

Customer :

Specification for Approval

Part Name : WD14MKF-5065B

Customer : _____ 2013. ____ . ____ .

Checked	Checked	Approved	Remark
/	/	/	

WOOREE E & L Co., Ltd. 2013. ____ . ____ .

Designed	Checked	Approved
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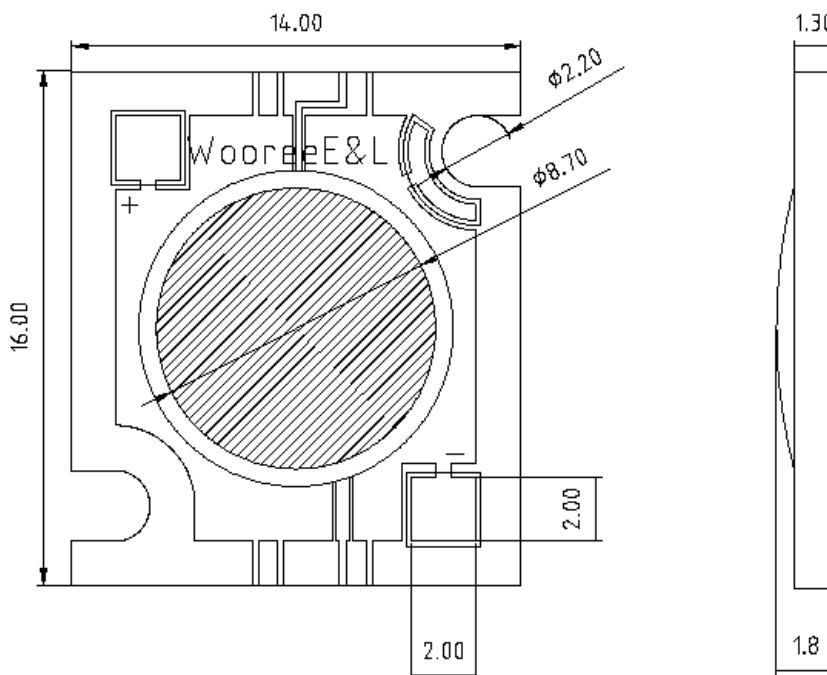
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1. Features

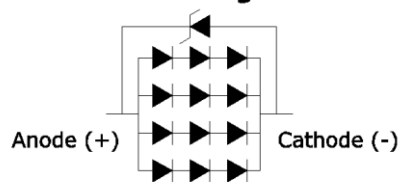
- Package size is 14.0 * 16.0 * 1.8t (mm)
- Lead (Pd) free product - RoHS compliant
- View angle ($\Delta\theta : 120^\circ \times 120^\circ$) for uniform illuminance
- Low thermal resistance $R_{th,j-s} < 5 \text{ }^\circ\text{C/W}$
- High-power LED in COB technology
- Application : Street lamp / Highbay lamp / Security lamp / Down Light
Other applications

2. Outline Dimension

Unit : mm
Tolerance: ± 0.2



Circuit Diagram



* This LED has built-in ESD protection device(s) connected in parallel to LED chip(s).

3. Absolute maximum ratings

Item	Symbol	Absolute Maximum Ratings	Unit
Forward Current	I_F	440	mA
Pulse Forward Current	I_{FP*1}	480	mA
Operating Temperature	Topr	-30 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +100	°C
Junction Temperature	T_J	110	°C

*1. Pulse Width ≤ 10msec, Duty ≤ 10%

4. Electrical/Optical characteristics

(Ta=25°c)

Item	Symbol	Condition	Value			Unit
			Min	Typ	Max	
Luminous Flux*1-1)	I_v	$I_F=440mA$	480	500	580	lm
Forward Voltage *1-2)	VF	$I_F=440mA$	8.5	9.2	11.0	V
Color Temperature *1-3) [CIE 1931 Coordinates]	CCT	$I_F=440mA$	-	5000	-	K
Viewing Angle	2θ1/2	$I_F=440mA$	-	120	-	Deg.
Color Rendering Index	Ra	$I_F=440mA$	-	65	-	-
Thermal Resistance	Rth,j-s*2			5		°C/W

*1. Equipment measured tolerance

- 1) Luminous Flux is ±5%
- 2) Forward voltage is ±5%, Reverse Voltage is ±5%,
- 3) Color Temperature is 5028±283K (5000K)

*2. Rthj-s is Thermal Resistance (Junction - Slug)

5. Ranks

(1) Forward Voltage

(Ta=25℃)

Rank	Condition	Min.	Max.	Unit
0	$I_F = 440\text{mA}$	8.5	10.5	V

(2) Luminous Flux

(Ta=25℃)

Rank	Condition	5000K
470	$I_F=440\text{mA}$ Unit : lm	470 - 500
500		500 - 530
530		530 - 560
560		560 - 590
590		590 - 610

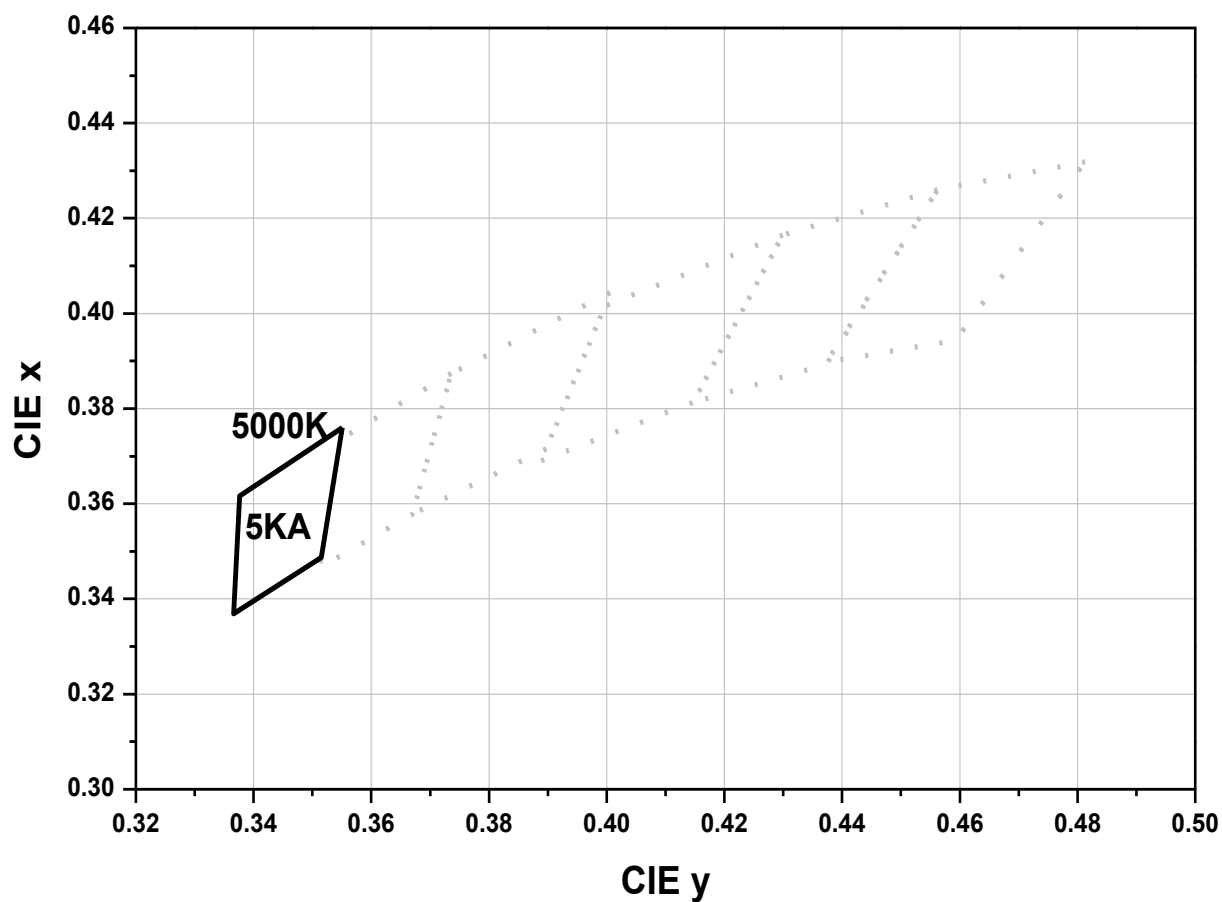
(3) Chromaticity coordinates

($I_F = 440\text{mA}$, $T_a = 25^\circ\text{C}$)

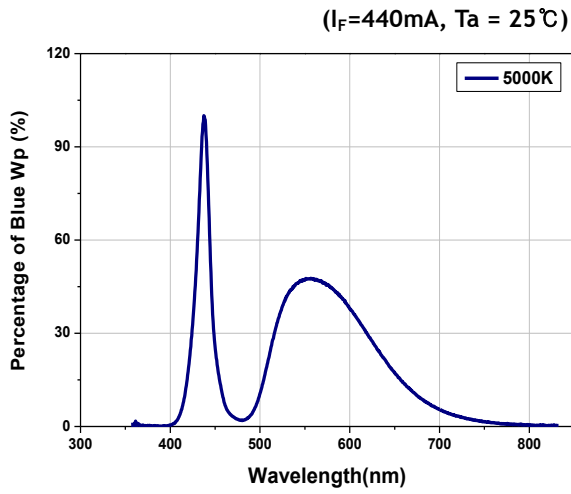
5000K	
5KA	
Cx	Cy
0.3551	0.3760
0.3376	0.3616
0.3366	0.3369
0.3515	0.3487
0.3551	0.3760

(4) Chromaticity Coordinates Diagram

($I_F = 440\text{mA}$, $T_a = 25^\circ\text{C}$)

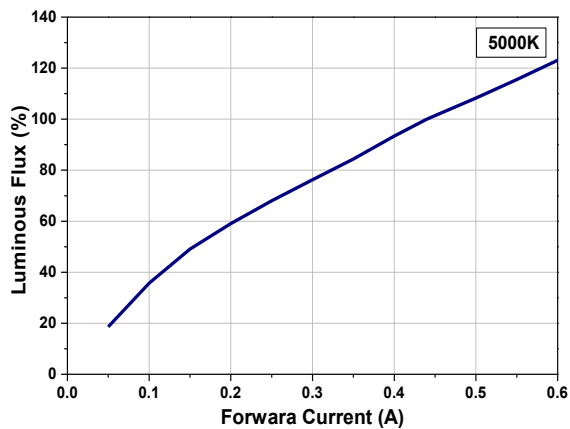


6. Color Spectrum



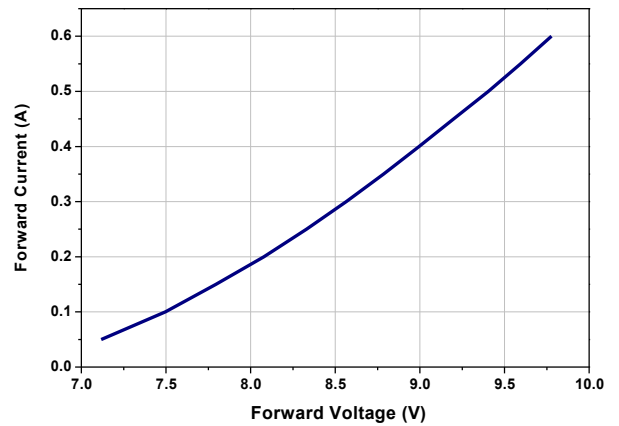
7. Characteristic Diagrams

(1) Luminous Flux vs. Forward Current

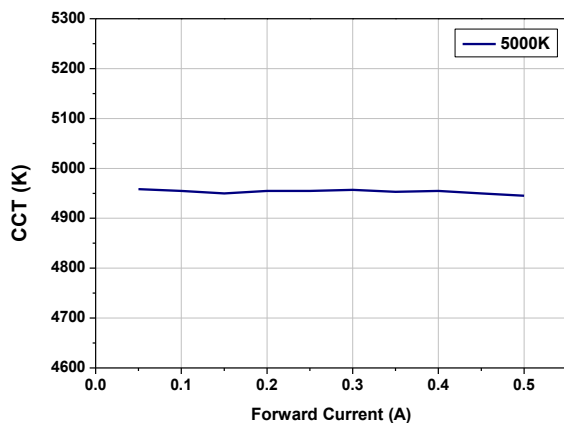


(2) Forward Current vs. Forward Voltage

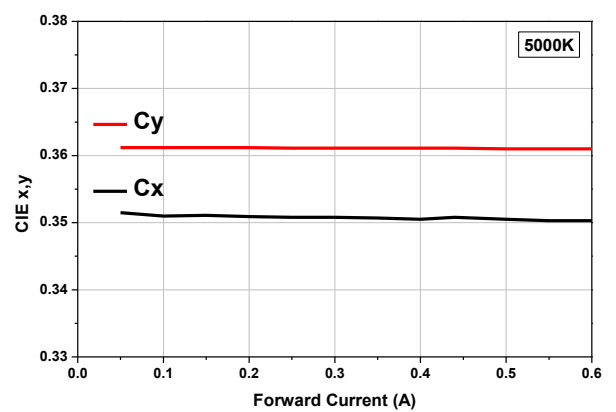
($T_a=25^\circ\text{C}$)



(3) CCT vs. Forward Current

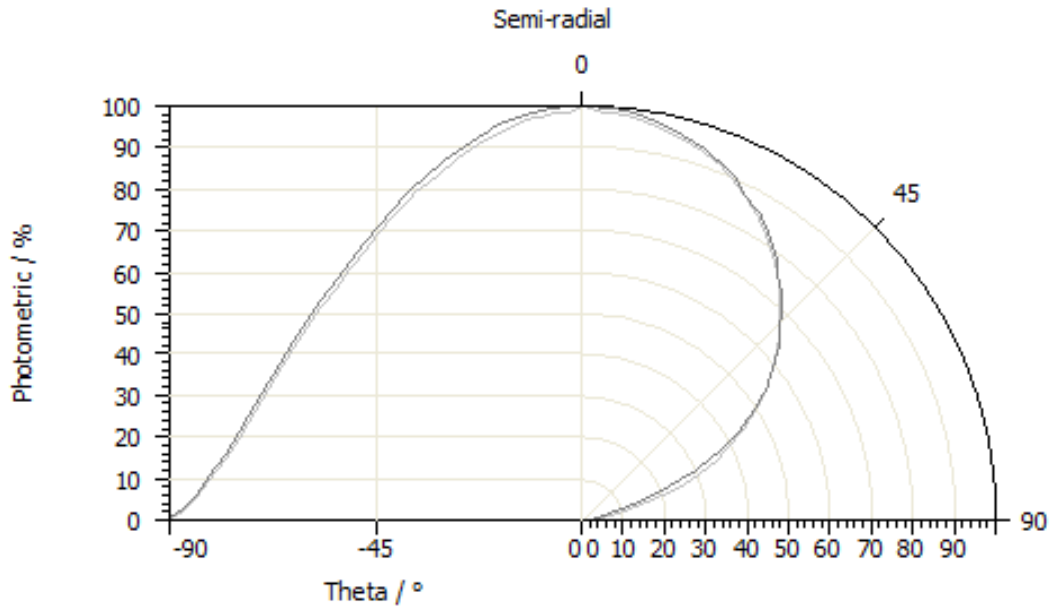


(4) CIE x,y vs. Forward Current

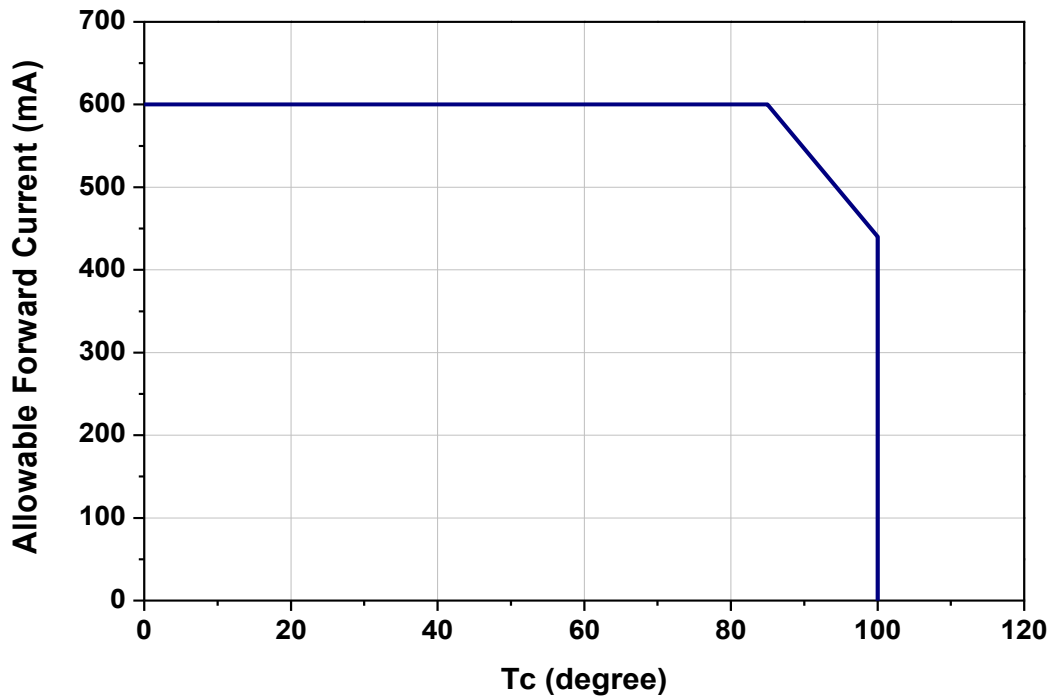


(5) Radiation Pattern

($I_F=440\text{mA}$, $T_a=25^\circ\text{C}$)



(6) Derating curve



8. Revision History

Spec NO.			
Title	Specification for Approval		
Times	Date	Summary of revision	Remarks
1		INITIAL ISSUE	R(0)