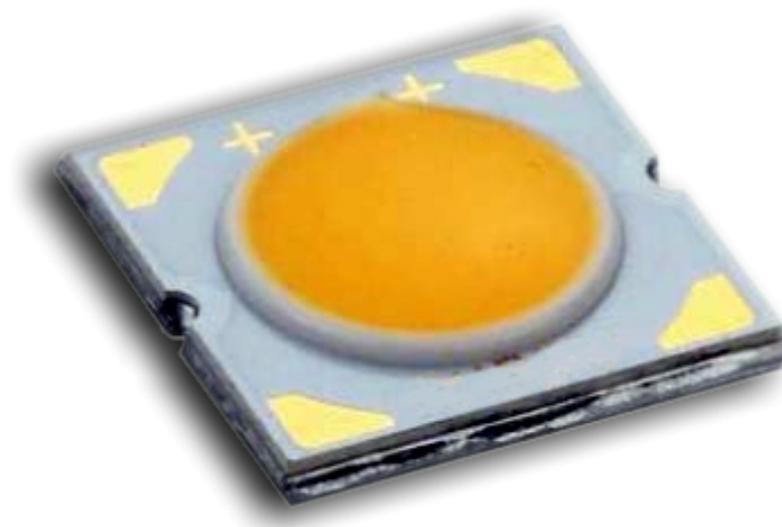


# SPECIFICATION

MODEL : ALD-CMW4.5-500D1

## Aluminum D Serial



LED SMC SEMICONDUCTOR

**Part No. : ALD-CMW4.5-500D1**

**Acknowledgment number :**

**Supplier name :**  
LED SMC Semiconductor

## Product Acknowledgment

**Customer Name :**

**Customer Model :**

**Customer Part Number :**

**Supply-side model :**

**Acknowledgment Effective Date :**

Manufacturers		Client Confirm (Quality)		Client Confirm (R & D)	
Prepared		Qualified <input type="checkbox"/>		Qualified <input type="checkbox"/>	
		Unqualified <input type="checkbox"/>		Unqualified <input type="checkbox"/>	
Audit		Audit		Audit	
Approve		Approve		Approve	

( After both sides confirmed the Acknowledgment qualified, must be signed and sealed )

Supply-side Address :

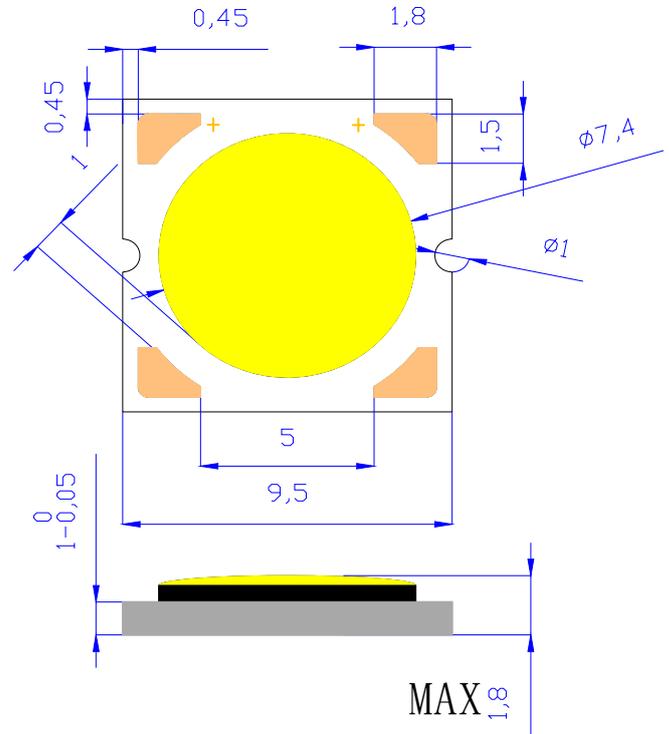
**PartNo. : ALD-CMW4.5-500D1**

**Features :**

- ⌘ High radiometric power per LED
- ⌘ Very long operating life
- ⌘ More Energy Efficient than Incandescent and most Halogen lamps
- ⌘ Easy installation with Screws

**Typical Applications :**

- ⌘ Spot light
- ⌘ Bulb
- ⌘ Down Light
- ⌘ cornering lamp
- ⌘ Panel Light
- ⌘ Street Light



**Product Picture:**

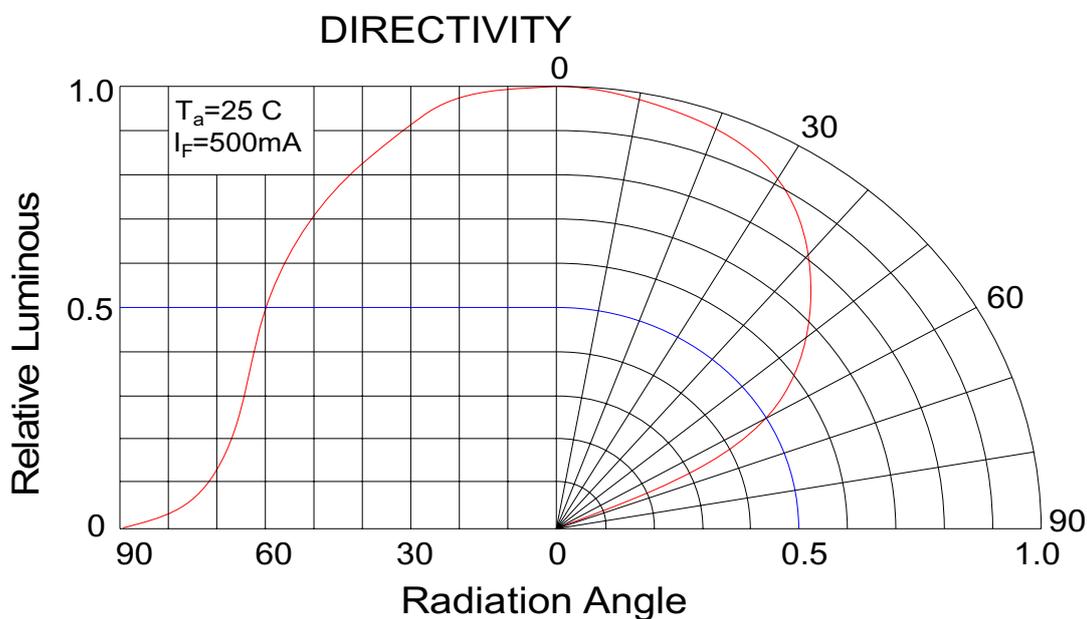


**NOTES:**

- ⌘ All dimensions are millimeter.
- ⌘ Tolerance is  $\pm 0.1$ mm unless otherwise noted.
- ⌘ It is strongly recommend ed that the temperature of lead be not higher than  $85^{\circ}\text{C}$ .
- ⌘ The appearance and specific ations of the product may be modified for improvement without notice.

**PartNo. : ALD-CMW4.5-500D1**

**Typical Radiation Pattern**



**Absolute maximum ratings ( $T_a = 25^\circ\text{C}$ )**

Parameter	Symbol	Test Condition	Value		Unit
			Min.	Max.	
DC Forward Current	$I_F$	----	----	600	mA
Peak Pulse Current	$I_{\text{peak}}$	Duty=1/10 1kHz	----	800	mA
Power Dissipation	$P_d$	----	----	5.76	W
LED Junction Temperature	$T_J$	----	----	125	$^\circ\text{C}$
Operating Temperature	$T_{\text{opr}}$	----	-25	+85	$^\circ\text{C}$
Storage Temperature	$T_{\text{str}}$	----	-40	+100	$^\circ\text{C}$
ESD Sensitivity	----	HBM	8000	----	V
Soldering Temperature	----	----	220 $^\circ\text{C}$ for 5 Seconds max		

**PartNo. : ALD-CMW4.5-500D1**

**Electrical and optical characteristics (T<sub>a</sub> = 25°C )**

Parameter	Symbol	Test Condition	Value			Unit	
			Min.	Typ.	Max.		
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 500mA		9.3		V	
Luminous Flux	Φ <sub>v</sub>			500	----	lm	
Viewing Angle	2θ 1/2			----	120	----	Deg.
Color Temperature	CCT			5000	-----	6500	K
Color Rendening	R <sub>a</sub>			70			--
Thermal Resistance	R <sub>J</sub>	-----		5.5		°C/W	

**Luminous Flux Bins (T<sub>a</sub> = 25°C ) Unit:lm**

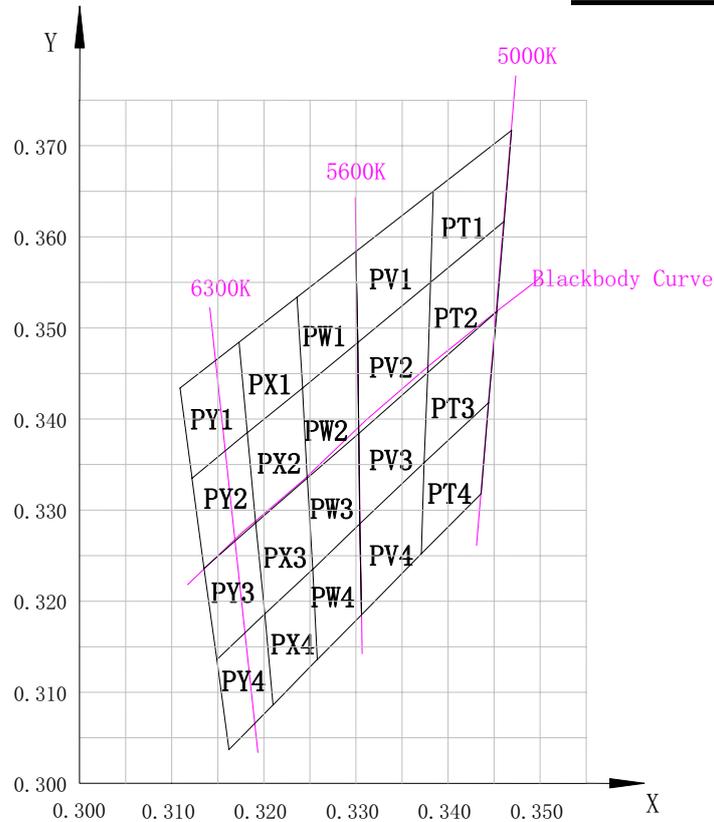
Bin	A2	B2	C2
Min	500	600	700
Max	600	700	800

**PartNo. : ALD-CMW4.5-500D1**

**Chromaticity Coordinates Ranks( $I_F=500mA$   $T_a=25^\circ C$ )**

Bin	x1	y1	x2	y2	x3	y3	x4	y4
PT1	0.3384	0.3650	0.3381	0.3550	0.3461	0.3617	0.3469	0.3717
PT2	0.3381	0.3550	0.3378	0.3451	0.3453	0.3518	0.3461	0.3617
PT3	0.3378	0.3451	0.3374	0.3352	0.3444	0.3418	0.3453	0.3518
PT4	0.3374	0.3352	0.3371	0.3252	0.3436	0.3318	0.3444	0.3418
PV1	0.3300	0.3584	0.3302	0.3484	0.3381	0.3550	0.3384	0.3650
PV2	0.3302	0.3484	0.3303	0.3384	0.3378	0.3451	0.3381	0.3550
PV3	0.3303	0.3384	0.3304	0.3285	0.3374	0.3352	0.3378	0.3451
PV4	0.3304	0.3285	0.3306	0.3185	0.3371	0.3252	0.3374	0.3352
PW1	0.3236	0.3534	0.3242	0.3434	0.3302	0.3484	0.3300	0.3584
PW2	0.3242	0.3434	0.3247	0.3335	0.3303	0.3384	0.3302	0.3484
PW3	0.3247	0.3335	0.3253	0.3235	0.3304	0.3285	0.3303	0.3384
PW4	0.3253	0.3235	0.3258	0.3136	0.3306	0.3185	0.3304	0.3285
PX1	0.3173	0.3484	0.3182	0.3385	0.3242	0.3434	0.3236	0.3534
PX2	0.3182	0.3385	0.3191	0.3286	0.3247	0.3335	0.3242	0.3434
PX3	0.3191	0.3286	0.3201	0.3186	0.3253	0.3235	0.3247	0.3335
PX4	0.3201	0.3186	0.3210	0.3086	0.3258	0.3136	0.3253	0.3235
PY1	0.3109	0.3434	0.3122	0.3335	0.3182	0.3385	0.3173	0.3484
PY2	0.3122	0.3335	0.3135	0.3236	0.3191	0.3286	0.3182	0.3385
PY3	0.3135	0.3236	0.3149	0.3136	0.3201	0.3186	0.3191	0.3286
PY4	0.3149	0.3136	0.3162	0.3037	0.3210	0.3086	0.3201	0.3186

PartNo. : ALD-CMW4.5-500D1



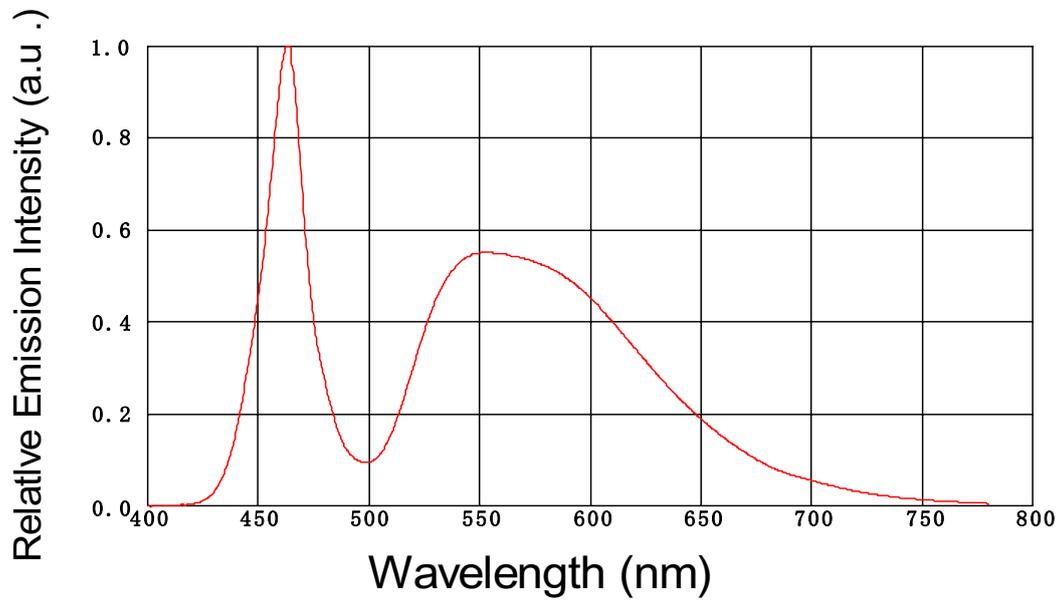
Notes :

1. \* Ranking at  $T_c=25^\circ\text{C}$
2. \* It is strongly recommended that the temperature of lead be not higher than  $85^\circ\text{C}$
3. \* Tolerance of measurements of the Forward Voltage is  $\pm 2\%V$
4. \* Tolerance of measurements of the Luminous Flux is  $\pm 10\%$
5. \* Tolerance of measurements of the Color Rendering  $R_a$  is  $\pm 3$
6. \* Chromaticity Coordinates (x,y) is measured with an accuracy of  $\pm 0.01$

PartNo. : ALD-CMW4.5-500D1

Characteristic spectrum :  $T_j=25^{\circ}\text{C}$

White



Part No. : ALD-CMW4.5-500D1

Typical electrical/optical characteristic curves :

Fig.1 Forward Current(mA) Vs. Forward Voltage(V)

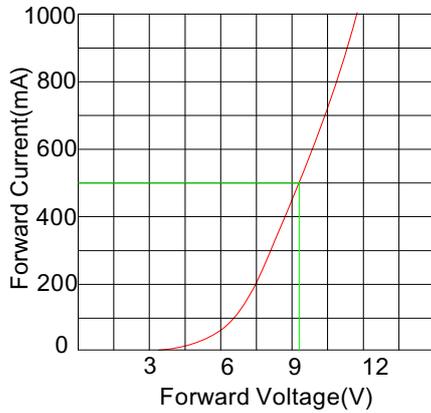


Fig.2 Relative Intensity Vs Forward Current (mA)

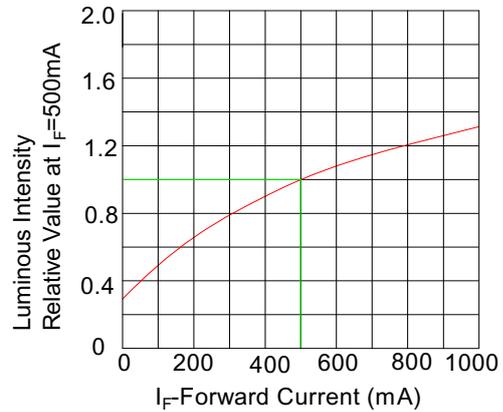


Fig.3 Forward Current Vs Ambient Temperature

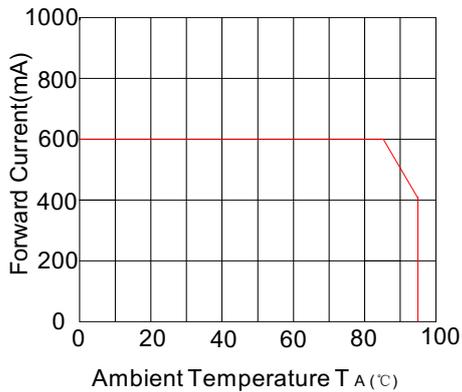
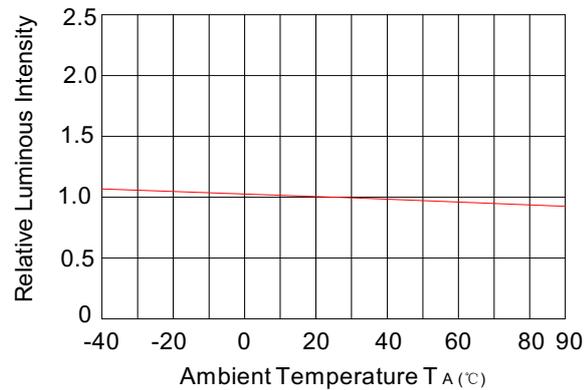


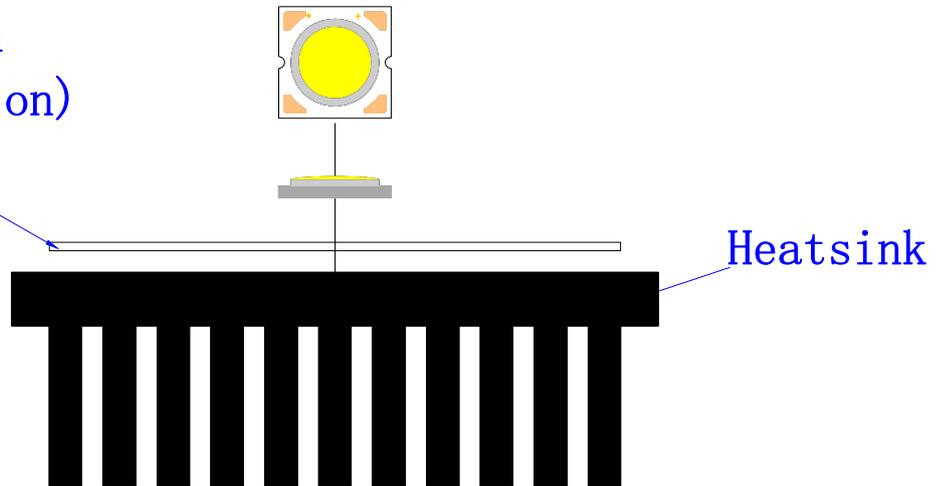
Fig.4 Relative Intensity Vs. Ambient Temperature



PartNo. : ALD-CMW4.5-500D1

Recommended installation screw pitch

Thermal conduction materials (insulation)



If you can not solve the heat problem, the product will destroy easily. Suggest that the surface of the heat sink is  $35\text{cm}^2/\text{W}$