PRODUCT DATASHEET
LVCOB PFM-006-1202

COB LED PERFORMANCE 6W 1202

AREAS OF APPLICATION

– Track 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	IF	/	360	mA
Forward Voltage	VF	31.2	36.9	V
Operating Temperature	T_a	-40	+105	°C
Storage Temperature	Tstg	-40	+105	°C
Junction Temperature	Tj	/	140	°C
Case Temperature	Tc	/	105	°C
Power Dissipation	P_D	/	13.3	W
ESD (HBM)	/	/	±2	kV
Color Rendering Index	R_a	80 / 90	/	/
Thermal Resistance (Junction to chip point)	°C / W	/	1,48	/
Beam Angle	°	/	115	/
Nominal Power	W	/	6.1	/

LDV maintains measurement tolerance of: forward voltage = ±5%, CRI = ±1"

Chromaticity Coordinate Groups
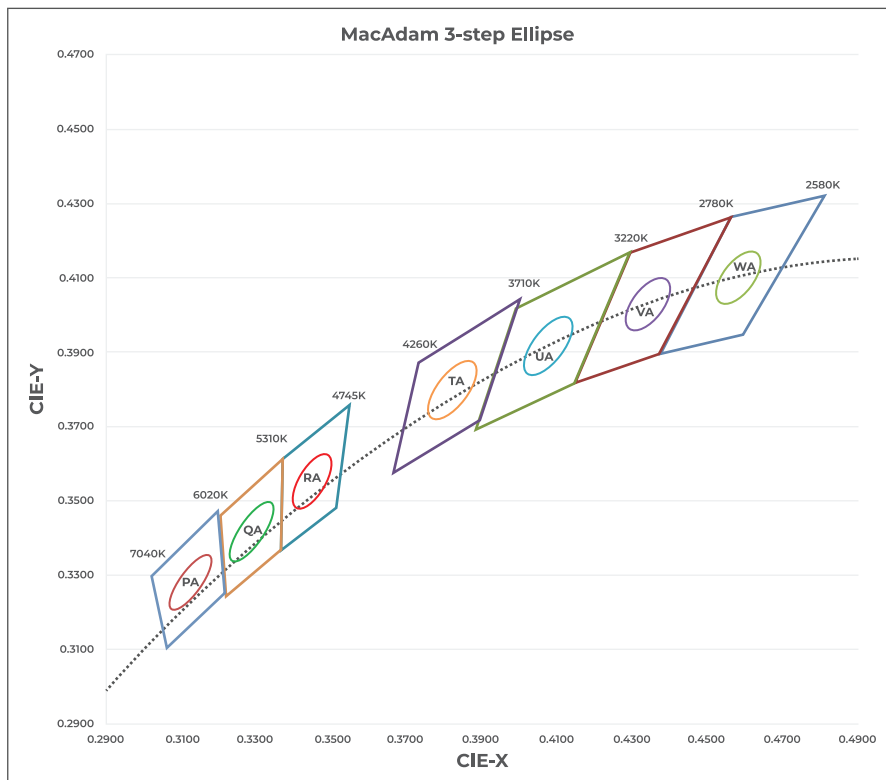
CCT	RANK	CIE-X	CIE-Y	q	a	b
2700K	WA	0.4578	0.4101	53.70	0.0081	0.0042
3000K	VA	0.4338	0.4030	53.20	0.0083	0.0041
3500K	UA	0.4073	0.3917	54	0.0093	0.0041
4000K	TA	0.3818	0.3797	53.70	0.0094	0.0040
5000K	RA	0.3447	0.3553	59.60	0.0082	0.0035
5700K	QA	0.3287	0.3417	59.10	0.0075	0.0032
6500K	PA	0.3123	0.3282	58.60	0.0067	0.0029

• All correlated color temperature bin structure in above figure is within ANSI.
• Tolerance on chromaticity (CIEx, CUEy) is ±0.003

## Product Selection Guide

If=180mA Tj= 85°C

Product Code	CCT	Ra	R9	Luminous Flux (lm)			Typical Luminous Efficacy (lm/W)
				Min.	Typ.	Max.	
LVCOB PFM-006-1202-P2780	2700K	≥80	≥0	857	912	1003	149
LVCOB PFM-006-1202-P3080	3000K	≥80	≥0	902	960	1056	157
LVCOB PFM-006-1202-P3580	3500K	≥80	≥0	928	988	1086	162
LVCOB PFM-006-1202-P4080	4000K	≥80	≥0	947	1008	1108	165
LVCOB PFM-006-1202-P5080	5000K	≥80	≥0	951	1012	1113	166
LVCOB PFM-006-1202-P5780	5700K	≥80	≥0	947	1008	1108	165
LVCOB PFM-006-1202-P6580	6500K	≥80	≥0	947	1008	1108	165
LVCOB PFM-006-1202-P2790	2700K	≥90	≥50	721	768	844	126
LVCOB PFM-006-1202-P3090	3000K	≥90	≥50	767	816	897	134
LVCOB PFM-009-1203-P3590	3500K	≥90	≥50	793	844	928	138
LVCOB PFM-006-1202-P4090	4000K	≥90	≥50	825	878	968	144
LVCOB PFM-006-1202-P5090	5000K	≥90	≥50	830	883	971	145

• The COB is tested in pulsed operating condition at rated test current (10 ms pulse width) and rated temperature ($T_j = T_c = 85°C$)

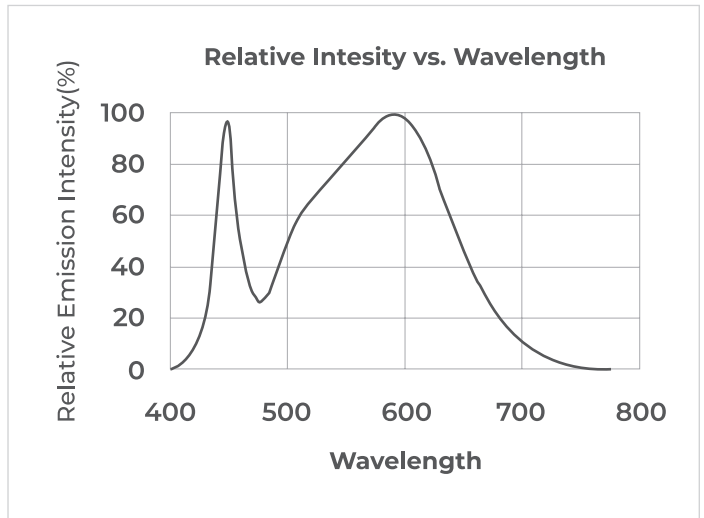• LDV maintains measurement tolerance of: Luminous flux = ±5%, CRI = ±1

CHARACTERISTIC CURVES
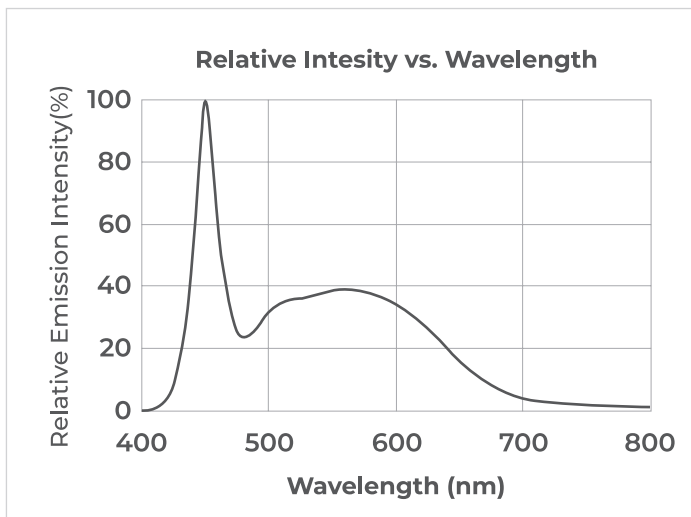
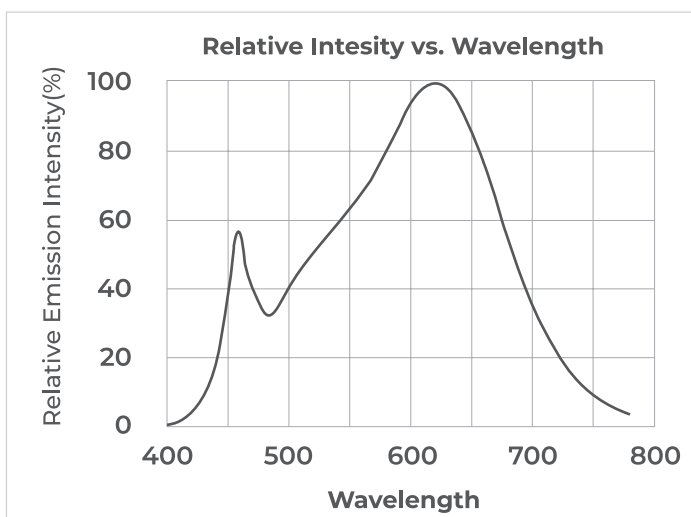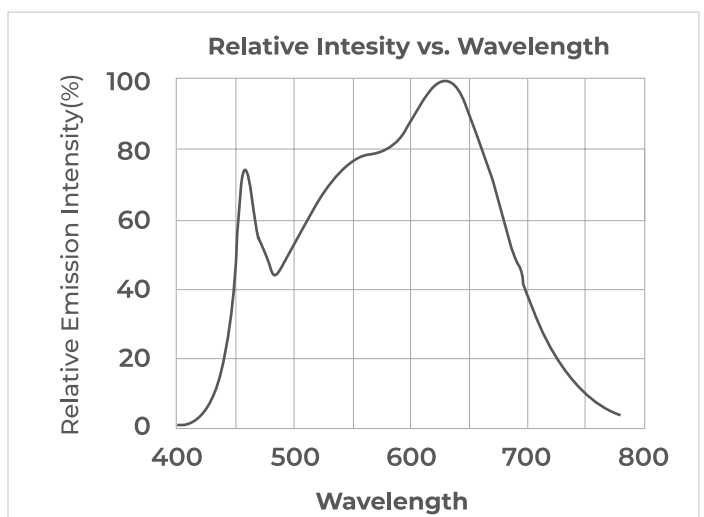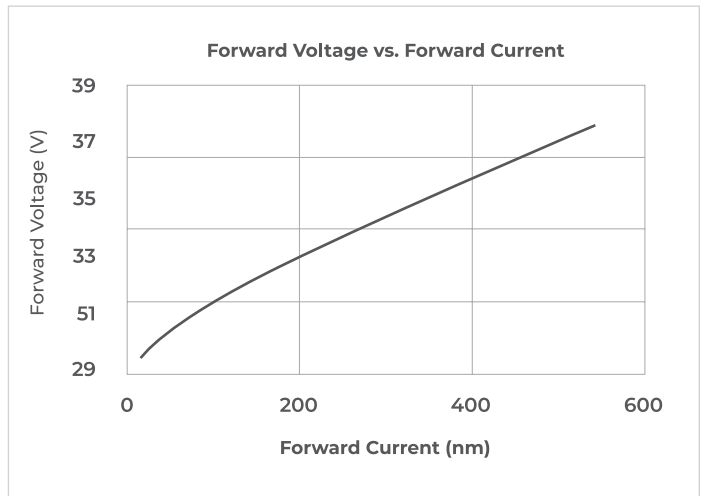Spectrum Distribution (If = 180mA, Tj = 85°C)
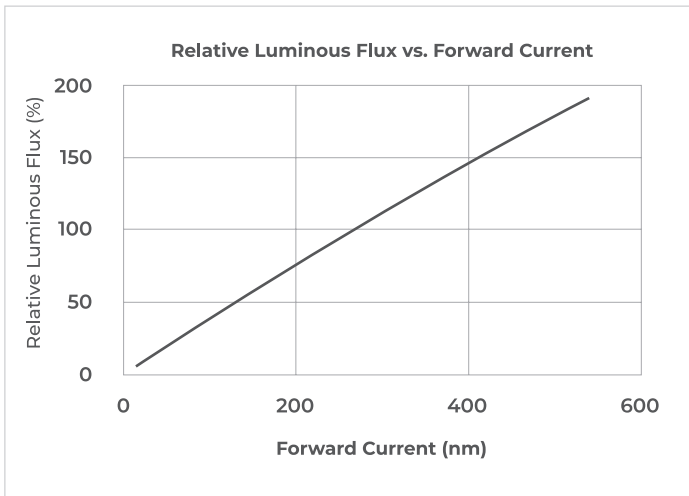
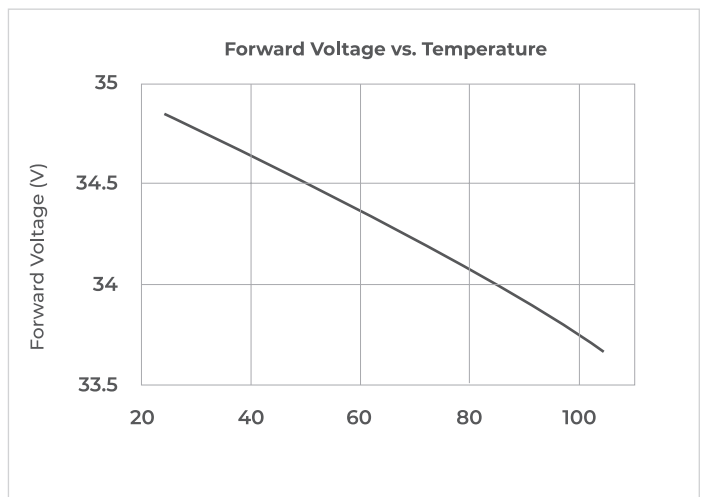CCT: 3000K (80CRI)
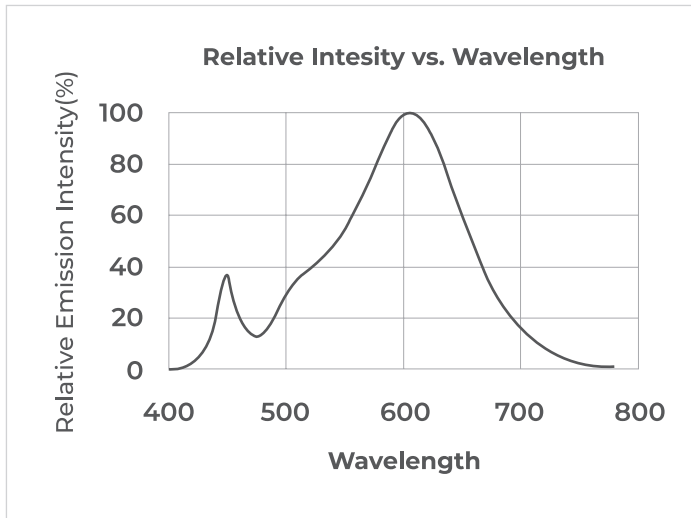
CCT: 4000K (80CRI)
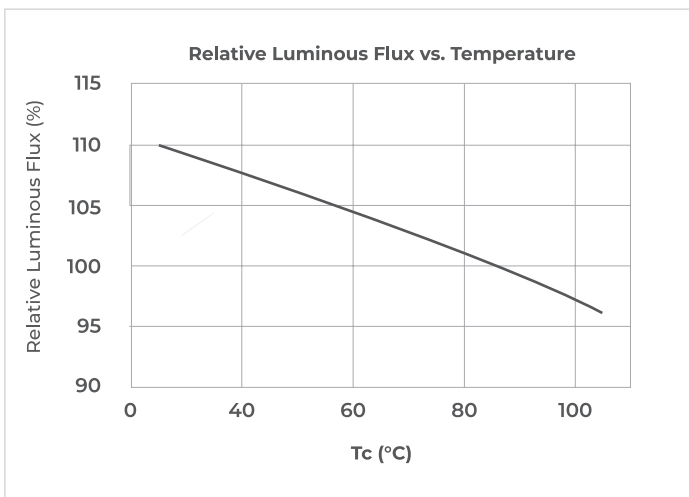
CCT: 6500K (80CRI)

CCT: 3000K (90CRI)

CCT: 4000K (90CRI)

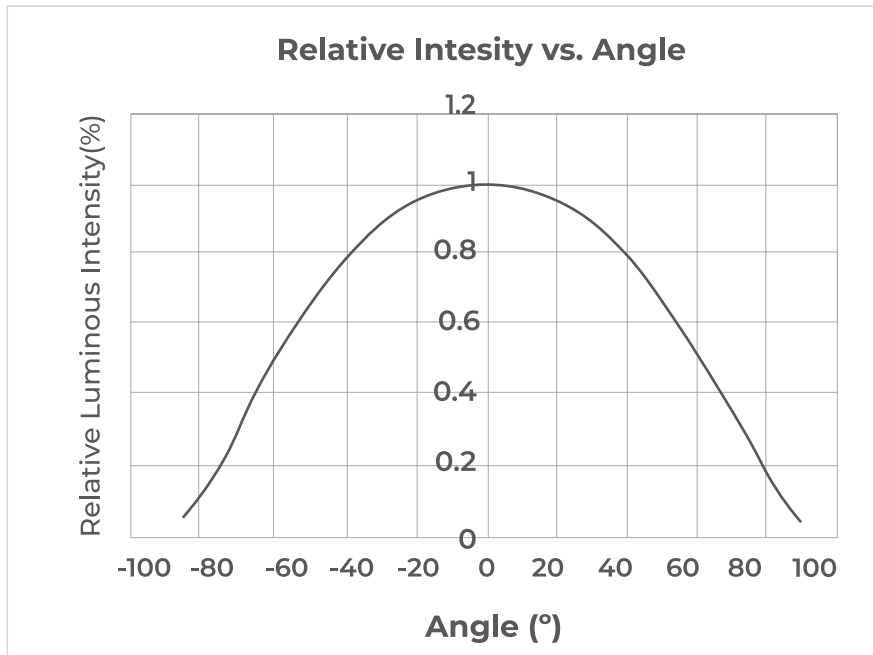## Forward Current Characteristics (Tj = 85°C)

Relative Luminous Flux vs. Forward Current

Relative Luminous Flux (%)

Forward Current (nm)

Forward Voltage vs. Forward Current

Forward Voltage (V)

Forward Current (nm)

Temperature Characteristics (IF = 180mA)

Relative Luminous Flux vs. Temperature

Relative Luminous Flux (%)

Tc (°C)

Forward Voltage vs. Temperature

Forward Voltage (V)

Tc (°C)

Color Shift Characteristics (Tj = 85°C, IF=180mA, CRI80)

△CIEx ,△CIEy vs. Forward Current

△CIE x, △CIE y

Forward Current(A)

△CIE x △CIE y

△CIEx ,△CIEy vs. Temperature

△CIE x, △CIE y

Tc(°C)

△CIE x △CIE y
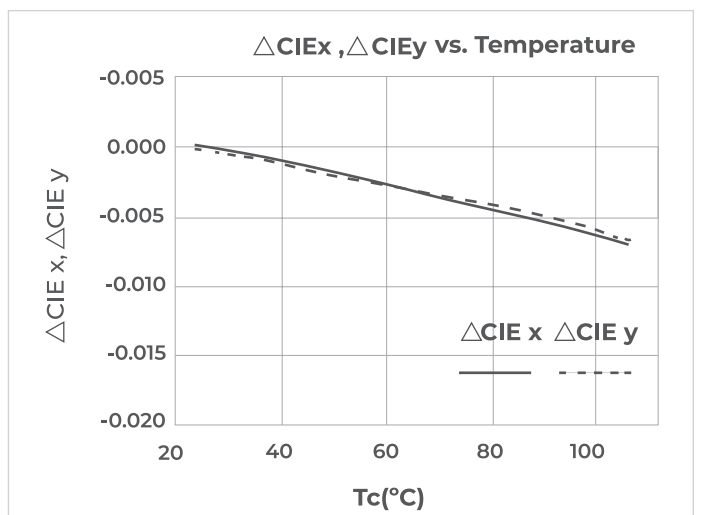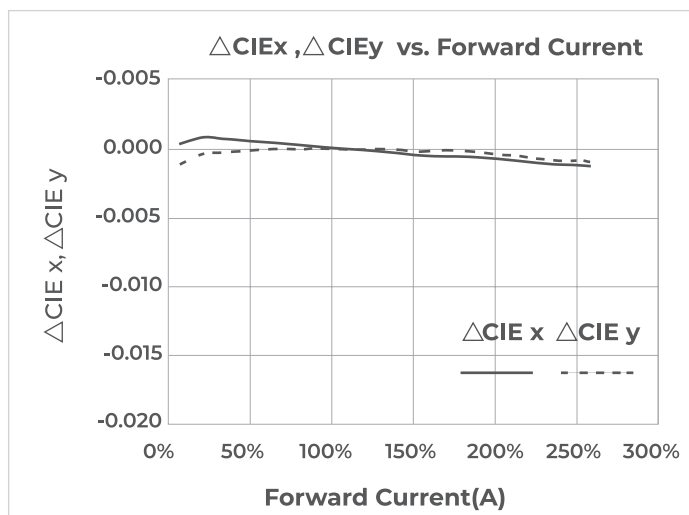
Beam Angle Characteristics (If = 270mA, Tj = 85°C)

Relative Intesity vs. Angle

MECHANICAL DIMENSION

13.5±0.15
1.9
4.0
1.9
4.0
13.5±0.15
Ø11.2±0.3
Ø9.8±0.3
4.0
4.0
1.9
1.9
Tc

11.2±0.3
0.1
1.0±0.1
0.5±0.2
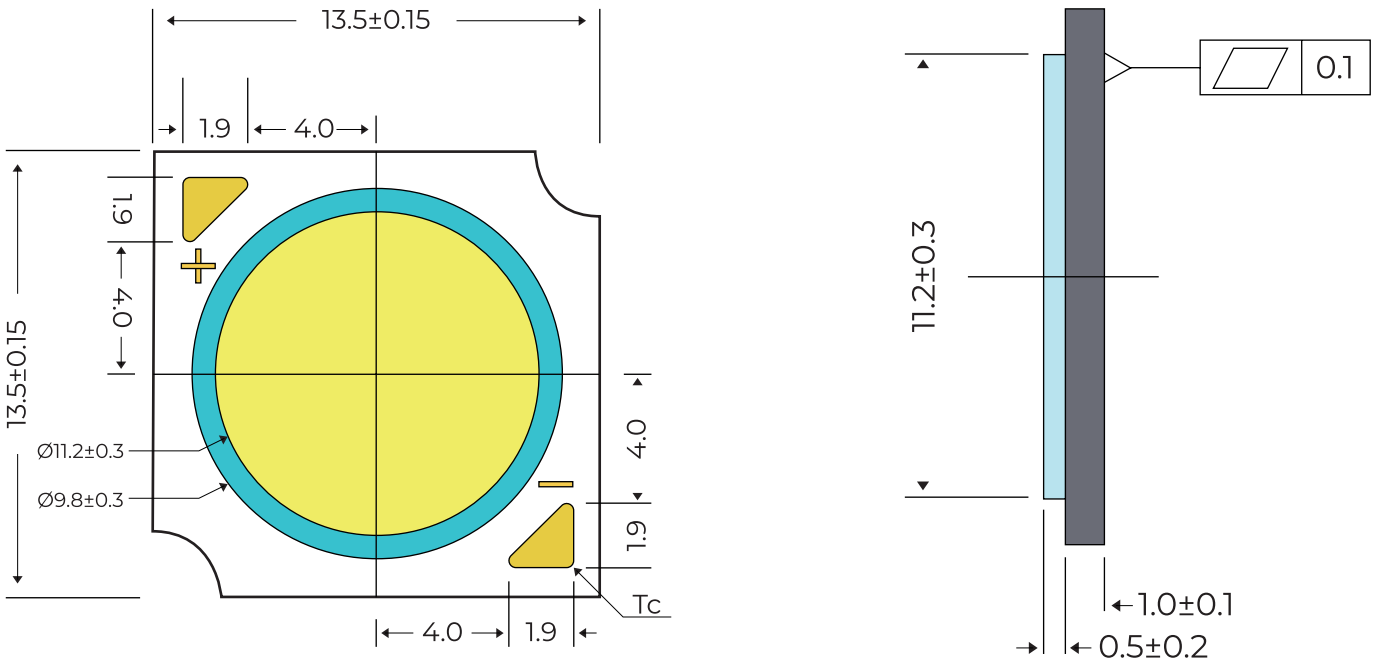
ENCODING
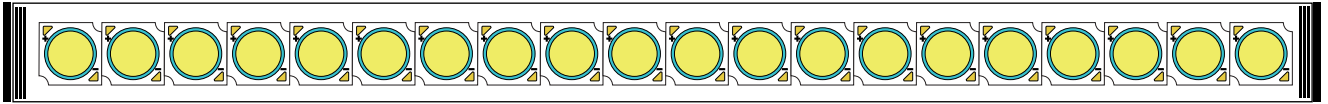
LVCOB - PFM - 006 - 1202 - P3080

- 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

115mm

17mm
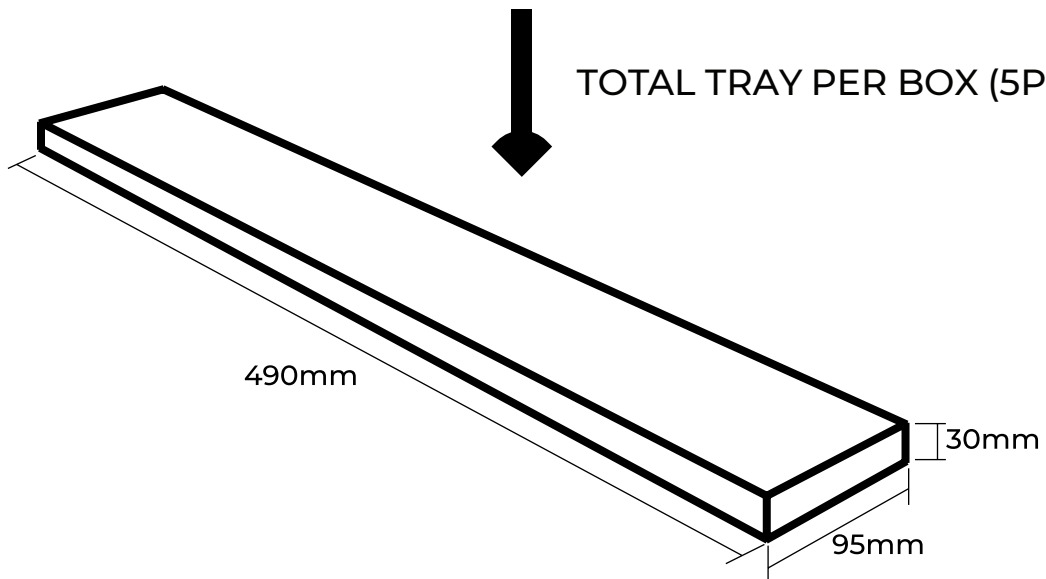
PART#: XXXXXXXXXXXXXXX

Made in xxx

LOT NO: XXXXXXXX   C/B: XX   QTY: XX   DATE: XXXX

115mm

17mm

PART#: XXXXXXXXXXXXXXX
A/N: XXXXXXXXXXXXXXXX
Bin: XXXXXXXXXXXXX
LOT NO: XXXXXXXX   C/B: XX   QTY: XX   DATE: XXXX

Made in xxx

MANNER OF PACKING

Inner Box

TOTAL UNITS PER TRAY (20PCS)

TOTAL TRAY PER BOX (5PCS)

490mm

30mm

95mm

Outer Box

INNER BOXES (20PCS)
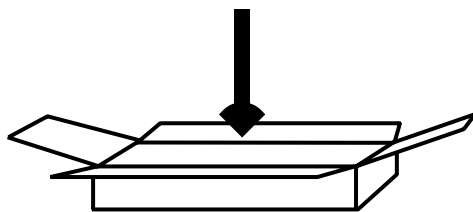
INNER BOXES (5PCS)

OUTER RSC
(L)505mm x (W)170mm x (H)130mm

TOTAL (500PCS)
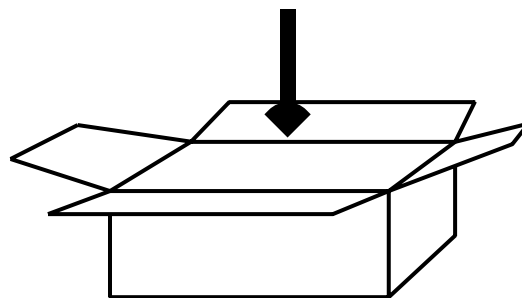
OUTER RSC
(L)505mm x (W)315mm x (H)264mm

TOTAL (2000PCS)

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.
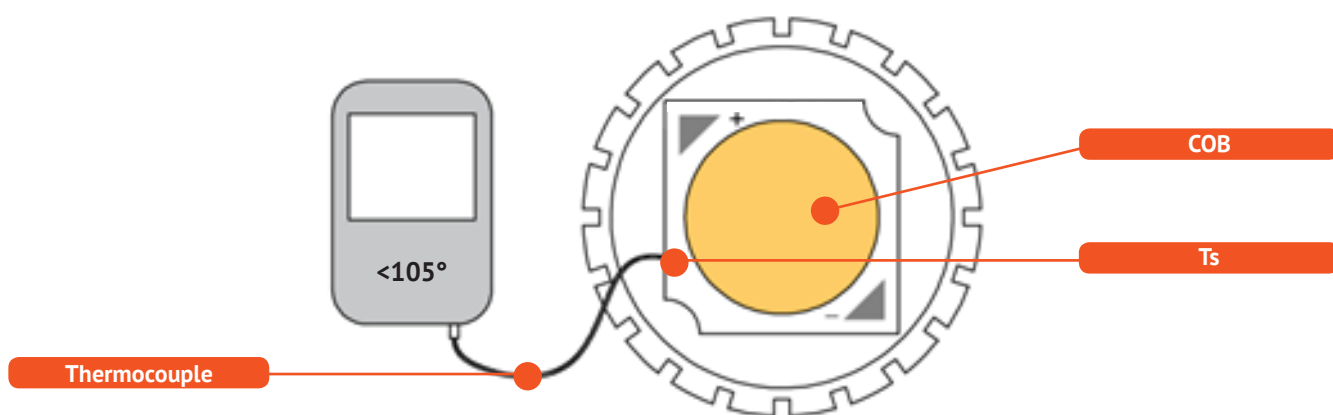
6. Thermal Design

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.