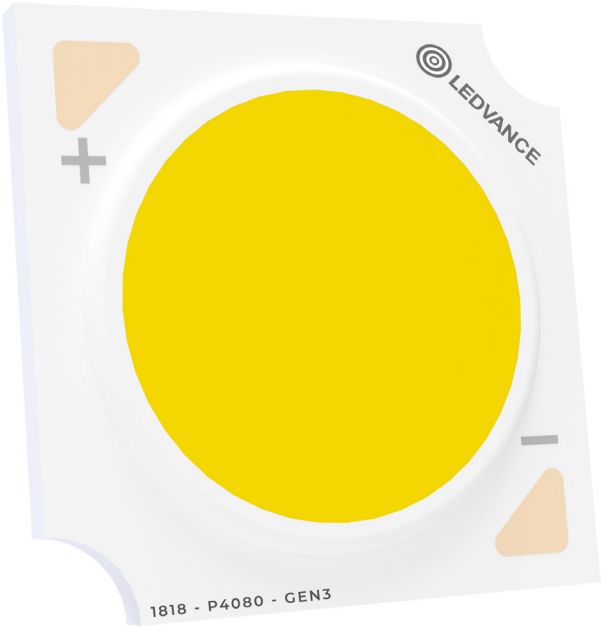
PRODUCT DATASHEET
LVCOB PFM-165-1818-GEN3

COB LED PERFORMANCE 165W 1818 GEN3



AREAS OF APPLICATION

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

PRODUCT BENEFITS

- Good consistency of light color, high flux, 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
- ANSI standards

TECHNICAL DATA

Basic Parameters

Model	CCT	RA	R9	Luminous Flux(LM)			Typ. Lumens (LM/W)	Typ. Current (mA)	Thermal Resistance Rj (°C/W)
		Min.	Min.	Tj=85°C		Tj=25°C	Tj=25°C		
				Min.	Typ.	Typ.			
PFM-165-1818-P2270-GEN3	2200K	70	-	9357	10170	11301	132	1620	0.09
PFM-165-1818-P4070-GEN3	4000K	70	-	11462	12459	13844	163	1620	0.09
PFM-165-1818-P5070-GEN3	5000K	70	-	11714	12733	14148	162	1620	0.09
PFM-165-1818-P6570-GEN3	6500K	70	-	11091	12055	13395	164	1620	0.09
PFM-165-1818-P2780-GEN3	2700K	80	0	10147	11030	12255	144	1620	0.09
PFM-165-1818-P3080-GEN3	3000K	80	0	10681	11610	12900	152	1620	0.09
PFM-165-1818-P3580-GEN3	3500K	80	0	11002	11958	13287	157	1620	0.09
PFM-165-1818-P4080-GEN3	4000K	80	0	11215	12191	13545	160	1620	0.09
PFM-165-1818-P5080-GEN3	5000K	80	0	11162	12132	13481	159	1620	0.09
PFM-165-1818-P5780-GEN3	5700K	80	0	11108	12074	13416	158	1620	0.09
PFM-165-1818-P6580-GEN3	6500K	80	0	11055	12016	13352	157	1620	0.09
PFM-165-1818-P2790-GEN3	2700K	90	50	8534	9276	10307	121	1620	0.09
PFM-165-1818-P3090-GEN3	3000K	90	50	9079	9869	10965	129	1620	0.09
PFM-165-1818-P3590-GEN3	3500K	90	50	9442	10263	11404	134	1620	0.09
PFM-165-1818-P4090-GEN3	4000K	90	50	9896	10757	11952	141	1620	0.09
PFM-165-1818-P5090-GEN3	5000K	90	50	9851	10707	11897	140	1620	0.09
PFM-165-1818-P5790-GEN3	5700K	90	50	9805	10658	11842	140	1620	0.09
PFM-165-1818-P6590-GEN3	6500K	90	50	9760	10609	11787	139	1620	0.09

Device tolerance

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

TECHNICAL DATA

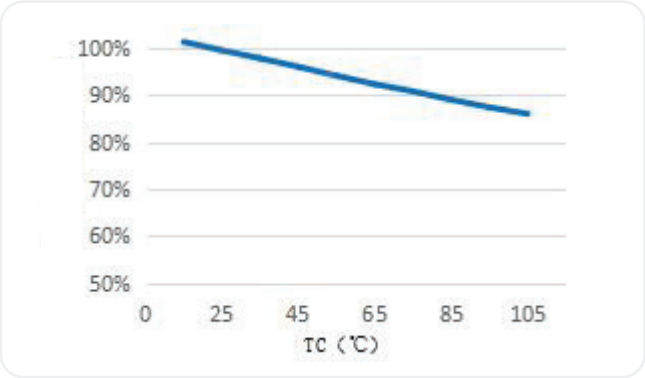
Limit Parameters

Parameters	Symbol	Min	Typ	Max	Unit
Forwad V	Vf	48	52.4	58	V
Forwrd A	If	-	1620	3000	mA
Power	Pi	-	84.8	174	W
Junction Temp	Tj	-	-	150	°C
Attractions (HBM)	-	-	-	8000	V
View Angle	2 0 1/2	-	120	-	Degrees
Operation Temperature	Top	-20	-	+85	°C
Storage Temperature	Tst	-40	-	+100	°C
Welding Temperature	Tsol	-	-	350	°C

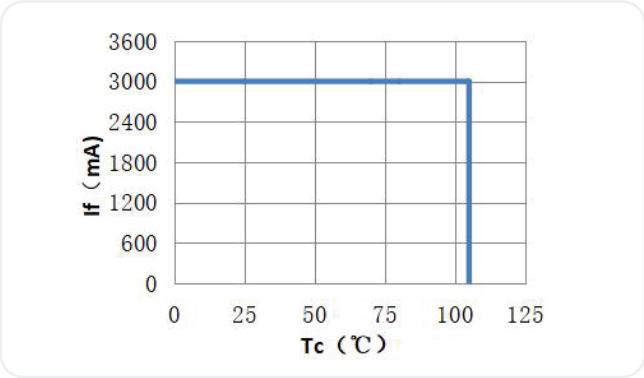
- Ta=25°C Bonding pad Tc≤85°C. In actual condition, silica gel surface temperature of ≤130°C

RELIABILITY TEST CURVE

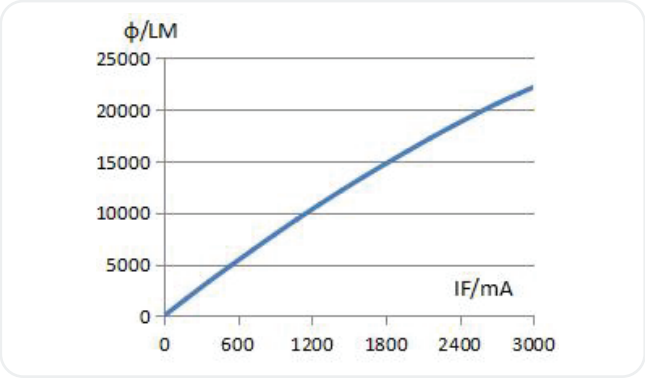
Temperature vs Lumen



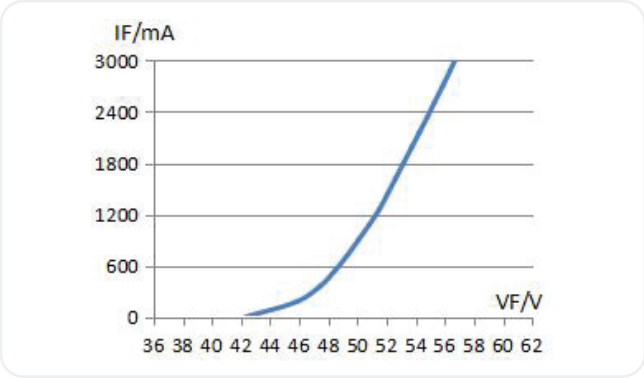
TC vs IF Curve



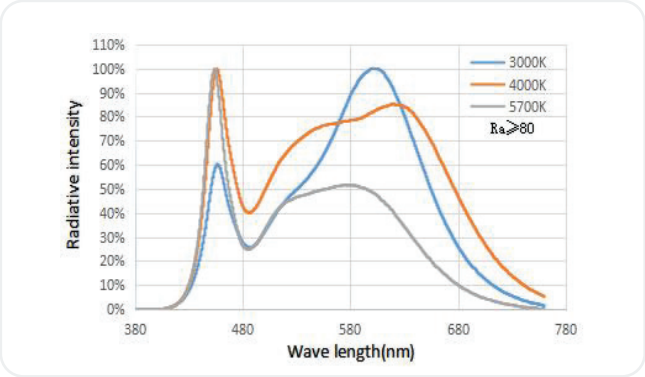
Current vs Lumen

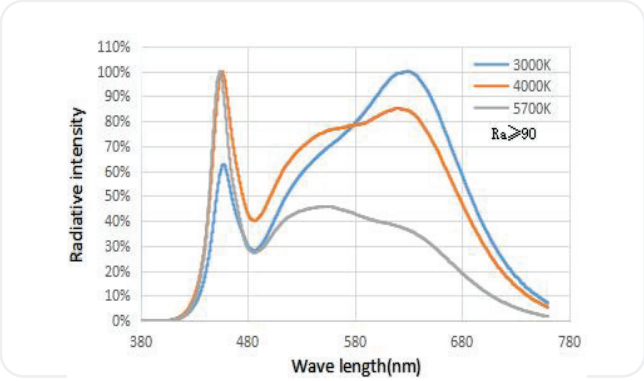


Voltage vs Curve

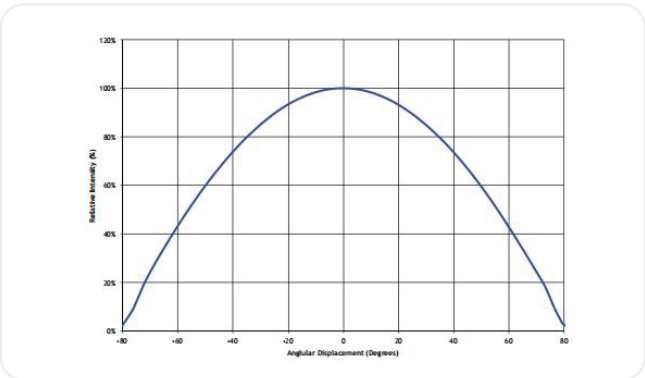


Relative Spectral Curve

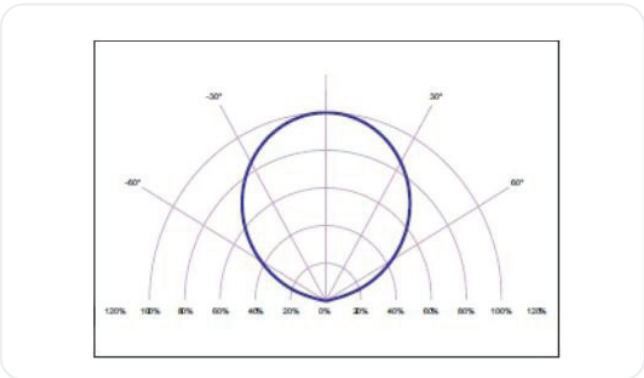




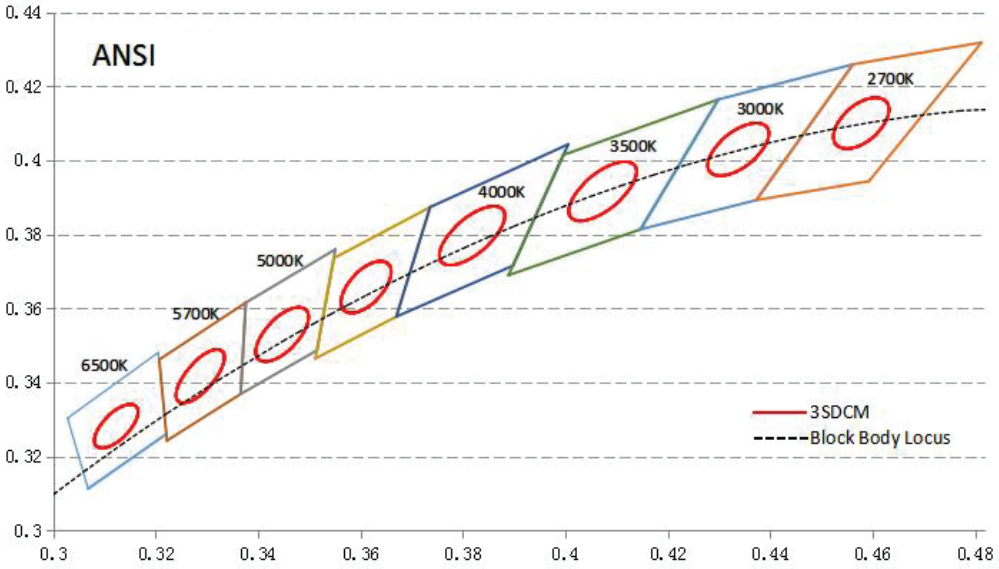
Light Distribution Diagram



Voltage vs Curve



White Bins On CIE-1931



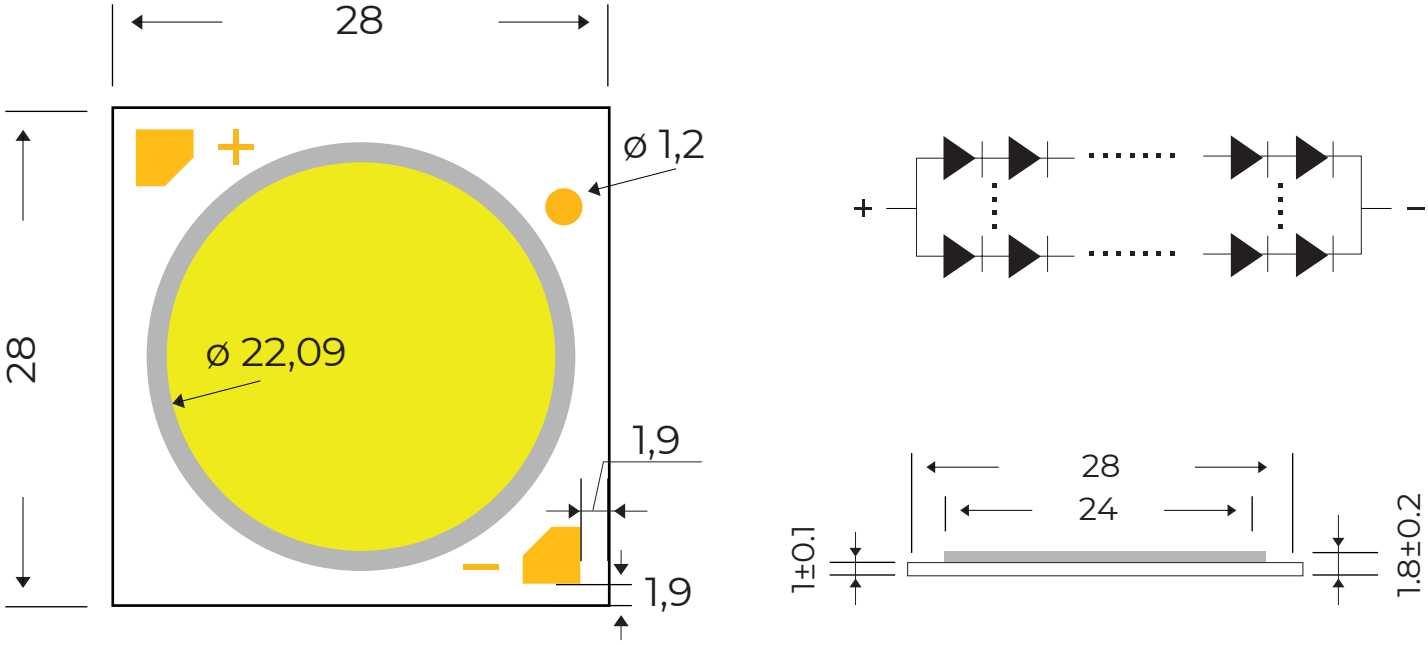
Color Temperature and BIN

CT	2700K	3000K	3500K	4000K	4500K	5000K	5700K	6500K
CT Range	2660-2790	2970-3125	3350-3575	3850-4110	4350-4640	4835-5235	5440-5920	6250-6850
CT Factor	±65	±77.5	±112.5	±130	±145	±200	±240	±300
Bin No	L3	M3	N3	O3	P3	Q3	R3	T3

CCT	Chromaticity Tolerances	Central Point Coordinates		Long Axis A	Short Axis B	Rotation Angle
		X	Y			
2700K	3SDCM	0.4578	0.4101	0.00774	0.00411	57.28
3000K	3SDCM	0.4338	0.403	0.00834	0.00408	53.17
3500K	3SDCM	0.4073	0.3917	0.00951	0.00417	52.97
4000K	3SDCM	0.3818	0.3797	0.00939	0.00402	54.00
4500K	3SDCM	0.3611	0.3658	0.00774	0.0036	61.00
5000K	3SDCM	0.3447	0.3553	0.00822	0.00354	59.62
5700K	3SDCM	0.3287	0.3417	0.0081	0.003	61.00
6500K	3SDCM	0.3123	0.3282	0.00669	0.00285	58.38

- Product color sorting test according to standard current, if using with other current, light/color will change.
- If customers need specific IEC standards, please let us know before placing an order. We will adjust the standards to meet your special requirements.

MECHANICAL DIMENSION



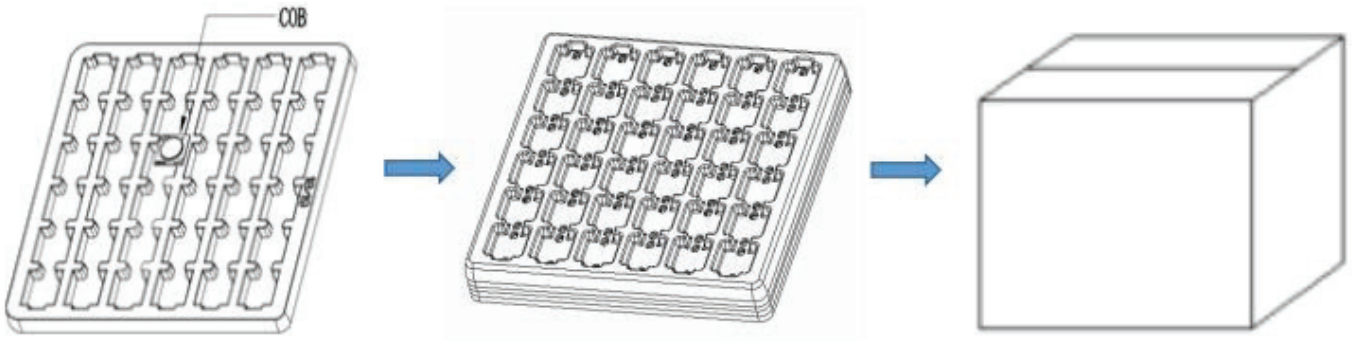
ENCODING

LVCOB - PDF - 006 - 1202 - P4080 - GEN3

- Generation: GEN /.../ GEN3
- CRI: 70:70 CRI /.../ 90:90CRI
- 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

MANNER OF PACKING

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



Plastic Tray

Vacuum Bag Packing

Outer Boxes

Box Size	Lengh (cm)	Width (cm)	Height (cm)
Big	38.5	38.5	23
Medium	33	23	19

PN Base	PCS / Tray	Tray / Bag	PCS / Bag	Bag / Pcs / Big Box	Bag / Pcs / Medium Box
PFM-006-1202	36	5	180	24/4320	10/1800
PFM-009-1203	36	5	180	24/4320	10/1800
PFM-040-1206	25	5	125	24/3000	10/1250
VAL-050-1208	25	5	125	24/3000	10/1250
PFM-054-1208	25	5	125	24/3000	10/1250
PFM-165-1818	16	5	80	26/2080	10/800

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

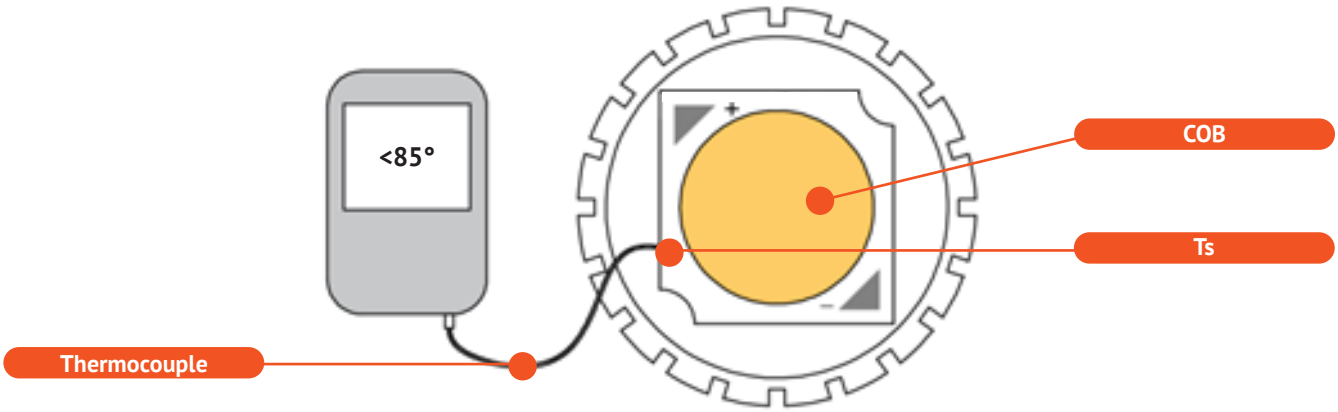
When welding, the soldering iron should be properly grounded. When manual welding, the temperature of the iron must be lower than 350°C, welding time shall not exceed 3 seconds and shall be cooled to room temperature before welding again. When welding, no external force should be put on the colloidal 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 thermalresistance, 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.