DongFeng Series

CA2016L 5W Cool White (Gen2)

DATASHEET

DongFeng series delivers unique brilliant light with outstanding efficiency and elegant design. Professional chip bonding process is applied which contributes extremely low thermal resistance performance. It also provides distinct and uniform light pattern by adopting one piece phosphor sheet. And automotive grade material and strict quality control during the whole process flow make it highly robust and stable to withstand extreme environment conditions and wide range of temperature change. With DongFeng series, you will start to experience and enjoy the excellent adventure during driving time.

Features

- Package: aluminum nitride ceramic
- Excellent brightness: 440 lm @ 1A
- With an electrically isolated thermal pad structure
- Automotive grade material and cost effective
- Color: according to ECE/SAE
- Superior reliability performance and lifetime
- Easy to design your own type of array
- AEC-Q102 compliant

Applications

- Daytime running light (DRL)
- Fog lamp
- Head-up display (HUD)
- Adaptive driving beam (ADB)
- Bicycle/motorcycle headlamp
- High beam/low beam for headlamp
- Exterior automotive lamp

Table of Contents

General Information

Ordering Code Format

2	D	F 1	0 5	C W	x x	F 1 1	x x x
X1	X2	X3-X4	X5-X6	X7-X8	X9-X10	X11-X13	X14-X16

X1		X2		X3-X4		X5-X6	
Item		Emitter Series		QTY of Chip(s)		Emitter Power	
2	Emitter	D	DongFeng	F1	1-Chip	05	5W

X7-X8		X9-X10		X11-X13		X14-X16	
Emitting Color		Internal Code		Ceramic Size		Serial No.	
CW	Cool White	-	-	F11	20 x 16	-	-

Product Code Information

Part No.	Description	Luminous Flux, Iv [lm] I_F = 1,000 mA
2DF105CW81F11011	CA2016L 5W Cool White	440

Absolute Maximum Ratings (T_J = 25℃)

Parameter		Symbol	Values	Unit
DC Forward Current [1]	(Min.)	I_F	50	mA
	(Max.)		1,500	mA
Reverse Voltage [2]		V_R	-	V
LED Junction Temperature		T_J	150	℃
LED Operating Temperature		T_{opr}	-40~+135	℃
LED Storage Temperature		T_{stg}	-40~+135	℃
HBM ESD Sensitivity (class 3B) [3]		V_B	8	kV

NOTE:
1. Proper current derating must be observed to maintain junction temperature below the maximum.
2. LEDs are not designed to drive in reverse bias.
3. According to ANSI/ ESDA/ JEDEC JS-001.

Characteristics (T_J = 25 °C; I_F = 1,000 mA)

Parameter		Symbol	Values	Unit
Luminous Flux (typ.) [4]		Iv	440	lm
Chromaticity Coordinate (typ.) [5]		CIE-x	0.325	-
		CIE-y	0.345	-
Real Thermal Resistance [6]	(typ.)	$R_{thJS\ real}$ (Junction/Solderpoint)	3.00	K/W
	(max.)		4.00	K/W
Electrical Thermal Resistance [6] with efficiency η_e = 39 %	(typ.)	$R_{thJS\ elec.}$ (Junction/Solderpoint)	1.83	K/W
	(max.)		2.44	K/W
Viewing Angle (typ.) [7]		2ϕ	120	Degree
Forward Voltage (typ.) [8]		V_F	3.2	V
Moisture Sensitivity Level (IPC/JEDEC STD-020) [9]		-	Level 2	-

NOTE:
4. Luminous flux is measured with accuracy of ±10%.
5. CIE-x/y tolerance ±0.005.
6. Thermal resistance is tested with copper MC-PCB.
7. 2ϕ is the off-axis angle where the luminous intensity is half of the axial luminous intensity.
8. Forward voltage measurement allowance is ±0.06 V.
9. According to IPC/ JEDEC STD-020.

Brightness Codes (T_J = 25 ℃; I_F = 1,000 mA) [10]

Code	Min. Luminous Flux, Iv [lm]	Max. Luminous Flux, Iv [lm]
A0	350	380
B0	380	410
C0	410	440
D0	440	470

NOTE:

10.The luminous flux performance is guaranteed within published operating conditions. Edison Opto maintains a tolerance of ±10% on flux measurements.

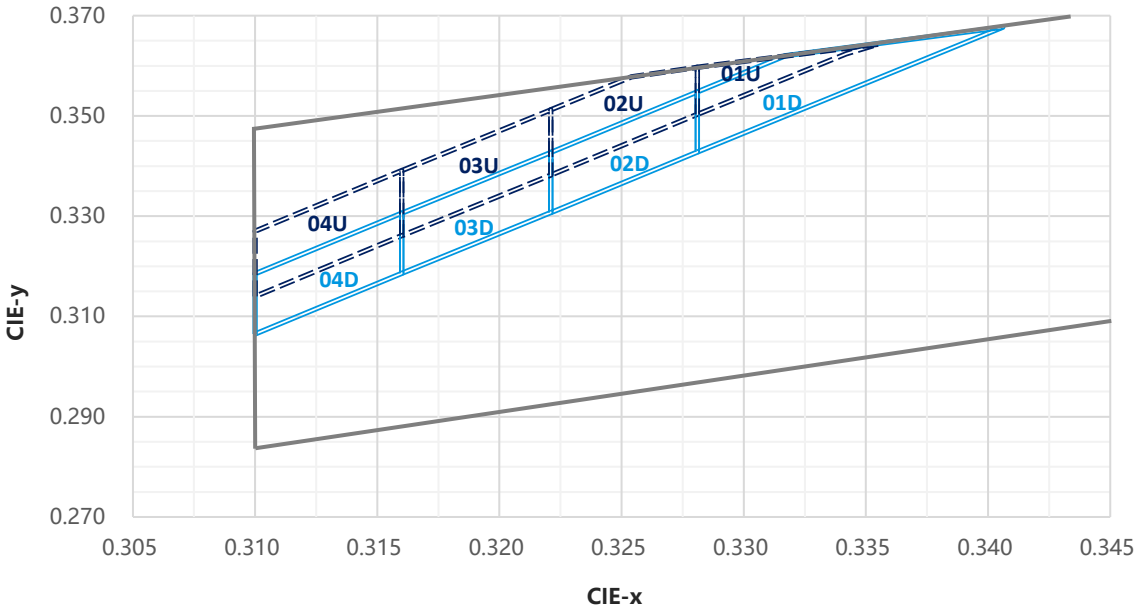
Forward Voltage Codes (T_J = 25 ℃; I_F = 1,000 mA) [11]

Code	Min. Forward Voltage, V_F [V]	Max. Forward Voltage, V_F [V]
V23	2.75	3.00
V31	3.00	3.25
V32	3.25	3.50

NOTE:

11. Forward voltage measurement allowance is ±0.06 V.

Chromaticity Coordinate Codes (T_J = 25 °C; I_F = 1,000 mA) [12]



Code	Cx	Cy
04U	0.3100	0.3140
	0.3100	0.3270
	0.3160	0.3391
	0.3160	0.3261
04D	0.3100	0.3065
	0.3100	0.3185
	0.3160	0.3306
	0.3160	0.3186
03U	0.3160	0.3261
	0.3160	0.3391
	0.3221	0.3512
	0.3221	0.3382
03D	0.3160	0.3186
	0.3160	0.3306
	0.3221	0.3427
	0.3221	0.3307

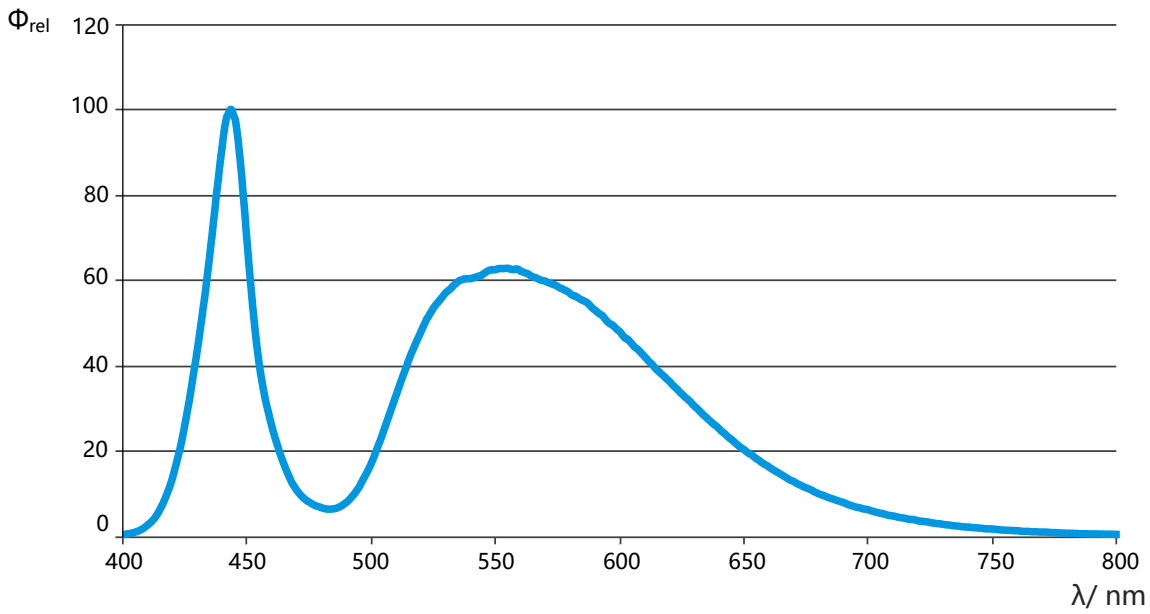
Code	Cx	Cy
02U	0.3221	0.3382
	0.3221	0.3512
	0.3254	0.3578
	0.3281	0.3597
	0.3281	0.3503
02D	0.3221	0.3307
	0.3221	0.3427
	0.3281	0.3548
	0.3281	0.3428
01U	0.3281	0.3503
	0.3281	0.3597
	0.3355	0.3643
	0.3342	0.3624
01D	0.3281	0.3428
	0.3281	0.3548
	0.3317	0.3620
	0.3406	0.3677

NOTE:
12. CIE-x/y tolerance: ±0.005.

Characteristic Curves [13] [14] [15]

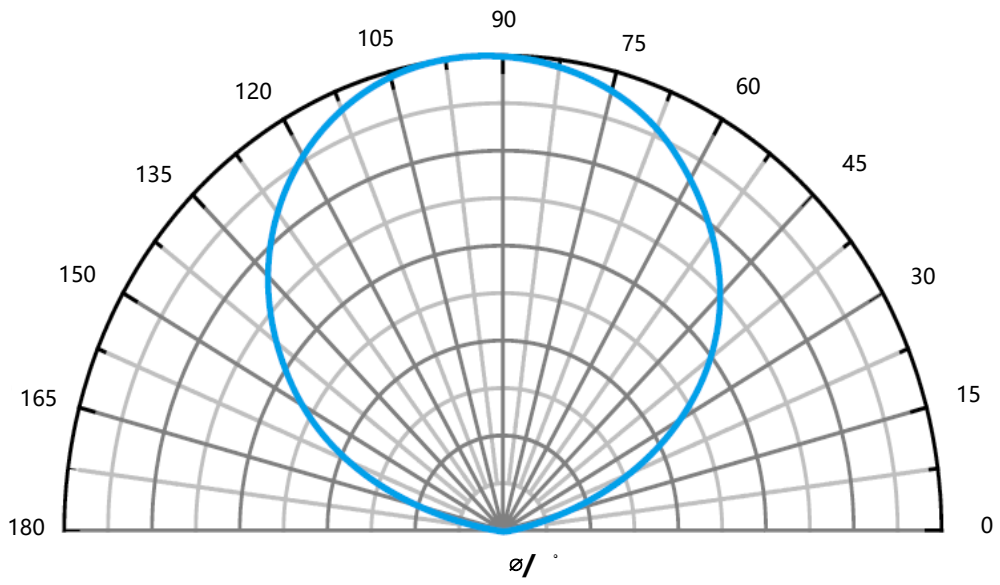
Relative Spectral Emission

$\Phi_{rel} = f(\lambda)$; I_F = 1,000 mA; T_J = 25 °C



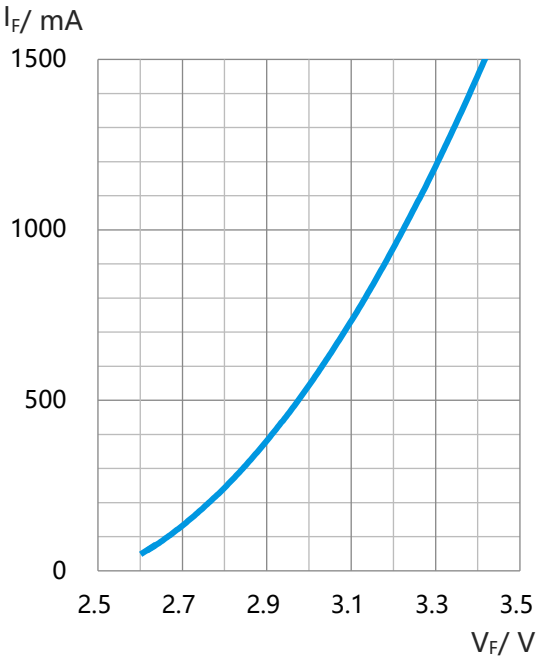
Radiation Characteristics

$I_{rel} = f(\phi)$; T_J = 25 °C



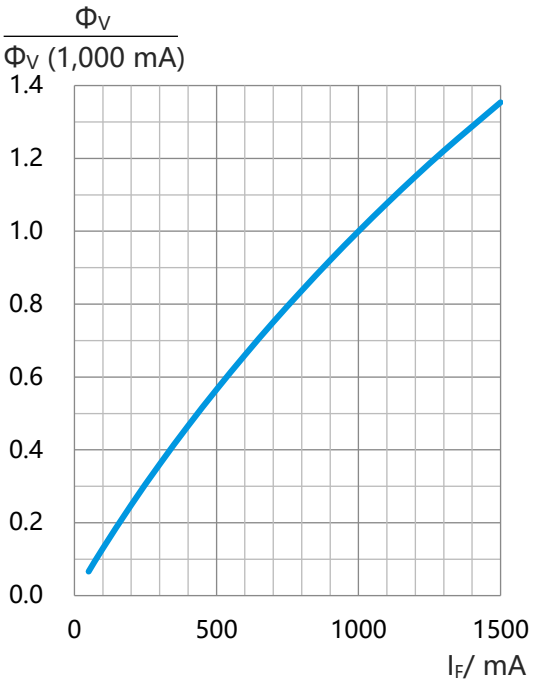
Forward Current

$I_F = f(V_F)$; T_J = 25 ℃



Relative Luminous Flux

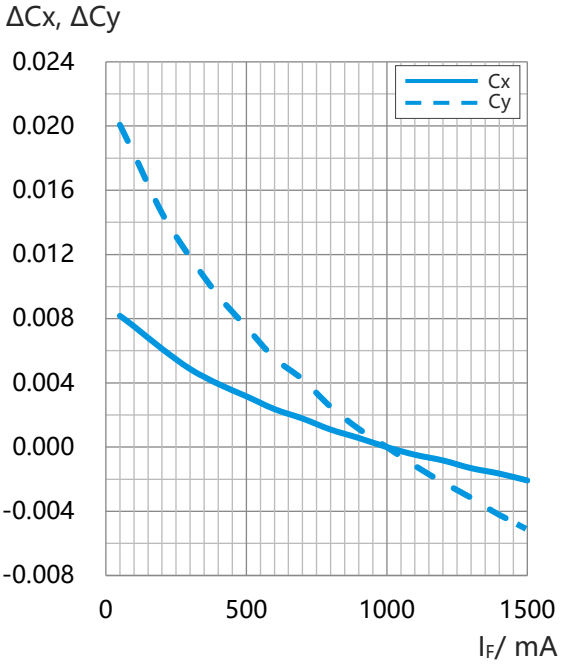
$\Phi_V/\Phi_V(1{,}000\ mA) = f(I_F)$; T_J =25 ℃



Chromaticity Coordinate Shift

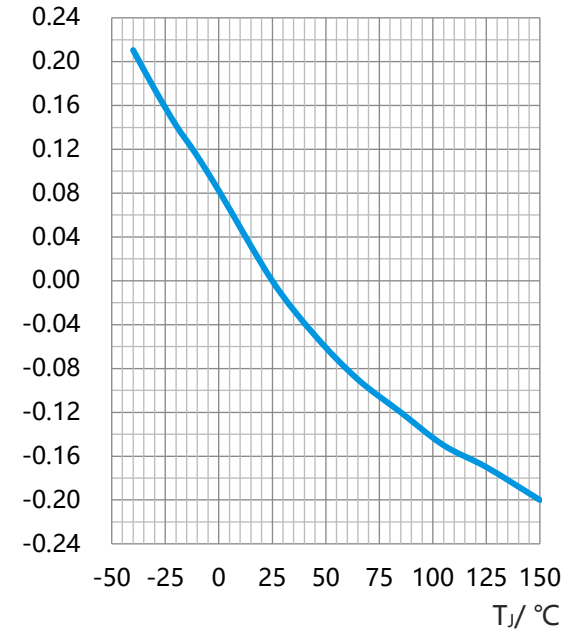
$\Delta Cx = Cx\text{-}Cx\ (1{,}000\ mA) = f(I_F)$; T_J = 25 ℃

$\Delta Cy = Cy\text{-}Cy\ (1{,}000\ mA) = f(I_F)$; T_J = 25 ℃



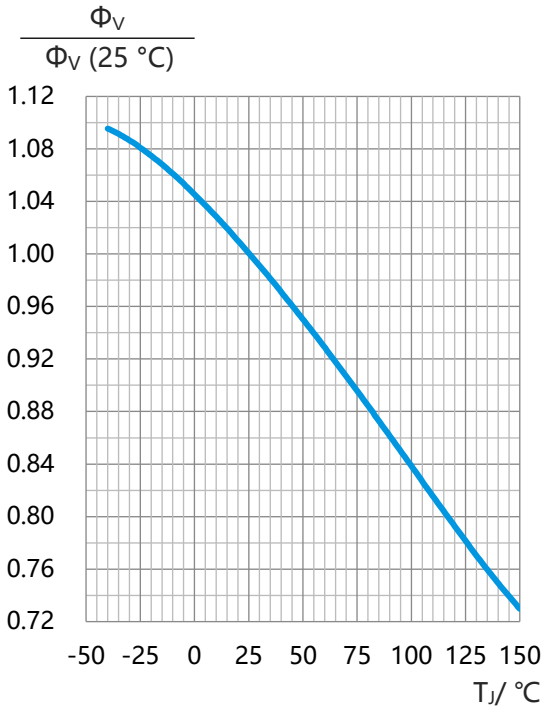
Relative Forward Voltage

$\Delta V_F = V_F - V_F(25\ ℃) = f(T_J);\ I_F = 1{,}000\ mA$



Relative Luminous Flux

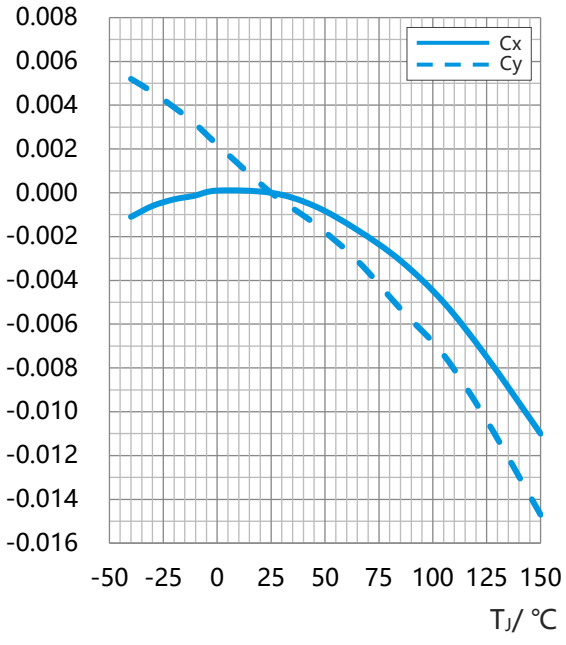
$\Phi_V/\Phi_V(25\ ℃) = f(T_J);\ I_F = 1{,}000\ mA$



Chromaticity Coordinate Shift

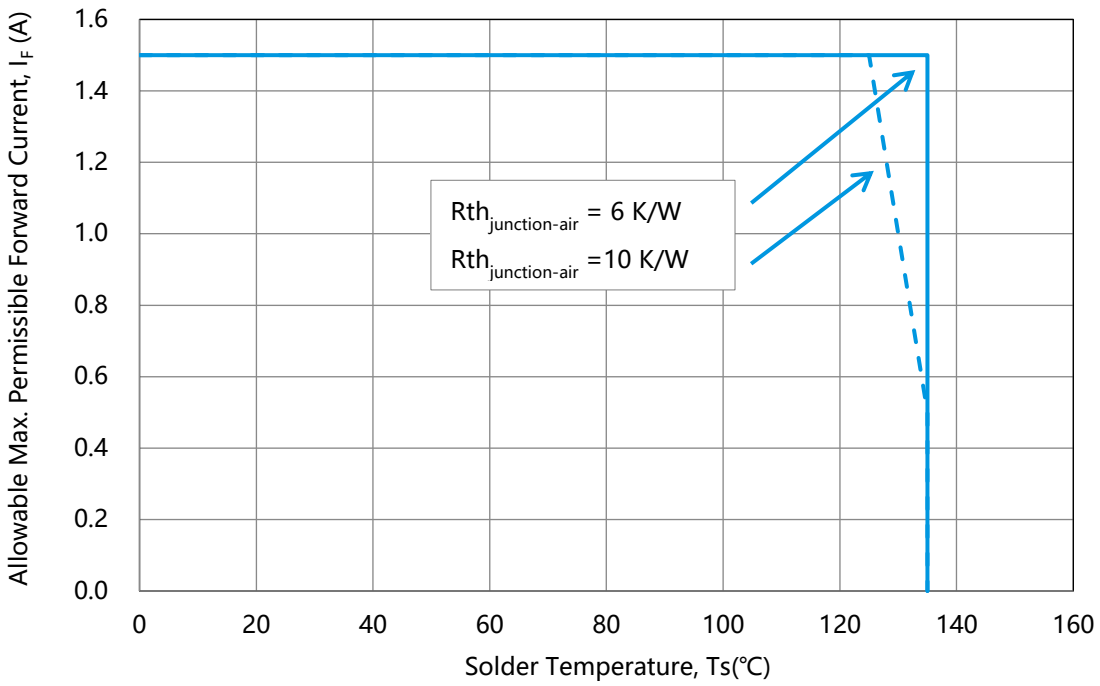
$\Delta Cx = Cx - Cx\ (25\ ℃) = f(T_J)\ ;\ I_F = 1{,}000\ mA$

$\Delta Cy = Cy - Cy\ (25\ ℃) = f(T_J)\ ;\ I_F = 1{,}000\ mA$



Allowable Maximum Permissible Forward Current

$I_F = f(T_s)$

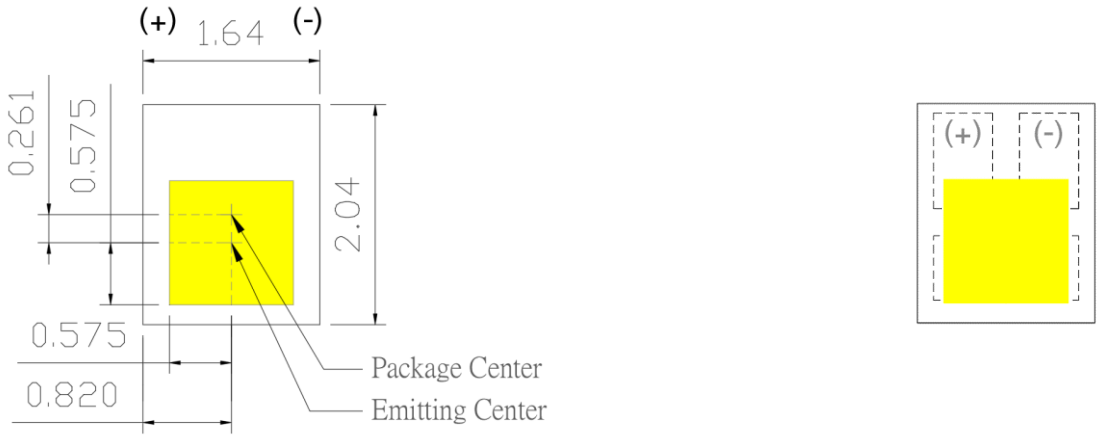


NOTE:

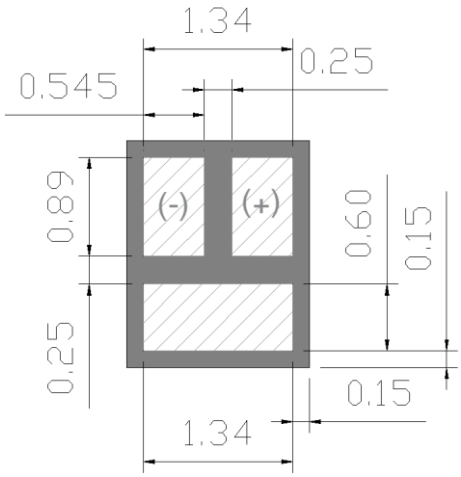
13. The characteristics curves shown above are for reference only and are not guaranteed.
14. Operating current should be determined considering the possible maximum ambient temperature and its corresponding junction temperature. Thermal resistance of the whole design will also significantly affect the maximum permissible current allowed.
15. Performance graphs are illustrative only; actual results require validation.

Mechanical Dimensions

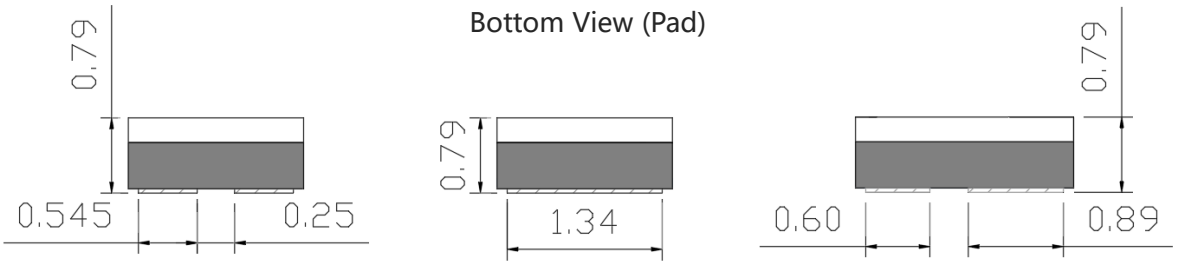
Component



Top View



Bottom View (Pad)



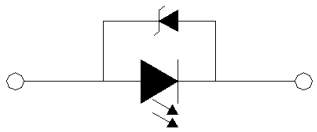
Side View

Further information:

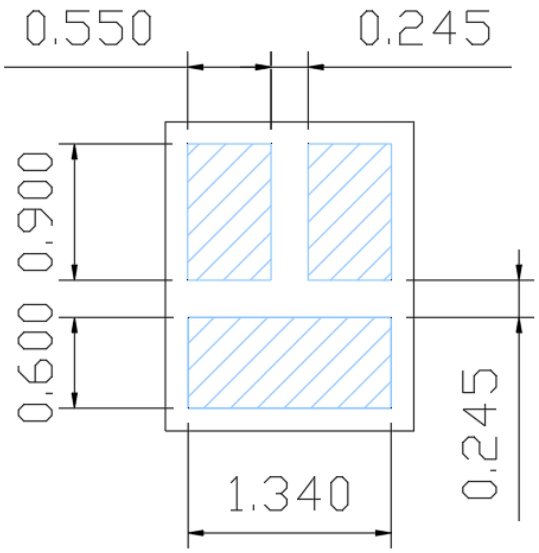
1. Unit: mm.
2. Tolerance (unless otherwise specified): ±0.10 mm.
3. Drawings are not to scale.
4. Approximate weight: 8.8 mg.

Circuit

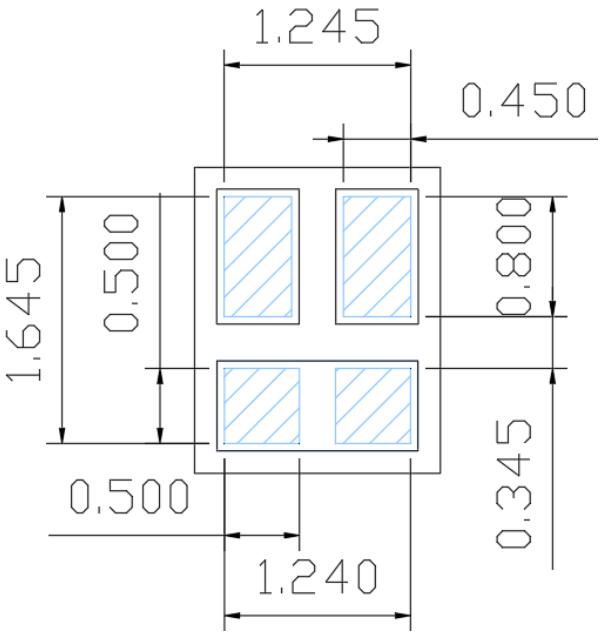
Anode (+) Cathode (-)



Recommended PCB Solder Pad



Recommended Stencil Mask



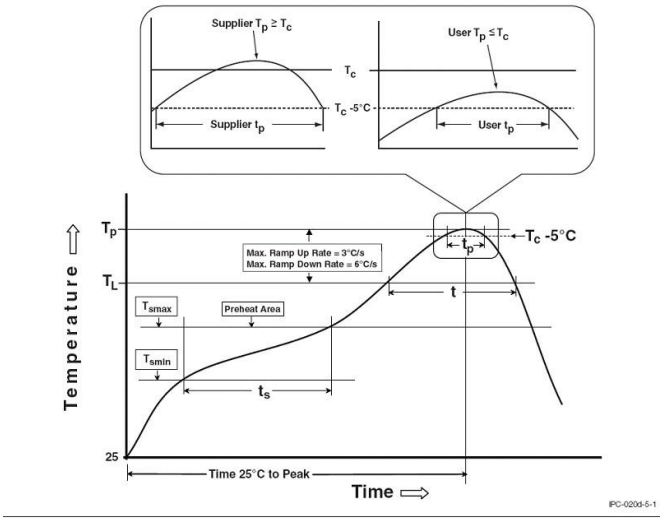
Further information:

1. Unit: mm.
2. Drawings are not to scale.

Reflow

Classification Reflow Profiles

The following reflow profile is from IPC/JEDEC J-STD-020D which provided here for reference.

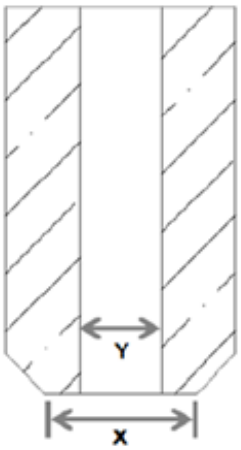


Profile Feature	Pb-Free Assembly
Preheat & Soak	
Temperature min (Tsmin)	150 ℃
Temperature max (Tsmax)	200 ℃
Time (Tsmin to Tsmax) (ts)	60-120 seconds
Average ramp-up rate (Tsmax to Tp)	3 ℃/second max.
Liquidous temperature (TL)	217 ℃
Time at liquidous (tL)	60-150 seconds
Peak package body temperature (Tp)	255 ℃ ~260 ℃
Classification temperature (Tc)	260 ℃
Time (tp) within 5 ℃ of the specified classification temperature (Tc)	30 seconds
Average ramp-down rate (Tp to Tsmax)	6 ℃/second max.
Time 25 ℃ to peak temperature	8 minutes max.

1. Tolerance for time at peak profile temperature (tp) is defined as a supplier minimum and a user maximum.
2. Tolerance for peak profile temperature (Tp) is defined as a supplier minimum and a user maximum.
3. Maximum temperature of SMT process must be under 300°C, and the duration at 300°C must be within 10 seconds.
4. Prior to the SMT process, the LED component shall be confirmed whether or not there is damping, so that any product failure caused during the SMT process can be prevented. (For more conditions and details of product storage, please refer to the information of product storage.)
5. This LED component is applicable for reflow profile onto the PCB board. We will not guarantee the reliability if other methods are implemented.
6. The reflow process of LED component shall not exceed three times. Re-soldering should be avoided after LEDs have been soldered. Must check all the characteristics of LEDs carefully before and after re-soldering if repair is unavoidable.
7. Should the LED product require second soldering, the re-work must be implemented with a hot plate. Moreover, the LED product shall be confirmed with well characteristics prior to usage.
8. Should flock, dirt and flux appear on the surface of LED component (emitting area and white silicone surface), cotton swabs dipped in a slight amount of IPA can be used to clean the component surface (no water, oil, organic solvent can be used) and awareness must be implemented on whether or not there is residual flock. In addition, no ultrasonic wave can be used to clean the component, so internal damage to the component can be prevented.
9. Use a gradual cooling slope when lowering the peak temperature to avoid rapid cooling.
10. Do not cool the LEDs rapidly right after soldering.

Pick and Place

1. CA2016 series is compatible for all kind of SMT instrument.
2. Using the recommended nozzle design can be more accurate during the SMT process.
3. The use of following specifications for designing the pick and place are recommended, which can pick and place the LED component more accurately.
4. The emitting surface of the LED component is a piece of glass phosphor sheet, thus the specifications and process parameters for pick and place shall be selected with caution, so that crack, scratch, deformation of the glass phosphor sheet that further affects the performance (shift of color temperature, insufficient brightness) and reliability of the LED component can be prevented.

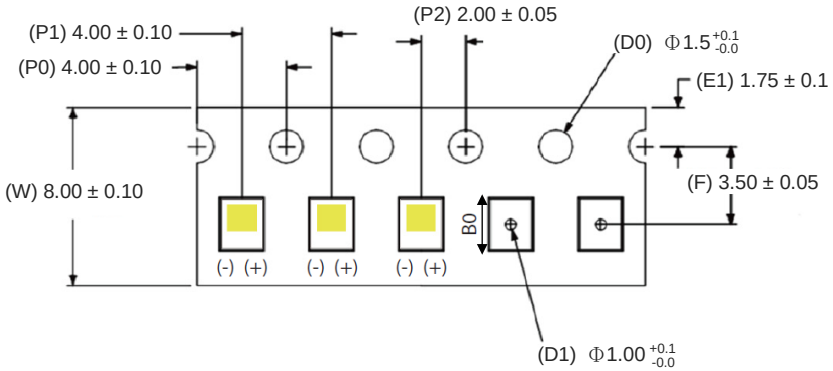


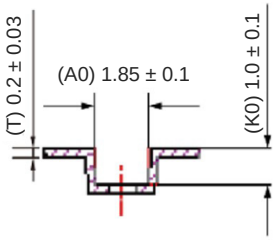
Recommended Nozzle Specification

Parameter	Spec.
Outside Diameter (x)	Ø 1.3
Inside Diameter (y)	Ø 0.9
Material	Ceramic

Product Packaging Information

Tapping





Tape Dimensions

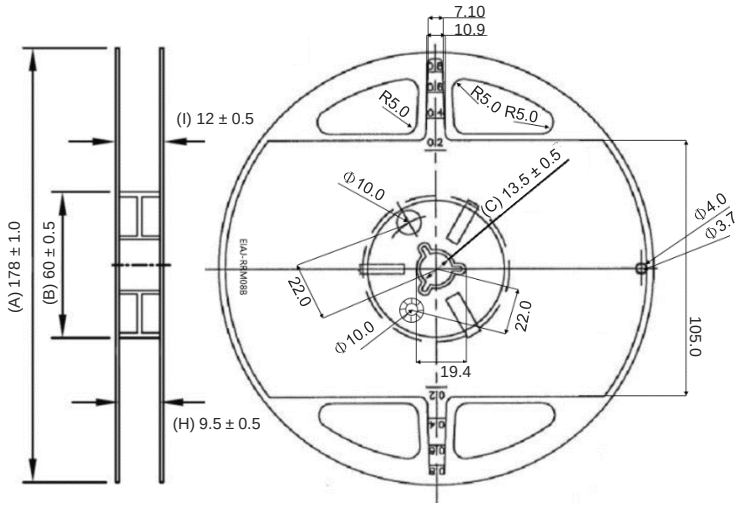
W	E1	F	P0	P1	P2
8.00 ± 0.10	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05

D0	D1	A0	B0	K0	T
Φ1.50 +0.10 - 0.00	Φ1.00 + 0.10 - 0.00	1.85 ± 0.10	2.30 ± 0.10	1.00 ± 0.10	0.20 ± 0.03

Further information:

1. Unit: mm.
2. Tolerance (unless otherwise specified): ±0.10 mm.
3. Drawings are not to scale.
4. Dimensions according to EIA-481.
5. Starting with 50 PCS empty, and 150 PCS empty at the last.
6. Pitch tolerance over any 10 P0 pitches is ±0.2 mm, unless otherwise specified.

Reel



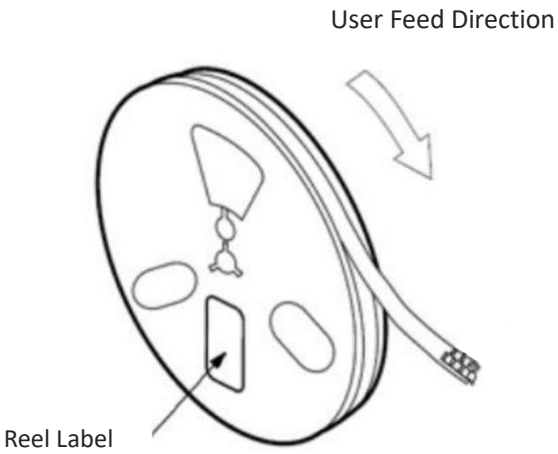
Further information:

1. Unit: mm.
2. Tolerance (unless otherwise specified): ±0.50 mm.
3. Drawings are not to scale.
4. Dimensions according to EIA-481.

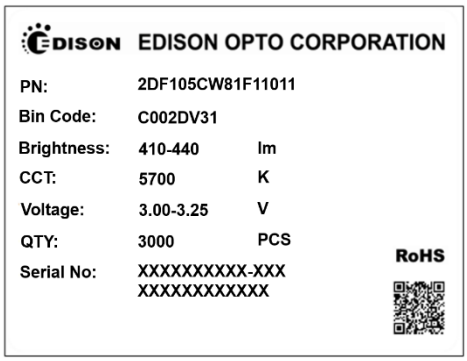
Reel Dimensions

A	B	C	H	I	Pieces per Reel
178 ± 1.0	60 ± 0.5	13.5 ± 0.5	9.5 ± 0.5	12 ± 0.5	≤3,000

SMT Feeder Direction



Product Label



Label information

PN: Order Code
Bin Codes: Bin Group
Brightness: Luminous Flux
CCT: Color Temperature
Voltage: Forward Voltage
QTY: Packing Quantity
Serial No: Lot Number

Bin Group Format

X X	X X X	X X X
X1-X2	X3-X5	X6-X8
Brightness Code	Color Code	Forward Voltage Code

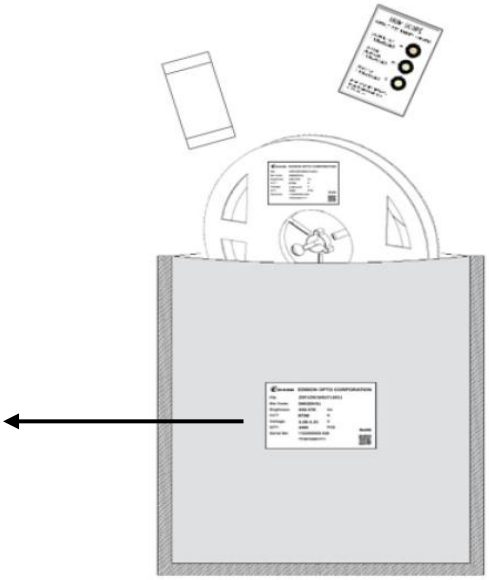
Packaging

Reel and anti-static bag labels

EDISON OPTO CORPORATION

PN:	2DF105CW81F11011	
Bin Code:	C002DV31	
Brightness:	410-440	lm
CCT:	5700	K
Voltage:	3.00-3.25	V
QTY:	3000	PCS
Serial No:	XXXXXXXXXX-XXX XXXXXXXXXXX	

RoHS

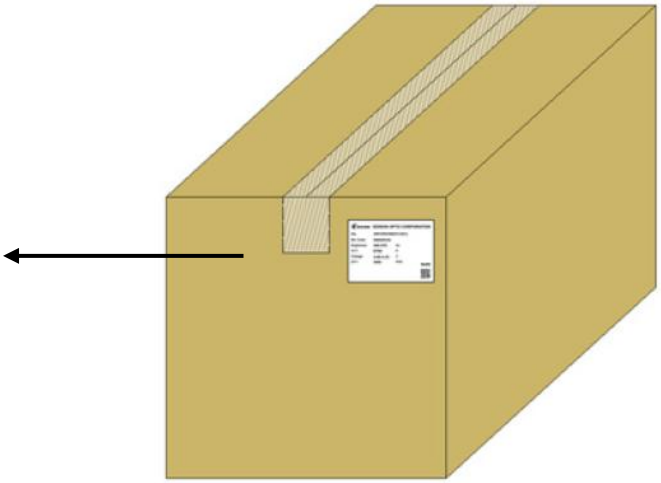


Package label

EDISON OPTO CORPORATION

PN:	2DF105CW81F11011	
Bin Code:	C002DV31	
Brightness:	410-440	lm
CCT:	5700	K
Voltage:	3.00-3.25	V
QTY:	3000	PCS

RoHS



1. It is advisable to use the original packaging materials or equivalent during transit.
2. Avoid exposure to water, as the box is not water-resistant.

Storage Information

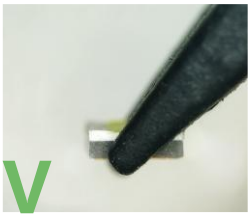
Conditions	Temperature	Humidity	Time	Remarks
Aluminum foil bag (sealed)	5~30 ℃	≦90 %	Within 1 year from delivery date	The aluminum foil bag is sealed with maintained integrity and there is no sign of vacuum relief.
Aluminum foil bag (unsealed)	5~30 ℃	≦60 %		The environmental conditions for storage shall be monitored.

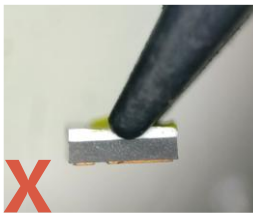
1. After the aluminum foil bag gets unsealed over a year or discoloration of the drying agents occurs, re-baking is required (preventing ambient temperature and moisture from affecting quality of the components and mounted piece). The entire roll of carrier tape shall be placed into the oven horizontally.
2. The storage environment shall be kept tidy and the environmental conditions for storage shall be monitored.
3. Long time exposure to sunlight or UV should be avoided; otherwise, it may cause the discoloration of materials.
4. The assembled PCB modules may not be stacked together, so broken packaging seal or internal failure of LED can be prevented.
5. Should the moisture card discolor after unsealing (possible vacuum relief to the packaging), the baking of the component is required for preventing impact on the product quality. (With reference to the baking treatment should be performed after unsealing and based on the following condition: 65±5 ℃ for 24 hours or above).
6. Be aware of the storage equipment (i.e., damp-proof cabinet), production environment or ESD protection for the operator. Prevent the component from ESD shock that may cause product failure.
   A. The personnel acquiring the LED component shall be equipped with anti-static bracelet, anti-static shoes, clean-room clothing (bracelet) and earth connection.
   B. The storage equipment (i.e., damp-proof cabinet) where the LED component is placed shall be ensured with an earth connection.
   C. The working area shall be provided with an anti-static desk (earth connection required) and anti-static fans.
   D. After suffering ESD damage, the LED component would cause quality abnormalities such as electrical leakage of the product (Ir), reduction in starting voltage or abnormal lumen decay.

Handling Manual

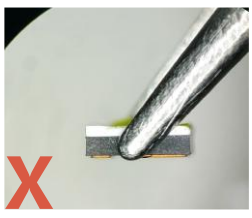
1. The emitting surface of the LED component is a piece of glass phosphor sheet, sealing by silicon. LED may be deformed or destructed if excessive force is applied. Crack, scratch, deformation of the glass phosphor sheet that further affects the performance (shift of color temperature, insufficient brightness) and reliability of the LED component can be prevented with special care.
2. Do not press the product; even a slight pressure may damage the product.
3. Should flock, dirt and flux appear on the surface of LED component (emitting area and white silicone surface), cotton swabs dipped in a slight amount of IPA can be used to clean the component surface (no water, oil, organic solvent can be used) and awareness must be implemented on whether or not there is residual flock. In addition, no ultrasonic wave can be used to clean the component, so internal damage to the component can be prevented.
4. Manually handling is not recommended, only vacuum pick and place should be used. When manually handling is unavoidable, please use the plastic tweezers instead of the metal ones. Avoid contacting to the white silicon structure which will cause damage to the package.
5. Avoid leaving fingerprints or grease on the glass phosphor sheet and white silicone.
6. Do not use adhesives or dissipation paste to attach the LED that outgas organic vapor.
7. Do not use any product with materials containing sulfur.
8. Do not assemble in humid environment or the conditions of containing oxidizing gas such as Cl, H_2S, NH_3, SO_2, NO_X, etc.

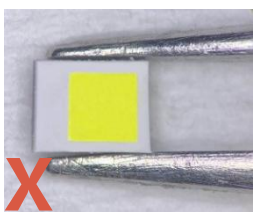
- Plastic Tweezers





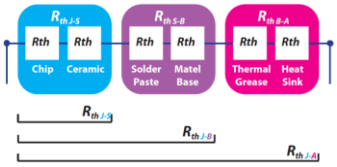
- Metal Tweezers





Thermal Management

A high temperature operation condition always easily causes the decrease of flux and the decay of LED dies. The highest operation temperature of a component is able to be found by the indication of junction temperature in its datasheet. The power dissipation ability, the ambient temperature of LED junction, environment, thermal path and its thermal resistance are the main parameters which affect the performance of a LED device. Therefore, the limitation of junction temperature has become an important issue when designing a LED product. The following paragraphs describe how to determine the junction temperature and a simple ideal to heat sink design. Thermal resistance is the temperature difference across a structure when a unit of heat energy flows through in unit time. For LEDs, temperature difference presents the temperature between a die's PN junction and package substrate. For the same package structure and operating condition, the smaller thermal resistance a LED has, the lower temperature of this LED. With lower operation temperature, a LED would keep its original performance for longer. By estimating the PN junction temperature, users may be aware that the thermal management had been well designed.



From basic thermal equation for thermal resistance: $Rth_{(J-A)} = \frac{\Delta T_{(J-A)}}{P_D}$

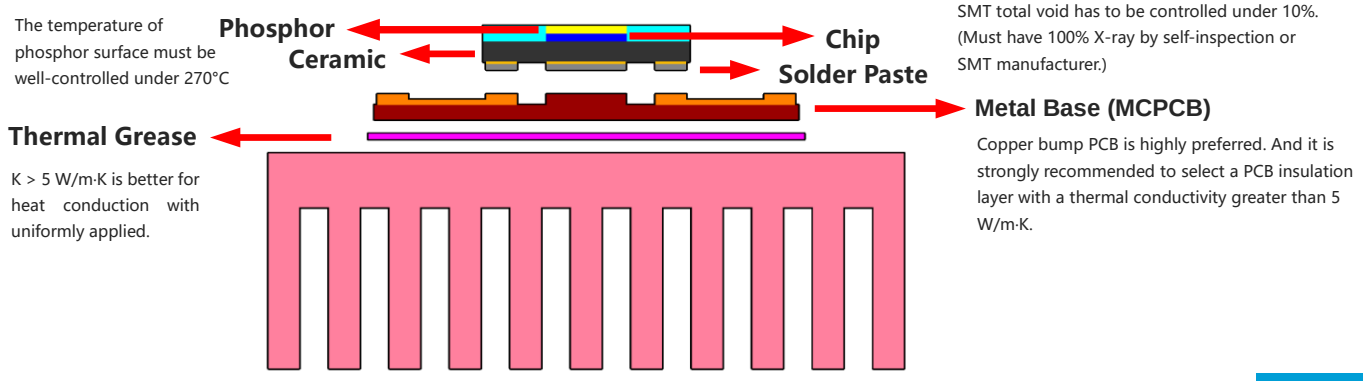
Therefore the junction temperature (T_J) is: $T_J = T_A + Rth_{(J-A)} \times PD$

which,

P_D: Power Dissipation = Forward Voltage (V_F) x Forward Current (I_F)

T_A: Ambient Temperature (assume 25℃)

$Rth_{(J-A)}$: Total Thermal Resistance = $Rth_{(J-S)} + Rth_{(S-B)} + Rth_{(B-A)}$

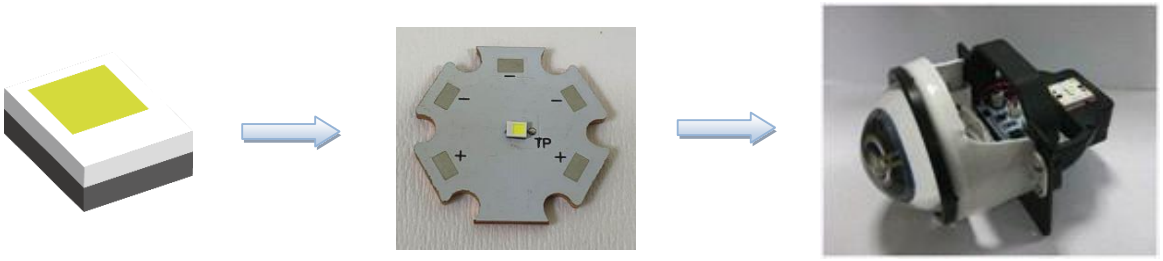


NOTE:

1. During designing, the temperature T_J upon overall thermal stability shall be ensured not to exceed 150℃ and the operating current can not exceed the allowable value.
2. While using the LED product, the overall structure for thermal conductivity shall be considered, so uneven paths for thermal conduction or high temperature of heat sink that speeds up product failure can be prevented.
3. When the LEDs are planned to operate at near maximum current, the temperature of PCB board should be measured before the optimized driving condition is decided.

Tips for Thermal Management

DongFeng products (e.g.: 5W) are not recommended to be operating without a heat sink. Through MCPCB, users may realize better performance.



For LEDs, choose an appropriate operation environment and conduct the heat to the air after light on LEDs may maintain the better performance and lifetime. Four major thermal paths are as follows:

From heat source (component) to heat sink. (By conduction)

Conduction within the heat sink to its surface. (By conduction)

Transfer from the surface to the surrounding air. (By convection)

Emit heat from the heat sink surface. (By radiation)

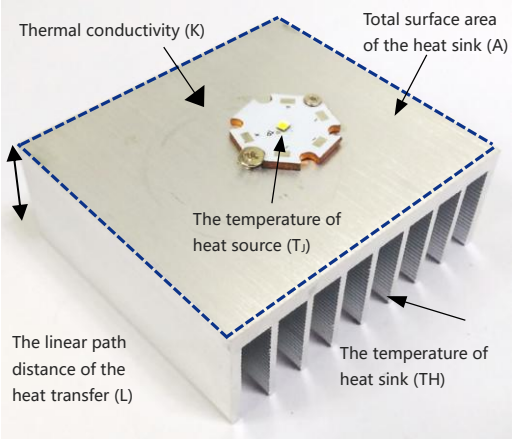
Path1: The contact surface of the MCPCB and heat sink are not perfectly flat, they are not able to meet each other completely. Air between these two materials will result in high thermal resistance and reduce the effect of heat transfer. To enhance the ability of thermal conduction, one common method is applying thermal grease between the two interfaces and uses the screws to enforce the adhesion between two surfaces.

Path2: Temperature gradient depends on the time of a heat sink. The total heat flux (Q) consists of:

1. The temperature difference between heat source (T_J) and heat sink (T_H)
2. Thermal conductivity (K) of the heat sink
3. Total surface area of the heat sink (A)
4. The linear path distance of the heat transfer (L)

This is represented by the Fourier's Law as follows:

$$Q = K \times A \times \frac{\Delta T}{L}$$



By choosing a higher thermal conductivity, increasing the surface area of the heat sink (add the number of fins) or shorten the distance of the linear path of heat dissipation may improve the loss of heat flux per unit time. Among all materials, metal is the best choice because of its high thermal conductivity.

List of thermal conductivity for some usual materials

Material	K (W/m•K)
Copper	391
C1100	384
Aluminum	230
5000 Series	225
ADC-12	96.2
Magnesium	156
Air	0.024

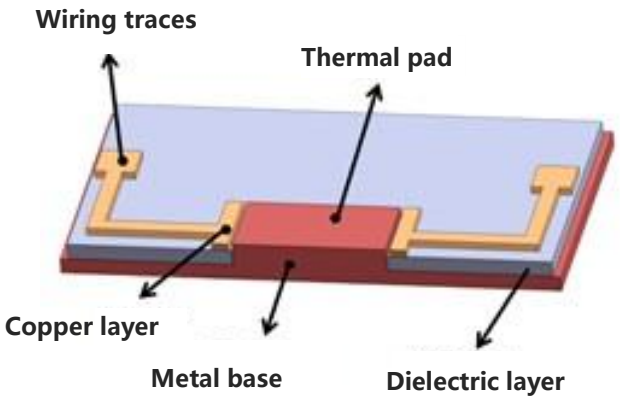
Path3: Heat dissipation includes convection and radiation. Those two types of transfer are proportional to the surface area of the heat sink. Adding the number of fin may increase the total surface area. However, too many fins may cause inhabitation of convection. There are many other thermal management methods such as install a fan to reach obliged convection. But this design may cause the issues such as noise or circuit design problem.

Path4: Compare with an unfinished heat sink, the one that covered by high emissivity material, such as ceramic powder or deep color paint, usually has better radiation ability. Both anodizing and etching are also effective to increase the thermal dissipation.

Key points for thermal management:

- The contact surface's flatness and smoothness of the component and heat sink.
- The total surface area of heat sink.
- The selection of heat sink material.
- Optimum number of fins. (Aerodynamic optimization)

The PCB design can affect the thermal performance of the end product. In order to reduce the thermal resistance of PCB, heat must transfer through metal without dielectric layer. The figure below shows the cross-section of PCB.



Precaution

The specifications, technical data and appearance of LEDs may be modified to improve the performance without notice.

Eye Safety

1. Intense light sources can cause temporary visual impairment, irritation, or accidents due to blinding effects. Eye safety is evaluated per IEC 62471, assuming no significant risk under typical use.
2. LEDs fall under IEC 62471:2006, with most Edison LEDs classified as Exempt Group or Risk Group 1. However, high-power blue LEDs may reach Risk Group 2, depending on emission characteristics. Improper use, such as increased output or collimated light, can harm human eyes. Additionally, flashing LEDs may cause health issues, requiring systems to mitigate harmful effects.

Disclaimer and Miscellaneous

1. This LED is designed only for household appliances, general lighting, automobiles, electronic devices.
2. It is not intended or manufactured for use in applications requiring safety-critical functions, such as aircraft, trains, vessels, life support systems, spacecraft, safety devices, nuclear reactor control systems, combustion equipment, submarine repeaters, traffic control equipment, military or similar. Unless otherwise specified, Edison does not guarantee the LED's suitability for these applications and disclaims any responsibility for potential property damage, injury, or loss of life and health. Users bear full responsibility for suitability assessments.
3. EDISON disclaims liability for all damages (direct, indirect, incidental, consequential) arising from product use, including personal injury, profit loss, or business disruption.
4. The customer agrees not to reverse engineer, disassemble, or otherwise attempt to extract design or technical information from the LED.
5. Reproduction, adaptation, or distribution prohibited without written consent.

Environmental Compliance

The entire product line complies with the substance restrictions outlined in the RoHS and REACH regulations, and all contained metals adhere to conflict-free compliance standards.

Datasheet History

Versions	Description	Release Date
0.1	New release.	2023/11/29
0.2	Modify the lumen range of brightness codes.	2023/12/05
0.3	1. Expand a higher bin of brightness codes. 2. Revise the range of chromaticity coordinate codes.	2023/12/12
0.4	1. Modify the typical characteristic of lumen. 2. Modify the dimensions of component.	2024/02/07
0.5	1. Modify the allowance of forward voltage. 2. Add diagram of allowable max. permissible forward current.	2024/03/29
0.6	1. Modify the typical characteristic of lumen. 2. Modify the product packaging information.	2024/06/03
0.7	Modify the typical characteristic of lumen.	2024/06/13
1	1. Revise datasheet format. 2. Add supplementary notes. 3. Add typical chromaticity coordinate information in the characteristics table. 4. Add the symbol of Rth in the characteristics table. 5. Add typical electrical thermal resistance information in the characteristics table. 6. Modify the representation of the curves in the chromaticity coordinate shift graph. 7. Add information of approximate weight of LEDs. 8. Adjust the decimal precision for the dimensions of the recommended stencil mask. 9. Add product packaging Information. 10. Add SMT feeder direction information. 11. Revise the format of product and packing labels. 12. Add handling manual information. 13. Update recommended thermal conductivity for thermal grease. 14. Add a recommendation for thermal conductivity of the PCB insulation layer.	2025/07/01
2	1. Revise the SMT feeder direction information.	2025/07/14

Versions	Description	Release Date
3	1. Revise the range of LED operating temperature. 2. Revise the range of LED storage temperature. 3. Add maximum thermal resistance information in the characteristics table. 4. Add a curve test interval from –40°C to 25°C. 5. Modify the graph of allowable maximum permissible forward current.	2025/07/23

About EDISON OPTO

Edison Opto provides comprehensive LED and solid-state lighting products from LED Component, Light Module, UV / IR LED, LED sensing, Horticulture and Automotive Lighting. With a view to improve R&D process, Edison Opto develops the vertical platform on TEMOTM (Thermal．Electrical．Mechanical．Optical) to ensure the quality of products and services; Furthermore, Edison Opto creates LDMSTM (LED Design Manufacturing Service) from light source to luminaire manufacturing, to serve our customers a quality experience of customized solutions.

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