HPLighting

High Power Lighting Corporation

SPECIFICATION

HPL- M L - N A X 01

1W

Product Type :	Package Type:	Assembly :	Application Power :	Color :
M : module	L : HPL-7070 LED	N: Star-O+Holed+10˚ collimator	A : ≤ 100W B : 101W~200W C : 201W~300W	W : Cool White N : Neutral White S : Warm White R : Red G : Green B : Blue A : Amber O : Orange

1. Features

- Lambertain or Collimated Radiation Pattern
- Low voltage DC operated
- 1W High Flux type
- All Metal Design Cu PCB/Al reflector
- Low thermal resistance
- The InGaN or AlInGaP Chip inside
- Superior ESD protect

2. Application

- Traffic signaling
- Backlighting
- Interior & exterior automotive lighting
- Decorative and landscape lighting
- Portable light source
- Decorating and entertainment lighting
- Architectural lighting
- Street lighting

3. Absolute Maximum Ratings

(Tj=25℃)

Parameter		Symbol	Rating	Unit
Power Dissipation	Cool White	P	1.5	W
	Neutral White		1.5	
	Warm White		1.5	
	Red		1.05	
	Green		1.5	
	Blue		1.5	
	Amber		1.05	
	Orange		1.05	
Forward Current		IF	350	mA
Forward Pulse Current (1/10 Duty Cycle, 400msec Pulse Width)		IFP	500	mA
Thermal Resistance, Junction-Case		Rth, J-C1	10	°C/W
Reverse Voltage		VR	5	V
LED Junction Temperature		Tj	125	°C

Note: 1. The thermal resistance value is measured with MCPCB (Star).

4. Initial Electrical/Optical Characteristics

- **Forward Voltage** (Tj=25℃)

Color	Forward Voltage					
	Symbol	MIN.	TYP.	MAX.	Test Condition	Unit
Cool White	V_F	3.03	3.80	4.23	I_F= 350mA	V
Neutral White	V_F	3.03	3.80	4.23	I_F= 350mA	V
Warm White	V_F	3.03	3.80	4.23	I_F= 350mA	V
Red	V_F	1.83	2.50	3.03	I_F= 350mA	V
Green	V_F	3.03	3.80	4.23	I_F= 350mA	V
Blue	V_F	3.03	3.80	4.23	I_F= 350mA	V
Amber	V_F	1.83	2.50	3.03	I_F= 350mA	V
Orange	V_F	1.83	2.50	3.03	I_F= 350mA	V

- **Luminous Flux** (Tj=25℃)

Color	Luminous Flux					
	Symbol	MIN.	TYP.	MAX.	Test Condition	Unit
Cool White	Φ_V	-	70	-	I_F = 350mA	lm
Neutral White	Φ_V	-	50	-	I_F = 350mA	lm
Warm White	Φ_V	-	34	-	I_F = 350mA	lm
Red	Φ_V	-	40	-	I_F = 350mA	lm
Green	Φ_V	-	60	-	I_F = 350mA	lm
Blue	Φ_V	-	12	-	I_F = 350mA	lm
Amber	Φ_V	-	37	-	I_F = 350mA	lm
Orange	Φ_V	-	42	-	I_F = 350mA	lm

• Radiometric Power

(Tj=25℃)

Color	Luminous Flux					
	Symbol	MIN.	TYP.	MAX.	Test Condition	Unit
Blue[1]	Φ_V	-	200	-	I_F = 350mA	mW

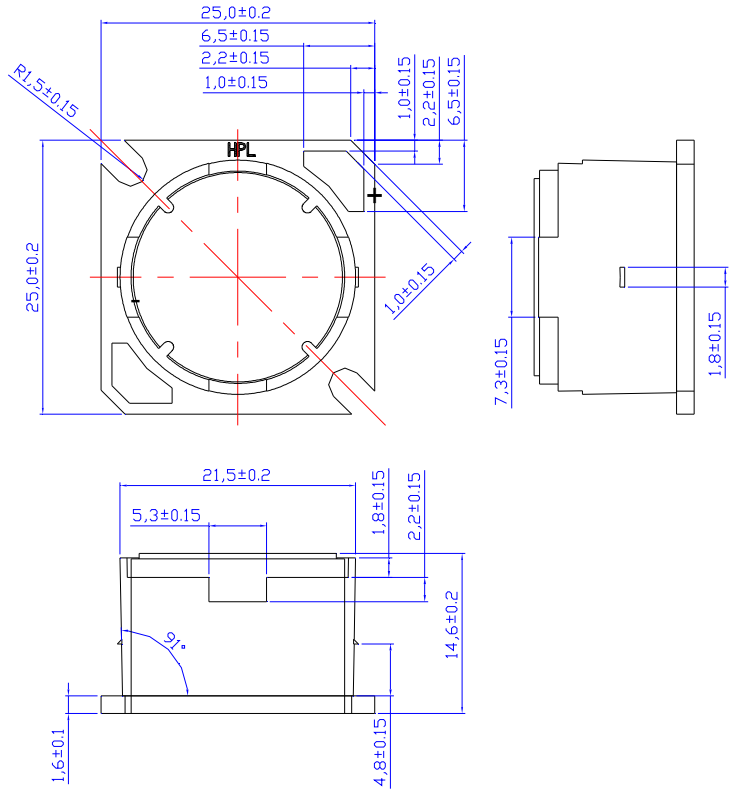
• Color Temperature or Dominate wavelength

(Tj=25℃)

Color	Color Temperature or Dominate Wavelength					
	Symbol	MIN.	TYP.	MAX.	Test Condition	Unit
Cool White	CCT	4100	5600	10000	IF = 350mA	°K
Neutral White	CCT	3250	3800	5650	IF = 350mA	°K
Warm White	CCT	2760	3250	4100	IF = 350mA	°K
Red	λd	620	-	630	IF = 350mA	nm
Green	λd	520	-	540	IF = 350mA	nm
Blue[1]	λd	450	-	470	IF = 350mA	nm
Amber	λd	585	-	595	IF = 350mA	nm
Orange	λd	610	-	620	IF = 350mA	nm

Note: 1. Royal Blue Products: Wavelength defined is Peak Wavelength ($\lambda_p = 450 \sim 460\text{nm}$).

5. Outline Dimension



6. Typical Radiation Pattern