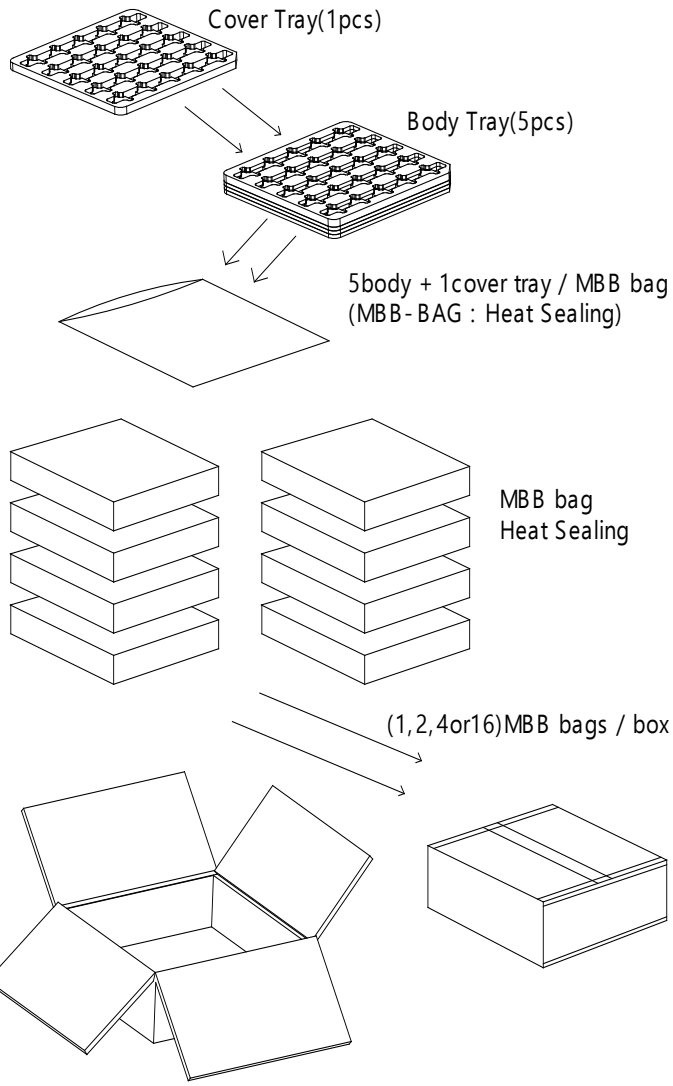
If(mA):XXX Vf(V):XX.X Pi(W):XX
CCT(K):XXXX Φ(lm):XXXX Ra:XX
XXXXXXXXXXX LotXXXXXXXXX XXXX-XXXXXXXX

Date: XX / XX / XXXX www.ledvance.com

Short Text	EAN10 1PC LED	EAN20 1 BAG - 125 PCS	EAN40 1 BOX - 500 PCS
LVCOB VAL-085-1213-V3080 4058075690592	4XBT125 TRLEDV	4058075690578	4058075690585
LVCOB VAL-085-1213-V3090 4058075690622	4XBT125 TRLEDV	4058075690608	4058075690615
LVCOB VAL-085-1213-V4080 4058075690653	4XBT125 TRLEDV	4058075690639	4058075690646
LVCOB VAL-085-1213-V5080 4058075690684	4XBT125 TRLEDV	4058075690660	4058075690677

MANNER OF PACKING





An empty tray is placed on top of a 5-tier tray which contain 16 PCS each.(Smallest packing unit:80 PCS)

A label whit product name,quantity and lot number is placed on the upper empty tray.(Tray Dimension:200*200*8 mm)

CAUTIONS

1. Storage

Store the parts in a dry, nitrogen-purged cabinet or container that actively maintains the temperature at 20°C-30°C and the RH at no greater than 60%.

2. Precautions for Use

By using anti-static-electricity bracelets/ cushions/ overalls/ shoes/gloves and anti-static-electricity containers, it can effectively prevent static electricity and surge. The soldering iron point should be properly grounded. Use soldering by hand: Soldering bit temperature shall be 350°C or less , Heating time: 5 seconds or less.

3. ESD Protection

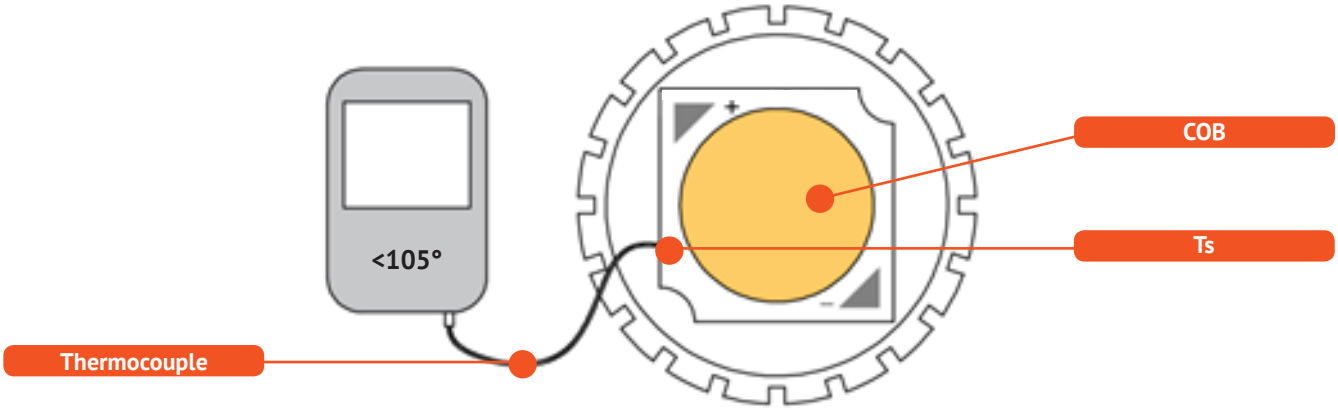
You need to take the protective measures for the product being sensitive to static electricity. It can lead to product damage or even the total invalid when the high voltage current made by static electricity is beyond the maximum rating. The ground resistance can't beyond 10Ω.

4. Cleaning

Please do not make the thermal grease, oil exposed to the light-emitting surface, air gun can be used to remove dirt. Guns Pressure: 0.5MPa, Time: 1 to 2 seconds, Distance: more than 20cm.

5. Overcurrent Protection

Any time, don't press colloid part, lest product surface come to be damaged or even invalid. It is recommended to design PCB with ground circuit. Pay special attention to the use environment of the products: Humidity must be between 50% and 80%, or else electrostatic breakdown and overcurrent damage would occur. The use temperature is -40°C~105°C. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these data sheets. LEDVANCE assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these data sheets.



6. Thermal Design

The thermal design to draw heat away from the LED junction is most critical parameter for an LED illumination system. High operating temperatures at the LED junction adversely affect the performance of LED's light output and lifetime. Therefore the LED junction temperature should not exceed the absolute maximum rating in LED illumination system.

7. Safety Tips

During using this product, the country relative safety standards (eg. GB7000.1-2007) should be accorded with. We will not be liable for the users' acts of non-observance of the country safety standards.

Reminder: In order to protect the environment, please dispose the waste light according to the general waste

If you have any objection of this datasheet, please inform us in writing within 7 days, or it will be considered as accepting all the contents of this datasheet.