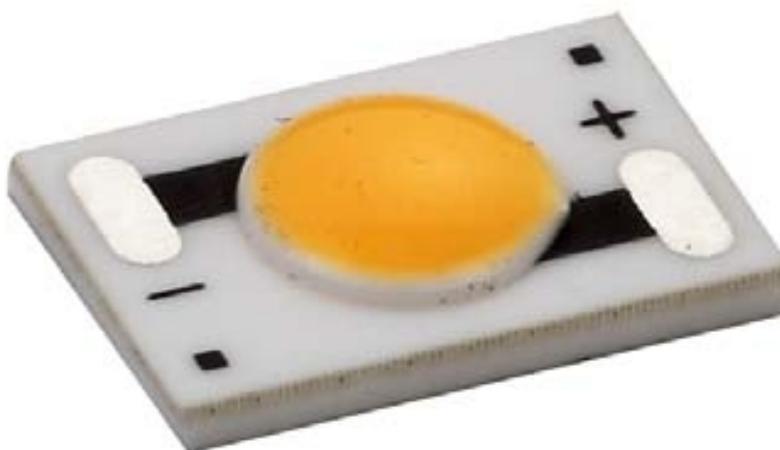


SPECIFICATION

MODEL : LCP-XPW36-400B1

Ceramic P serial



LED SMC SEMICONDUCTOR

KOREA

Part No. : LCP-XPW36-400B1

Supplier name :
LED SMC Semiconductor

Acknowledgment number :

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)

PartNo. : LCP-XPW36-400B1

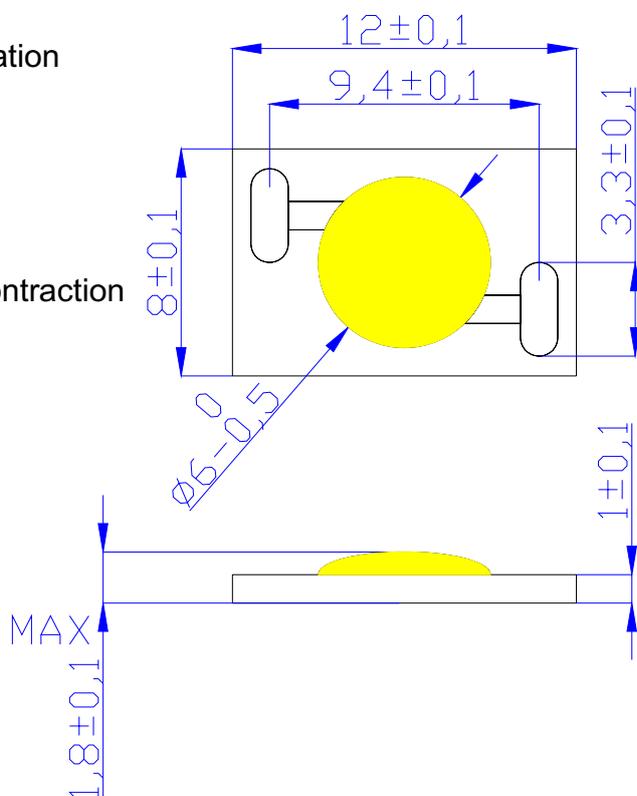
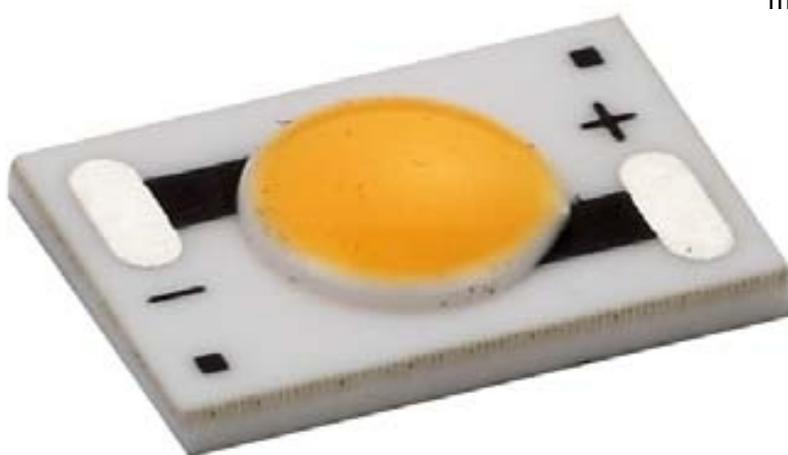
Features :

- Higher luminous efficiency and thermal dissipation
- Higher flexibility
- Higher reflectivity
- More reliable and longer life
- Lower coefficient of thermal expansion and contraction
- More flat under high temperatures
- High voltage resistant

Typical Applications :

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

Product Picture:

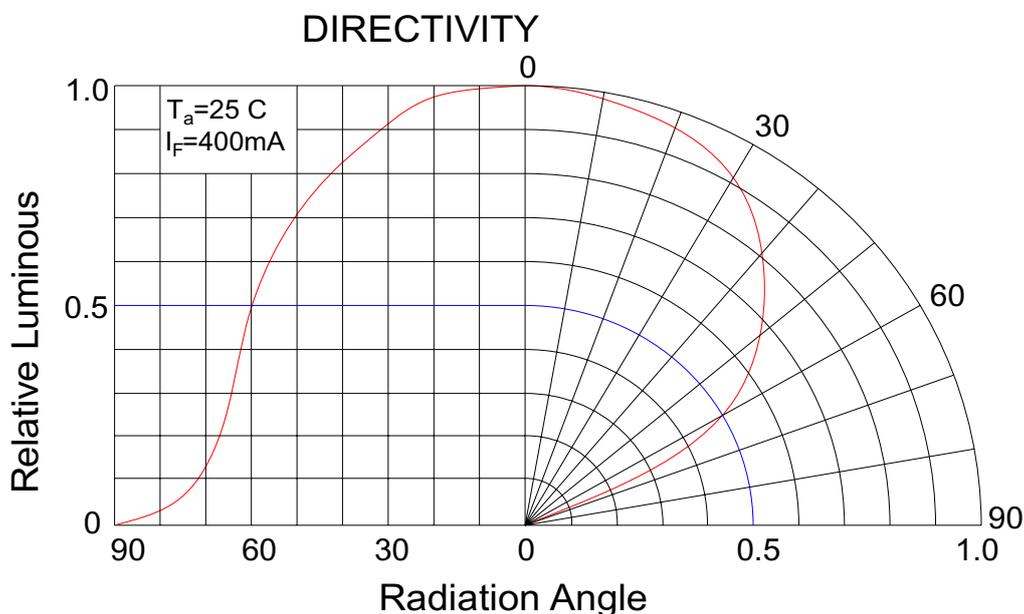


NOTES:

- All dimensions are millimeter.
- Tolerance is ± 0.1 mm unless otherwise noted.
- It is strongly recommend ed that the temperature of lead be not higher than 85°C.
- The appearance and specific ations of the product may be modified for improvement without notice.

PartNo. : LCP-XPW36-400B1

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	----	----	520	mA
Peak Pulse Current	I_{peak}	Duty=1/10 1kHz	----	800	mA
Power Dissipation	P_d	----	----	5.1	W
LED Junction Temperature	T_J	----	----	125	$^\circ\text{C}$
Operating Temperature	T_{opr}	----	-25	+85	$^\circ\text{C}$
Storage Temperature	T_{str}	----	-40	+100	$^\circ\text{C}$
ESD Sensitivity	----	HBM	8000	----	V
Soldering Temperature	----	----	220 $^\circ\text{C}$ for 5 Seconds max		

PartNo. : LCP-XPW36-400B1

Electrical and optical characteristics (T_a = 25°C)

Parameter	Symbol	Test Condition	Value			Unit	
			Min.	Typ.	Max.		
Forward Voltage	V _F	I _F = 400mA		9		V	
Luminous Flux	Φ _v			400	----	lm	
Viewing Angle	2θ 1/2			----	120	----	Deg.
Color Temperature	CCT			5000	-----	6500	K
Color Rendering	R _a		70			--	
Thermal Resistance	R _J	-----		6.9		°C/W	

Luminous Flux Bins (T_a = 25°C) Unit:lm

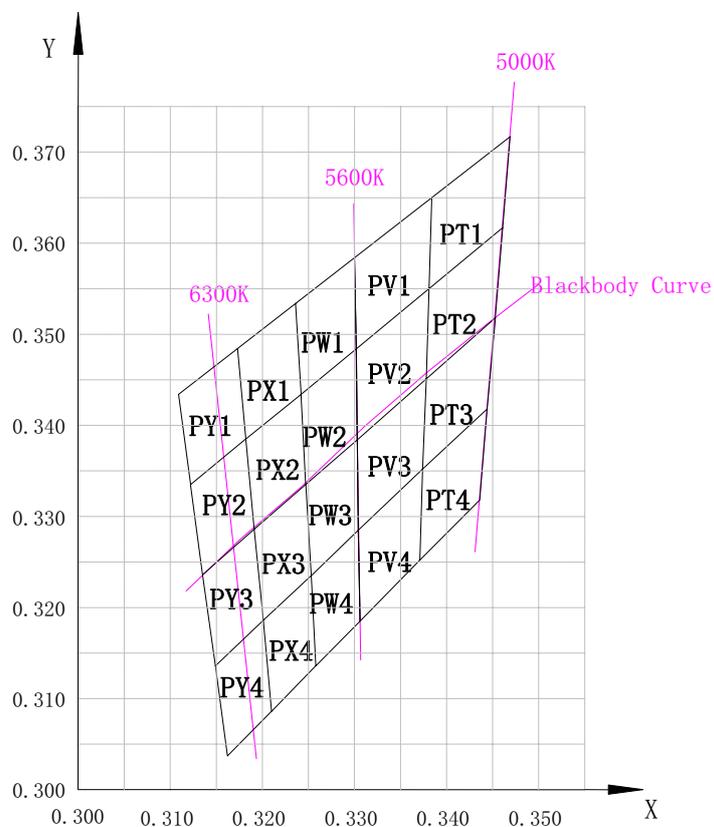
Bin	X	Y	Z
Min	360	400	450
Max	400	450	500

PartNo. : LCP-XPW36-400B1

Chromaticity Coordinates Ranks(I_F=400mA T_a=25°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. : LCP-XPW36-400B1



Notes :

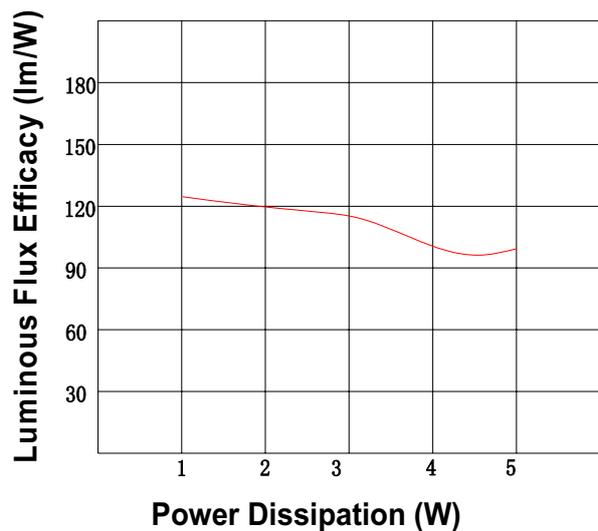
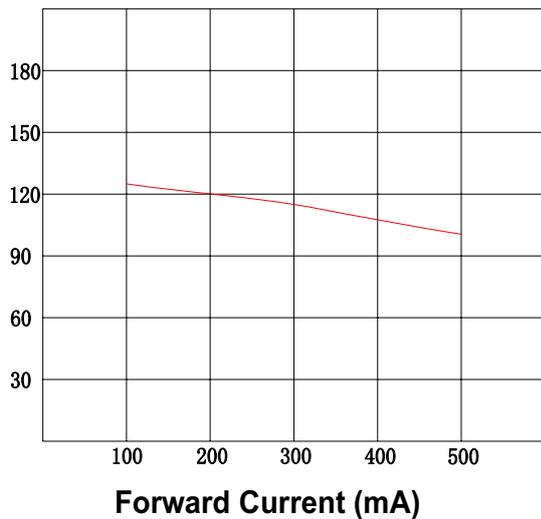
1. * Ranking at $T_c=25^{\circ}\text{C}$
2. * It is strongly recommended that the temperature of lead be not higher than 85°C
3. * Tolerance of measurements of the Forward Voltage is $\pm 2\%V$
4. * Tolerance of measurements of the Luminous Flux is $\pm 10\%$
5. * Tolerance of measurements of the Color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

Part No. : LCP-XPW36-400B1

Luminous Flux Efficacy characteristics

Current vs Luminous Flux efficacy (lm/W) T_a=25°C

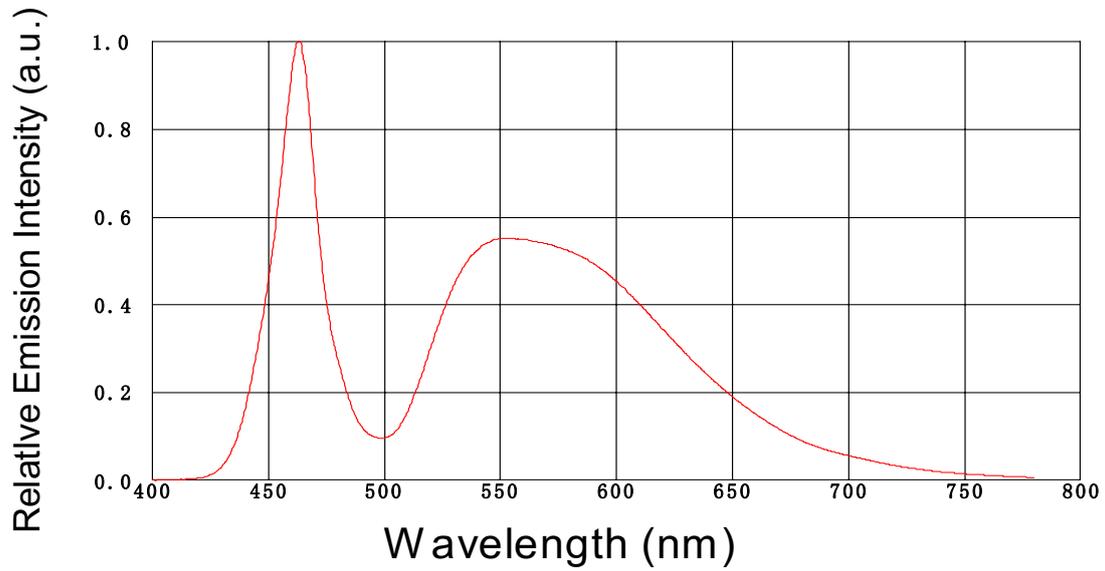
Current (mA)	Forward Voltage (V)	Power Dissipation (W)	Luminous Flux Efficacy (lm/W)
100	8.72	0.9	125
200	8.90	1.78	119
300	8.94	2.7	114
350	8.98	3.2	107
400	9.0	3.7	105
500	9.65	4.8	100



PartNo. : LCP-XPW36-400B1

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

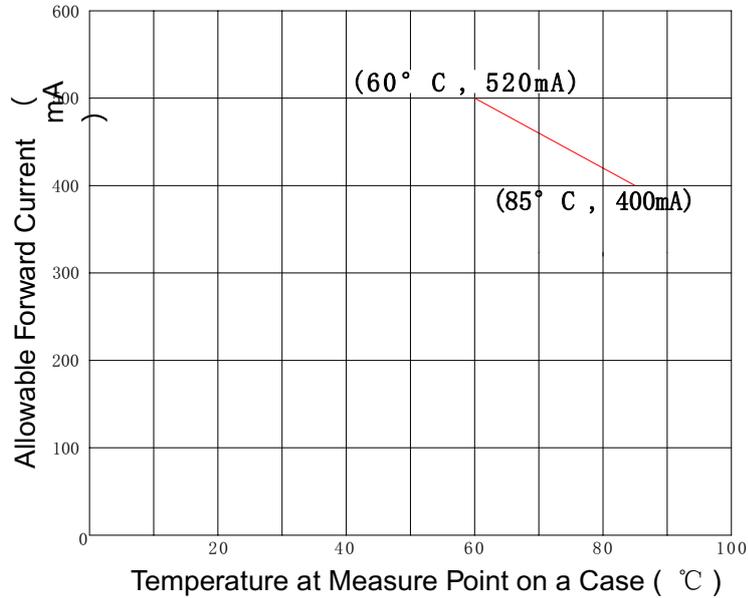
White



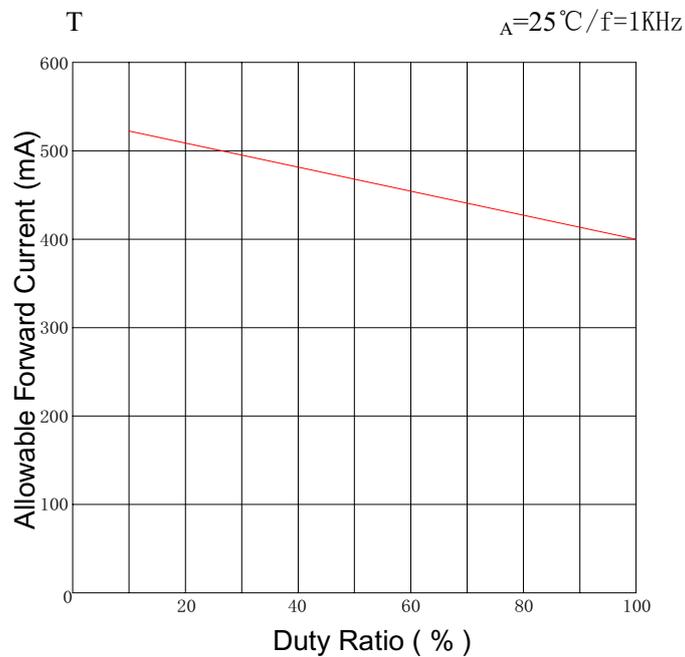
PartNo. : LCP-XPW36-400B1

Derating characteristics :

Temperature at Measure Point on a Case Vs Allowable Forward Current



Duty Ratio Vs Allowable Forward Current



PartNo. : LCP-XPW36-400B1

Typical electrical/optical characteristic curves :

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

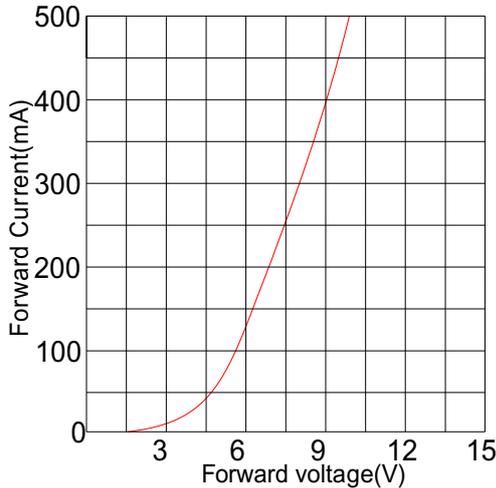


Fig.2 Relative intensity Vs Forward Current (mA)

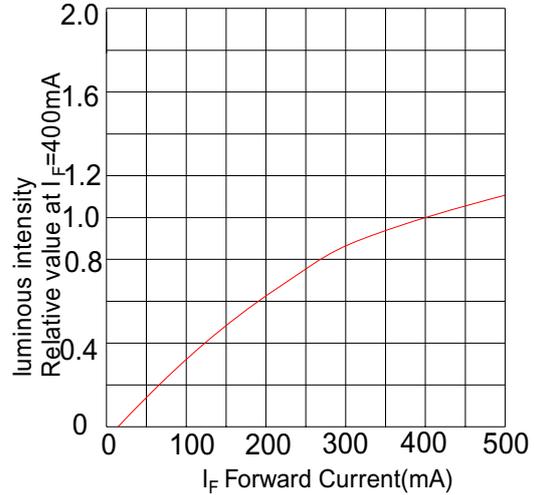


Fig.3 Forward Voltage Vs Ambient Temperature

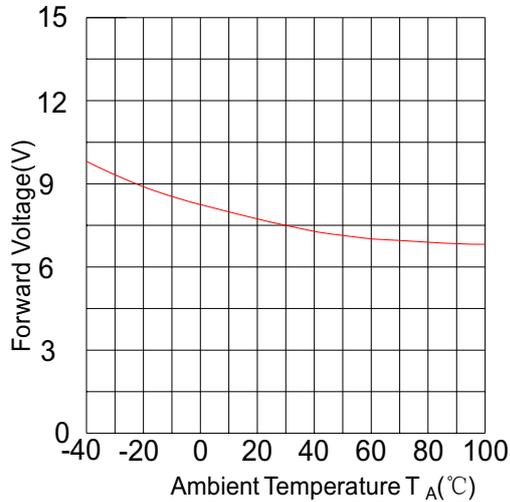
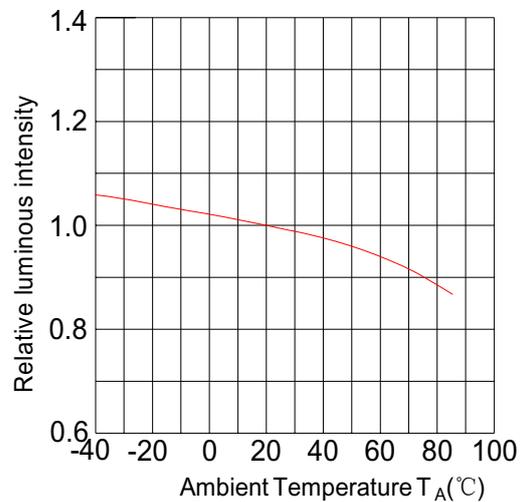
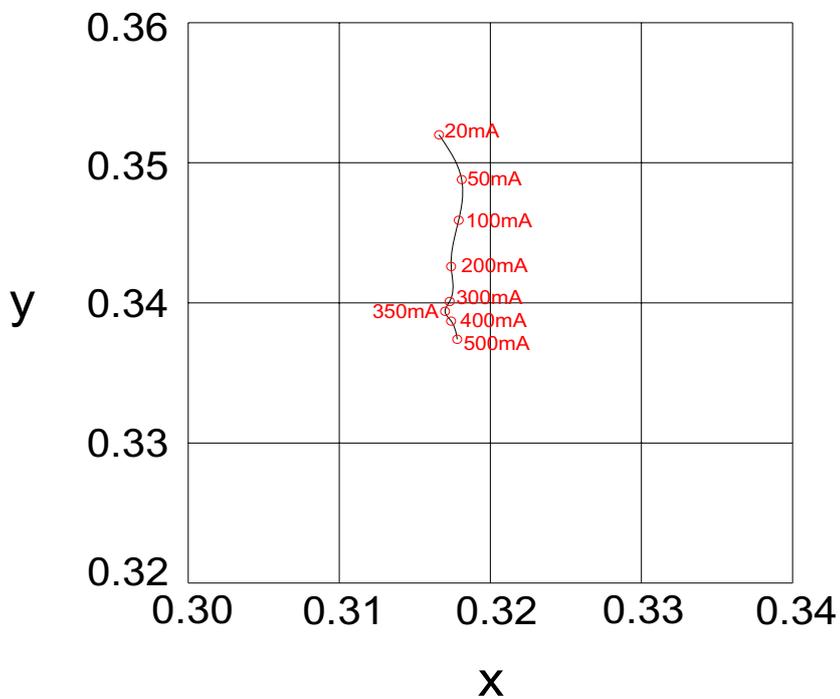


Fig.4 Relative intensity Vs Ambient Temperature

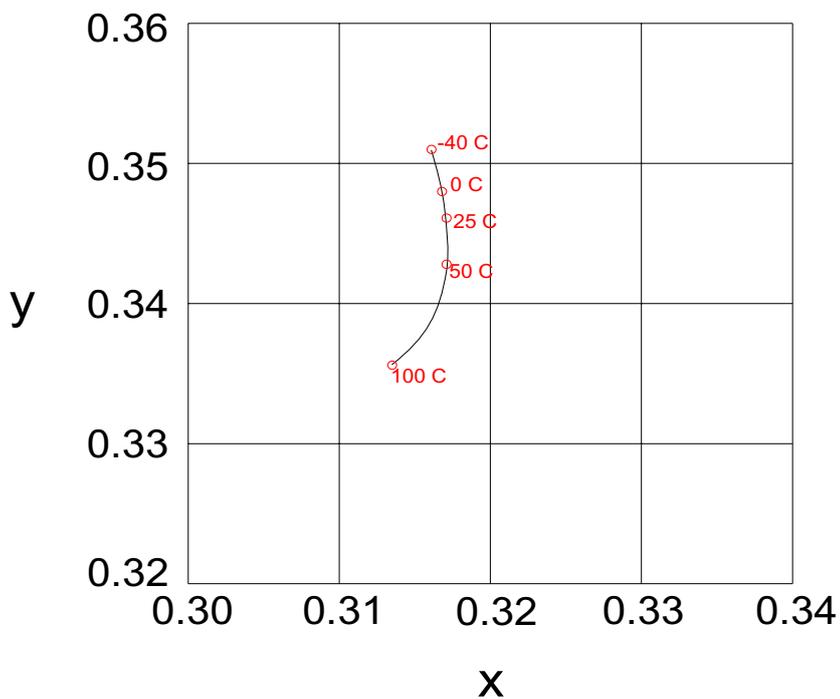


PartNo. : LCP-XPW36-400B1

十三. 正向电流与色坐标



Ambient Temperature Vs Chromaticity Coordinate



PartNo. : LCP-XPW36-400B1

Reliability

Tests and Results

Test	Reference Standard	Test Conditions	Test Duration	Units Failed/ Tested
Temperature Cycle	JEITA ED-4701 100	-40°C (30min) ∼ 25°C (5min) ∼ 100°C (30min) ∼ 25°C (5min)	100cycles	0/10
High Temperature Storage	JEITA ED-4701 200 201	T _A =100°C	1000hours	0/10
Temperature Humidity Storage	JEITA ED-4701 100 103	T _A =60°C RH=90%	1000hours	0/10
Low Temperature Storage	JEITA ED-4701 200 202	T _A =-40°C	1000hours	0/10
High Temperature Operating Life		T _C =85°C T _F =520mA	1000hours	0/10
Electrostatic Discharges	JEITA ED-4701 300 304	HBM 8KV 3KΩ 100Pf 3pulses nedative		0/10
Temperature Cycle *1	Smc-opt	-40°C (30min) ∼ (90s) ∼ 110°C (30min) ∼ (90s) -40°C	300cycles	0/10
Temperature Humidity Storage*2	Smc-opt	T _A =85°C RH=85% T _F =400mA	1000hours	0/10

NOTES:

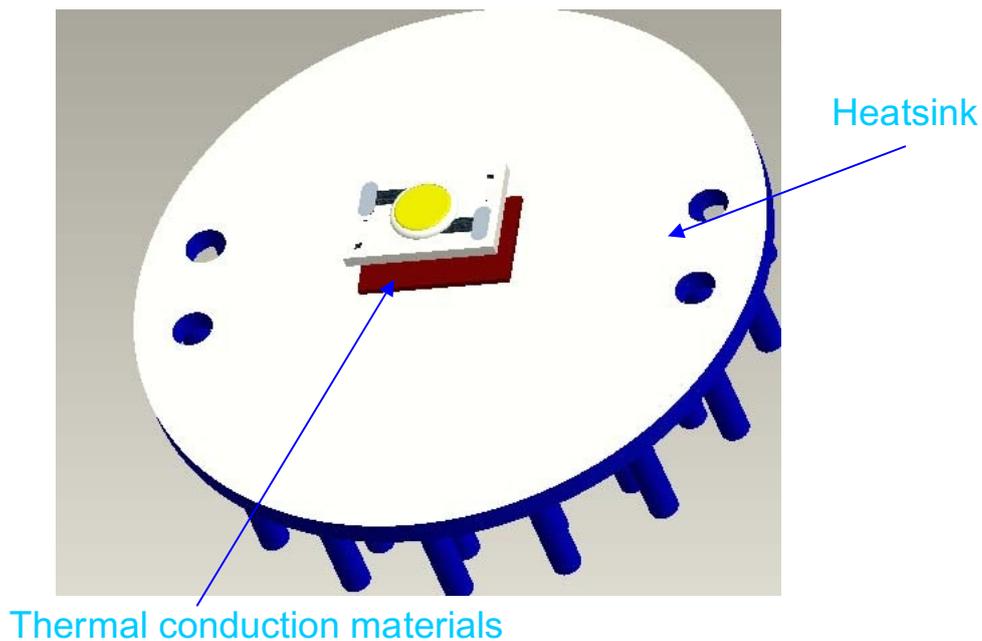
* Measurements are performed after allowing the LEDs to return to room temperature

Failure Criteria

Items	Conditions	Failure Criteria
Forward Voltagd (V _F)	I _F =400mA	>Initial value x 1.1
Luminous Flux (Φ _v)	I _F =400mA	<Initial value x 0.7

PartNo. : LCP-XPW36-400B1

Recommended installation screw pitch



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