

PRODUCT DATASHEET

LVCOB VAL-050-1208

COB LED VAL 50W 1208



AREAS OF APPLICATION

- Track Light
- Spot Light
- Par Light
- Bulb Light
- Down Light

PRODUCT BENEFITS

- Good consistency of lightcolor,highflux,high efficiency
 - Low thermal resistance, good thermal stability
 - Strong compatibility,easy to install and use
 - High reliability
 - LM-80 Certified and applied with RoHS standard
 - IEC standards
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TECHNICAL DATA

Basic Parameters

Model	CCT	RA Min.	R9 Min.	Luminous Flux(LM)			Typ. Lumens (LM/W) Tj=25° C	Typ. Current (mA)	Thermal Resistance Rj (° C/W)
				Tj=85° C		Tj=25° C			
				Min.	Typ.	Typ.			
VAL-050-1208-V2780	2700K	80	0	3081	3349	3722	143	720	0.6
VAL-050-1208-V3080	3000K	80	0	3244	3526	3918	151	720	0.6
VAL-050-1208-V3580	3500K	80	0	3341	3632	4036	156	720	0.6
VAL-050-1208-V4080	4000K	80	0	3374	3668	4076	159	720	0.6
VAL-050-1208-V5080	5000K	80	0	3390	3685	4076	159	720	0.6
VAL-050-1208-V6580	6500K	80	0	3434	3733	4027	158	720	0.6
VAL-050-1208-V2790	2700K	90	50	2592	2817	3130	121	720	0.6
VAL-050-1208-V3090	3000K	90	50	2757	2997	3330	129	720	0.6
VAL-050-1208-V3590	3500K	90	50	2868	3117	3464	134	720	0.6
VAL-050-1208-V4090	4000K	90	50	3006	3267	3630	140	720	0.6
VAL-050-1208-V5090	5000K	90	50	2992	3252	3613	140	720	0.6
VAL-050-1208-V6590	6500K	90	50	2964	3222	3580	139	720	0.6

Device tolerance

- For luminous flux:±7%
- Voltage±5%
- device tolerance for color coordinate:±0.002
- Ra/R9±2

TECHNICAL DATA

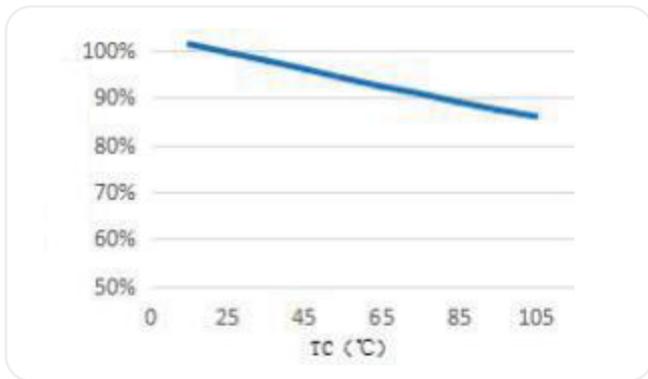
Limit Parameters

Parameters	Symbol	Min	Typ	Max	Unit
Forward V	V _f	32	35.4	38	V
Forward A	I _f	-	720	1600	mA
Power	P _i	-	25.4	67.2	W
Junction Temp	T _j	-	-	150	°C
Attractions (HBM)	-	-	-	8000	V
View Angle	2 θ _{1/2}	-	120	-	Degrees
Operation Temperature	T _{op}	-20	-	+85	°C
Storage Temperature	T _{st}	-40	-	+100	°C
Welding Temperature	T _{sol}	-	-	350	°C

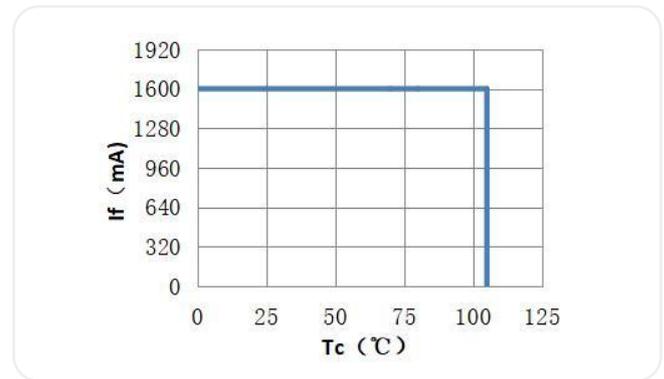
- Ta=25°C Bonding pad Tc≤85°C. In actual condition, silica gel surface temperature of ≤130°C

RELIABILITY TEST CURVE

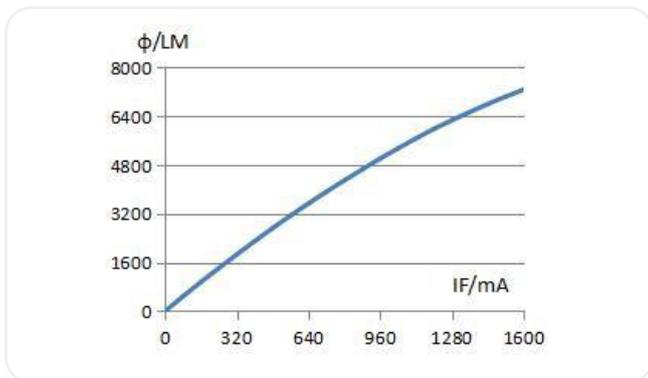
Temperature vs Lumen



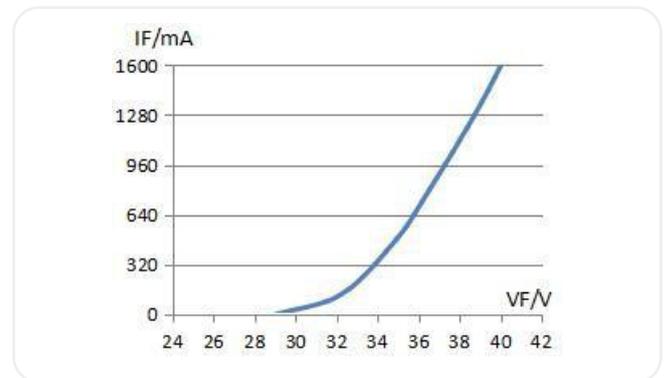
TCvs IF Curve



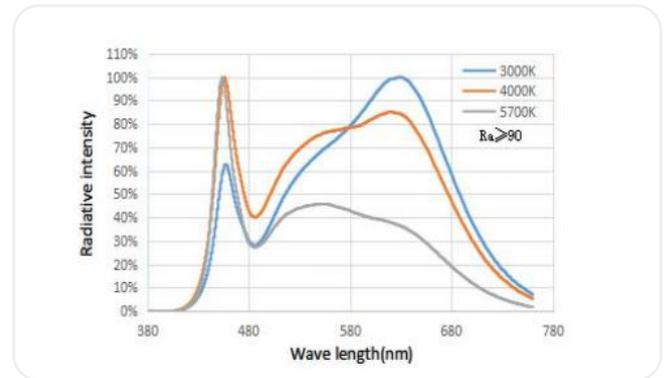
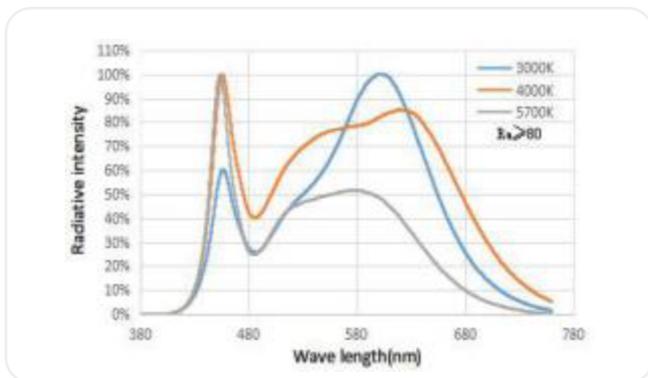
Current vs Lumen



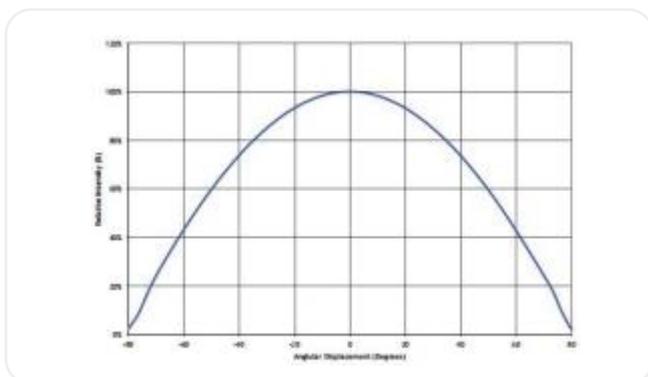
Voltage vs Curve



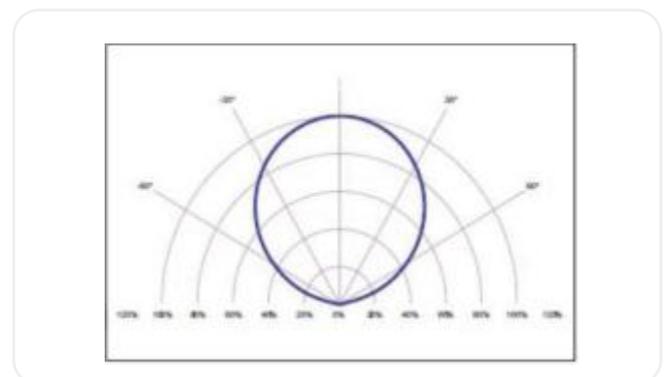
Relative Spectral Curve



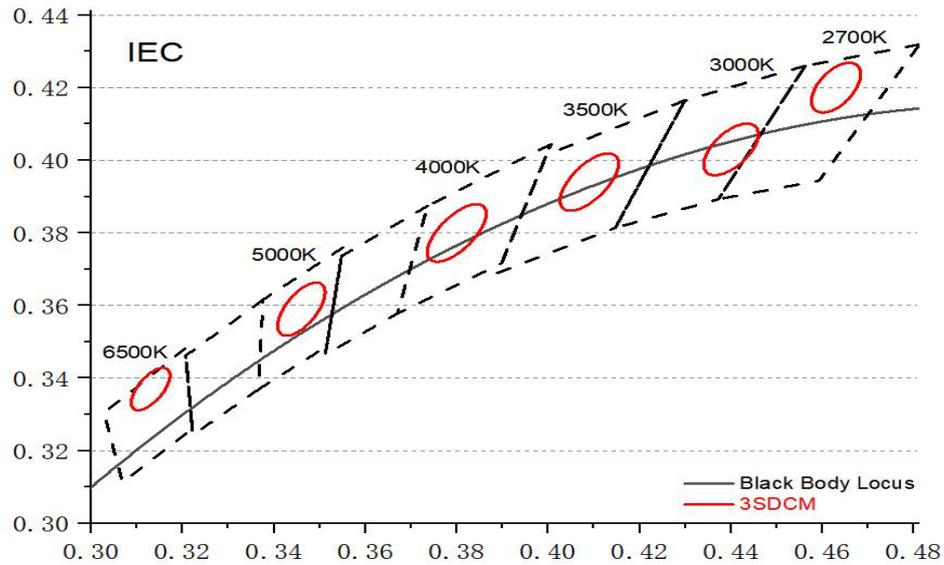
Light Distribution Diagram



Voltage vs Curve



WhiteBinsOnCIE-1931

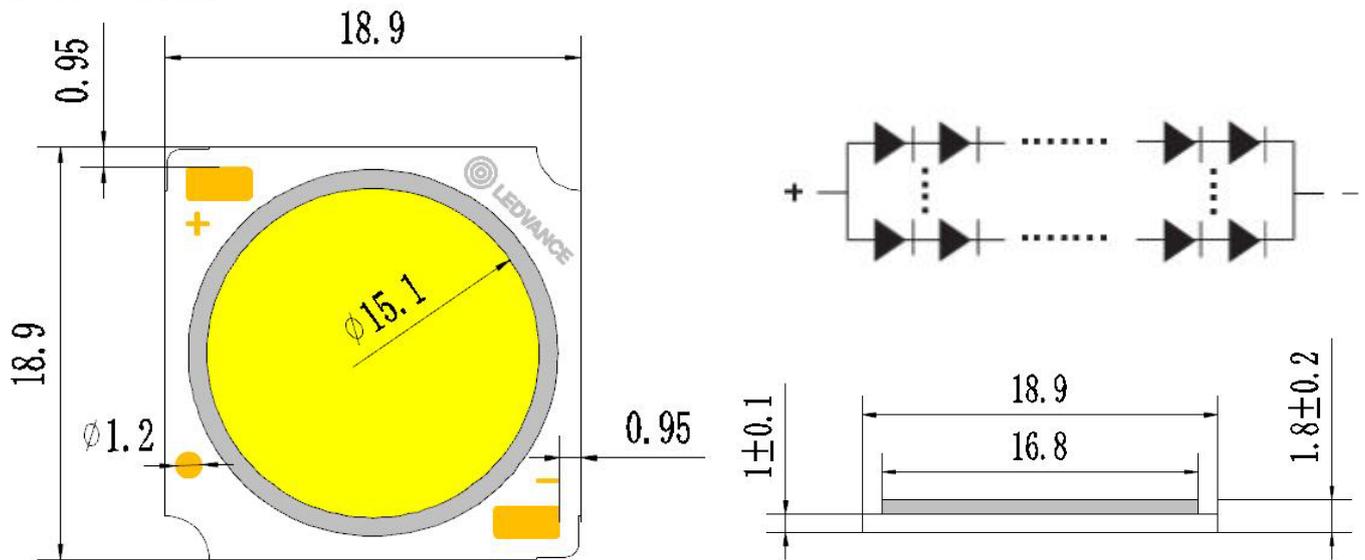


Color Temperature and BIN

CT	2700K	3000K	3500K	4000K	5000K	6500K
CT Range	2680-2790	2865-3015	3350-3550	3910-4160	4810-5160	6200-6700
CT Factor	± 55	± 75	± 100	± 125	± 175	± 250
Bin No	L627 E3	L630 E3	L635 E3	L640 E3	L650 E3	L665 E3

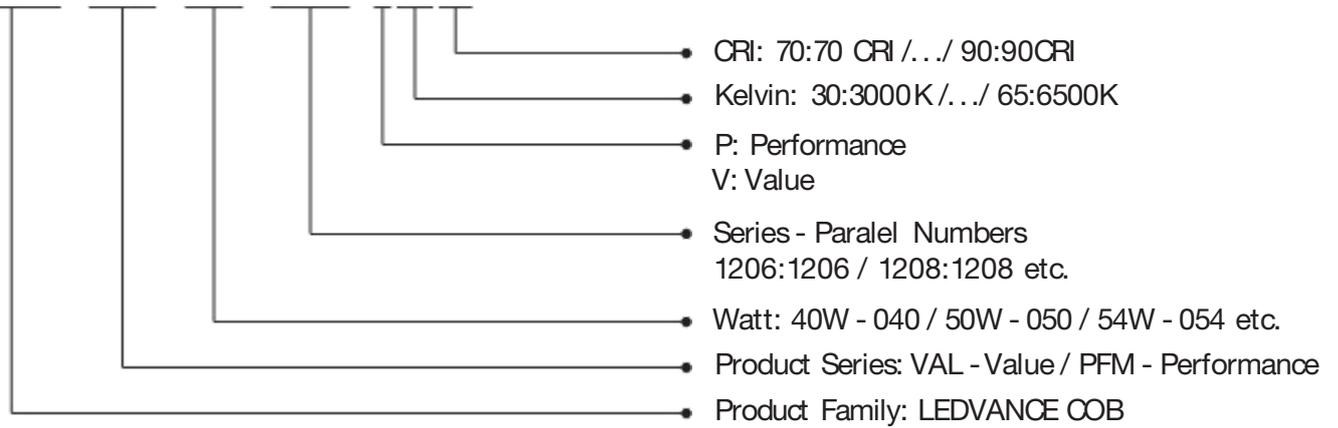
CCT	Chromaticity Tolerances	Central Point Coordinates		Long AxisA	Short AxisB	Rotation Angle
		X	Y			
2700K	3 SDCM	0.4630	0.4200	0.00258	0.00137	51.17
3000K	3 SDCM	0.4400	0.4030	0.00278	0.00136	53.10
3500K	3 SDCM	0.4090	0.3940	0.00317	0.00139	52.58
4000K	3 SDCM	0.3800	0.3800	0.00313	0.00134	54.00
5000K	3 SDCM	0.3460	0.3590	0.00274	0.00118	59.37
6500K	3 SDCM	0.3130	0.3370	0.00223	0.00095	58.23

MECHANICAL DIMENSION



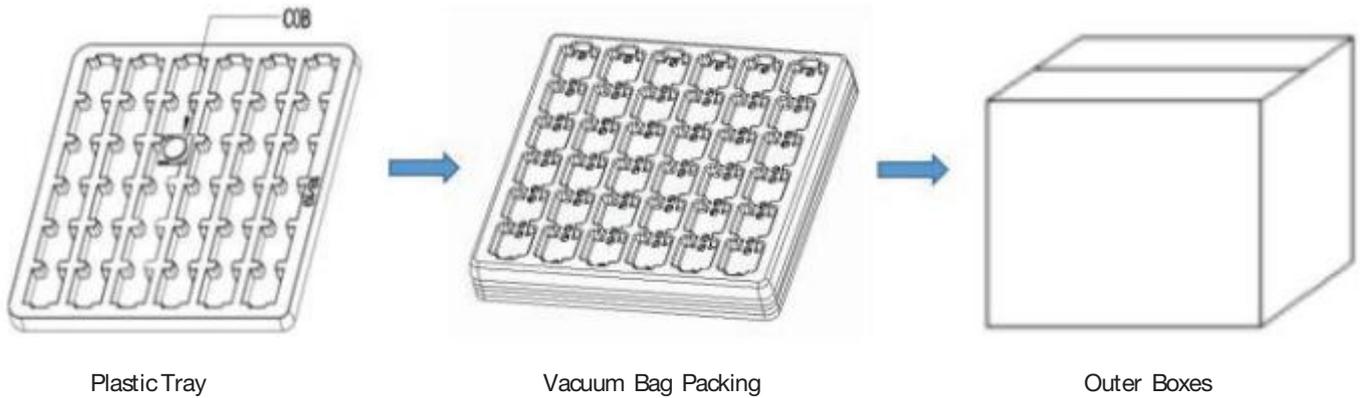
ENCODING

LVCOB - PFM - 040 - 1206 - P4080



MANNER OF PACKING

COB Packing: Tray + Anti-static bag with vacuum packing + Outer boxes



Box Size	Length (cm)	Width (cm)	Height (cm)
Medium	30	30	24

PN Base	PCS/Tray	Tray/Bag	PCS/Bag	Bag/PCS/Medium Box
PFM-006-1202	60	5	300	12/3600
PFM-009-1203	60	5	300	12/3600
PFM-013-1204	60	5	300	12/3600
PFM-040-1206	40	5	200	12/2400
VAL-048-1207	40	5	200	12/2400
VAL-050-1208	40	5	200	12/2400

CAUTIONS

1. Storage

The storage environment humidity is <60%, the temperature is maintained at 20°C-30°C. Once the COB light sources have been unsealed, please install them within 168H; if it is not used up within 168H, please vacuum it and keep it sealed. After sealing, the effective use period is 1 year.

2. Application

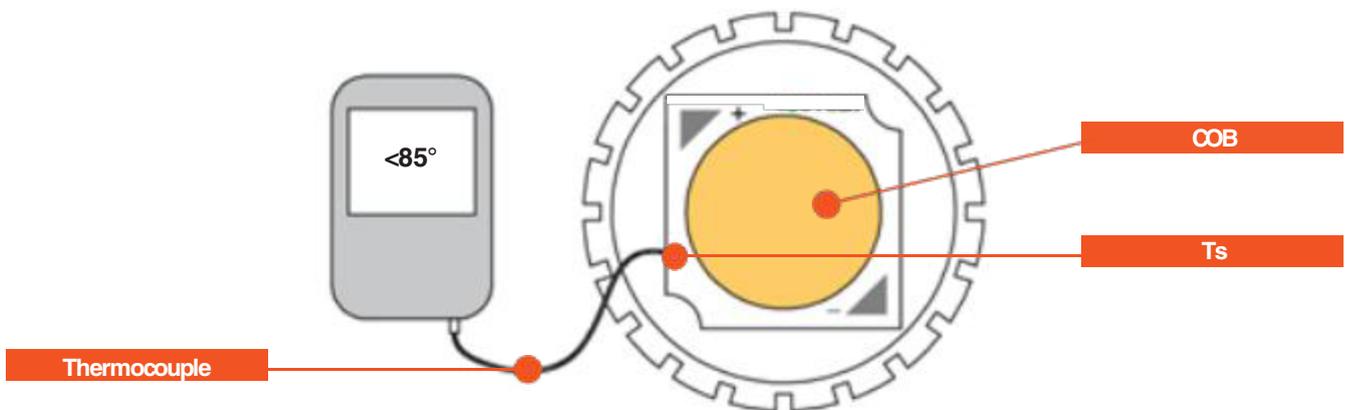
When welding, the soldering iron should be properly grounded. When manual welding, the temperature of the iron must be lower than 350°C, welding time shall not exceed 3 seconds and shall be cooled to room temperature before welding again. When welding, no external force should be put on the colloidal surface and the surrounding dam glue (such as pressure, friction or sharp metal nails, etc.) or it will cause deformation of gold wire or broken wire... In order to reduce the contact thermal resistance during assembling, please note that the thermal conductivity paste coating is uniform with proper distribution area, too little thermal conductivity paste or uneven application level is not okay. When using thermal conductive rubber pad, make sure that the base plate and thermal conductive rubber pad are in complete contact after screw installation, No hollow space is allowed. After welding, please do not let the heat conduction silicon grease, oil... to the luminous surface, dirt can be removed with an air gun, do not use sulfur, chlorine element liquid or washing board water to clean, Air gun pressure: 0.5mpa, time 1-2 seconds, distance: more than 20cm apart. In order to prevent external substances from entering the interior of the LED and causing damage to the LED, the environment and kit used must have a single bromine element content of less than 900PPM, a single chlorine element content of less than 900PPM, a total bromine and chlorine element content of less than 1500PPM, and sulfur and compound components must not exceed 100PPM.

3. Electrostatic Protection

This product is sensitive to static electricity, so effective protective measures must be taken when using this product to effectively prevent the damage of LED light source from static electricity and surge. When the high voltage current generated by static electricity exceeds the maximum rating of LED light source, the LED light source will be damaged or even completely invalid. Therefore, Customers should take effective measures to prevent static electricity and surge when using the products. Suggested grounding resistance is 10Ω or less.

4. Over-temperature, over current protection

Do not press the luminous silicon surface at any time to avoid bad effect or even ineffective to the COB. It is recommended to design grounding circuit for the whole lamp design.



The working humidity is between 50% and 80%, and the working environment is between -10°C and 85°C, otherwise, there will be hidden dangers of electrostatic breakdown and large current impact. When using this product, please ensure that it is used within the maximum rating (maximum current and Tc and glue surface temperature) specified in this specification. Any adverse consequences arising from failure to comply with the maximum rating and description of the product specifications shall not be covered by the warranty.

5. Thermal desing

A good use effect of LED light source depends on the thermal resistance of LED light source, external thermal resistance, power loss and ambient temperature.

High junction temperature of LED will affect the light flux and the working life of the light source. Full consideration of these factors is highly recommended in heat dissipation design.