



**■ Features**

- Direct AC input 110~120Vac for POB-30L
- POB-30L: UL 8750 compliant
- Direct AC input 220~240Vac, up to 270Vac max. for POB-30H
- POB-30H: CE compliant (LVD, EMF, EMC, Photo-biological test)
- TRIAC dimming available
- ANSI C78.377 4-step bins for 3000K and 4000K
- Systematic efficacy >100lm/W @ 3000K CRI80
- CRI > 80
- Power factor > 0.95
- No flicker compliant with Japan PSE regulations
- THD <17%, (compliant with EN61000-3-2, class C)
- RoHS, REACH compliant
- 3 years warranty

**■ Applications**

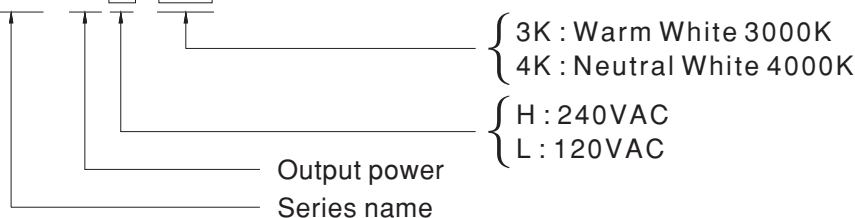
- LED bay lighting
- LED down lighting
- LED mining lighting
- LED stage lighting

**■ Description**

POB-30 series is an AC Direct-in driverless modular LED Light Engine. The most outstanding feature is not only the systematic efficacy is high but Power Factor is the best-in-class as well. It is highly compatible with most market-available TRIAC dimmers; best for commercial, industrial, outdoor and explosion or water proof product.

**■ Model Encoding**

**POB -30H- 3K**





# POB-30 series



## 30W Driverless Modular LED Light Engine

### SPECIFICATION

MODEL		POB-30L-3K	POB-30L-4K	POB-30H-3K	POB-30H-4K
OUTPUT	RATED POWER*1	35W (120VAC)		35W (240VAC)	
INPUT	VOLTAGE RANGE	110 ~ 120VAC		220 ~ 240VAC, up to 270VAC	
	POWER FACTOR	PF ≥ 0.95			
	TOTAL HARMONIC DISTORTION*2	<17%			
	EFFICIENCY (Typ.)	90%			
	SURGE PROTECTION*4	1K			
ENVIRONMENT	ESD SENSITIVITY	+4KV (HBM)			
	THERMA / RESISTANCE	~0.5°C / W			
	WORKING TEMP. (Tc)	-20 ~ 85°C			
	WORKING HUMIDITY	20 ~ 90% RH non-condensing			
	AMBIENT TEMPERATURE	≤45°C			
	STORAGE TEMPERATURE*3	-20 ~ 50°C			
SAFETY	UL	UL8750		-----	
	CE-LVD	-----		EN62031	
	CE-EMF	-----		EN62493	
	EMC EMISSION	-----		EN55015	
		-----		EN61547	
		-----		EN61000-3-2	
		-----		EN61000-3-3	
	CE-PHOTO-BIOLOGICAL TEST	-----		EN62471	
EMC IMMUNITY	EN61000-4-2,3,4,5,6,7,8,11				
OTHERS	DIMENSION	81.5*81.5*22mm (L*W*H)			
	PACKING	0.083Kg; 120pcs/10Kg			
NOTE	<p>1.Lustrous Technology allows a tolerance with tolerance rate of ±10%.</p> <p>2.THd compliant with EN61000-3-2,Class C.</p> <p>3.Relative Humidity &lt;60% RH within 6 months.</p> <p>4.Compliant with EN62031.</p> <p>5.The manufacturer is Lustrous Technology. The product is packaged and delivered with Lustrous Technology's logo.</p>				

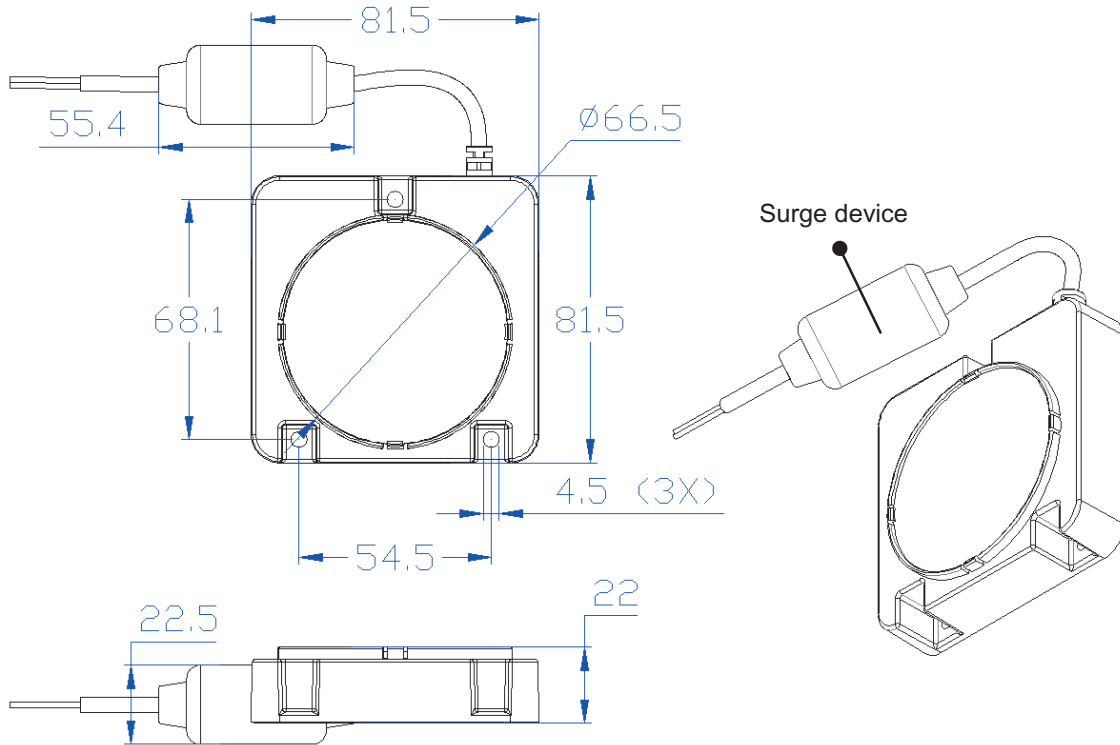
File Name:POB-30-SPEC 2016-05-17



Note: all features are subject to change without notice.

■ **Mechanical Specification**

Unit:mm



Note1: These drawings are not for scale. All dimensions are in millimeters.

■ **Recommended Installation Guide**

**Optical Characteristics, at 120Vac 60Hz / 240Vac 50Hz input and Casw Temperature T<sub>c</sub> = 25°C**

Table.1

CCT	CRI	Luminous flux					
		POB-30L			POB-30H		
		Min.	Typ.	T <sub>c</sub> 75°C	Min.	Typ.	T <sub>c</sub> 75°C
3000K	>80	2650	3150	2865	3030	3530	3190
4000K		2730	3300	3000	3180	3700	3350

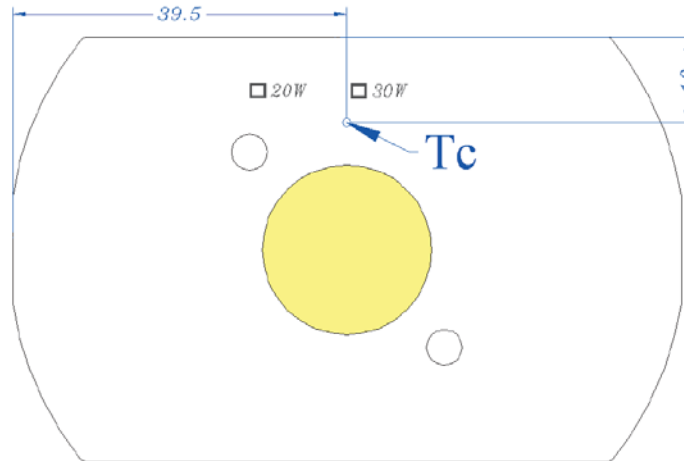
Note1 : Luminous flux is measured in total power with tolerance rate of ±10%.

Minimum luminous flux performance is guaranteed from the above data.

Note2 : Luminous flux at board temperature of 75°C is for reference.

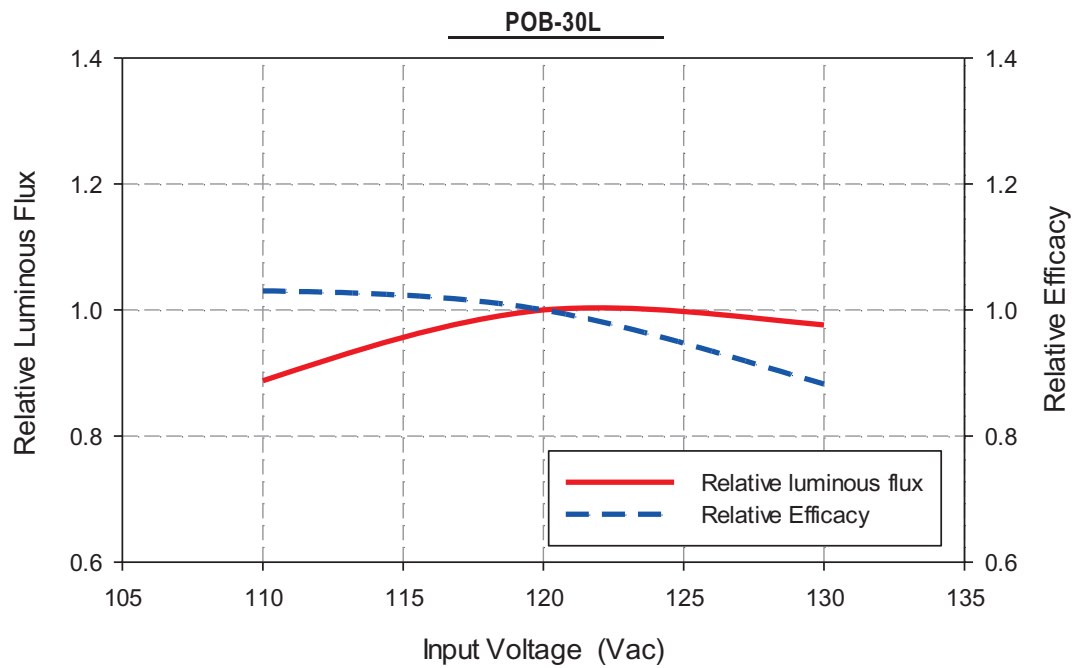
Note3 : CRI value is measured with tolerance rate of ±3%.

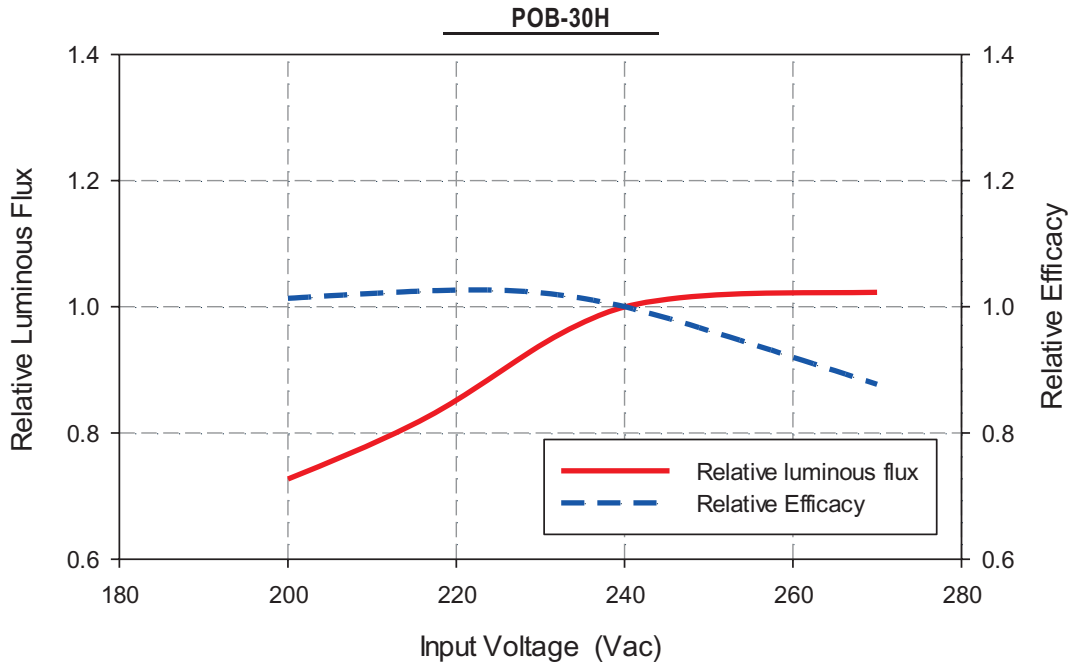
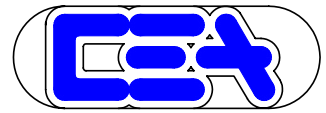
**Location of the T<sub>c</sub> point(without front cover)**



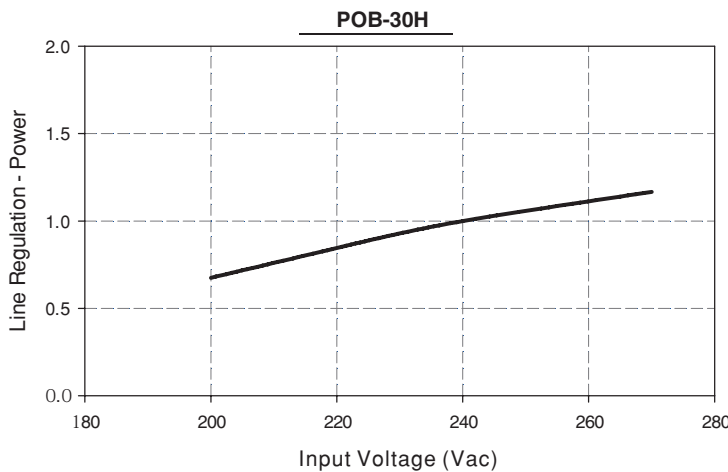
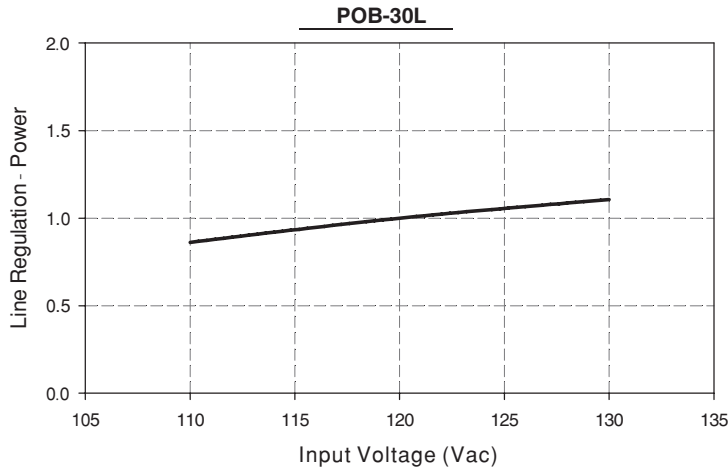
Note1 : These drawings are not for scale. All dimensions are in millimeters.

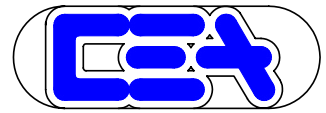
**Relative Intensity vs. Input Voltage, T<sub>c</sub>= 75°C**



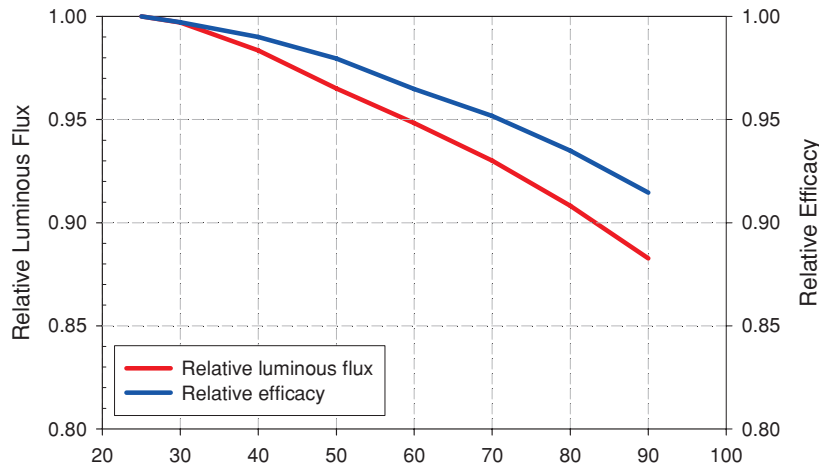


Line Regulation vs. Input Voltage,  $T_c = 75^\circ\text{C}$



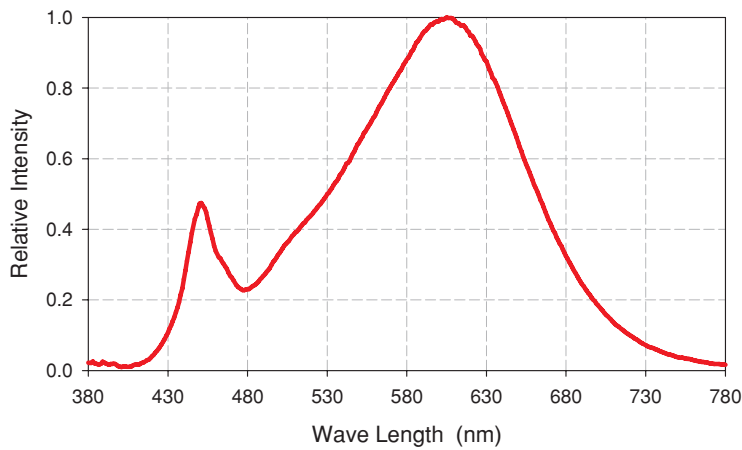


### Photometric Output vs. Board Temperature

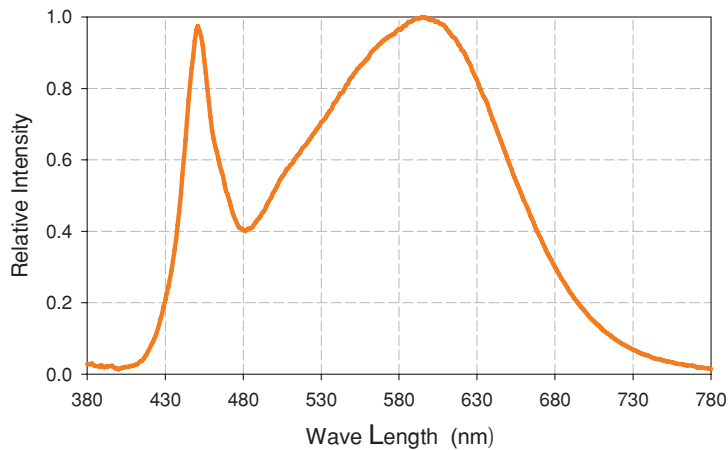


### Relative Spectral Power

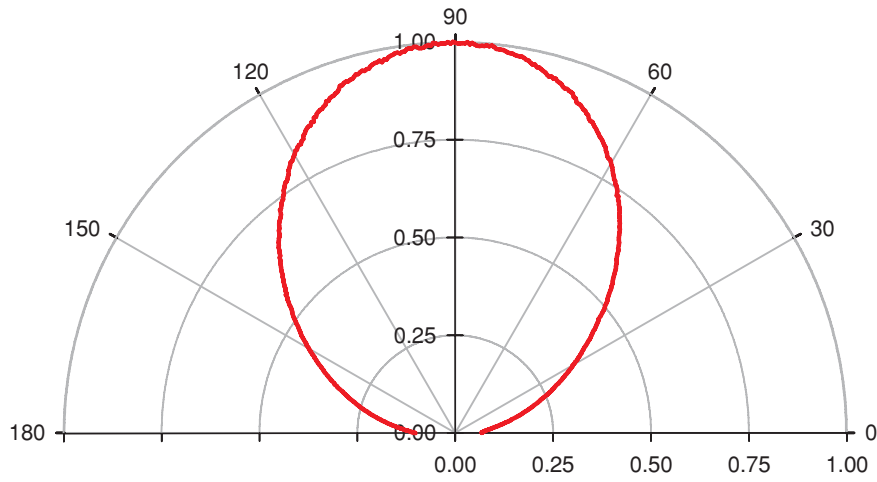
#### Warm White (3000K)



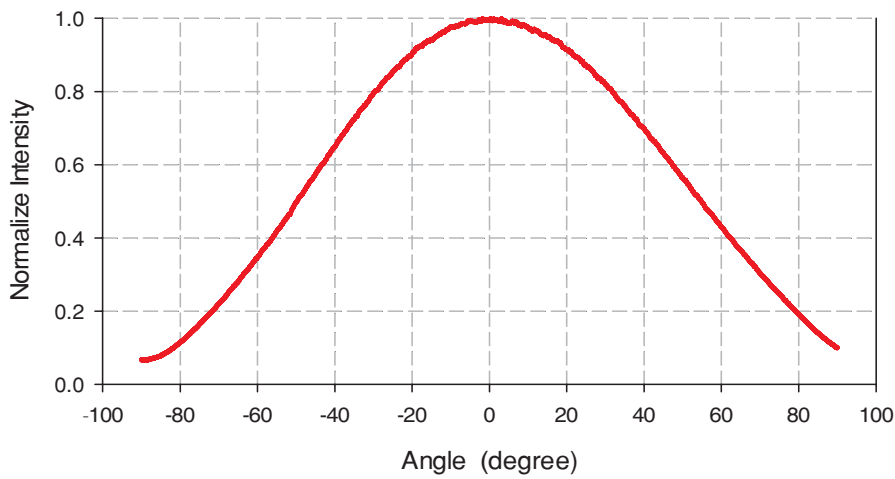
#### Neutral White (4000K)



Typical Angular Beam Profile, Tc= 25° C



View Angle: 105 degree



Note1 : Photometric data is ready on request

**Chromaticity Binning Information**

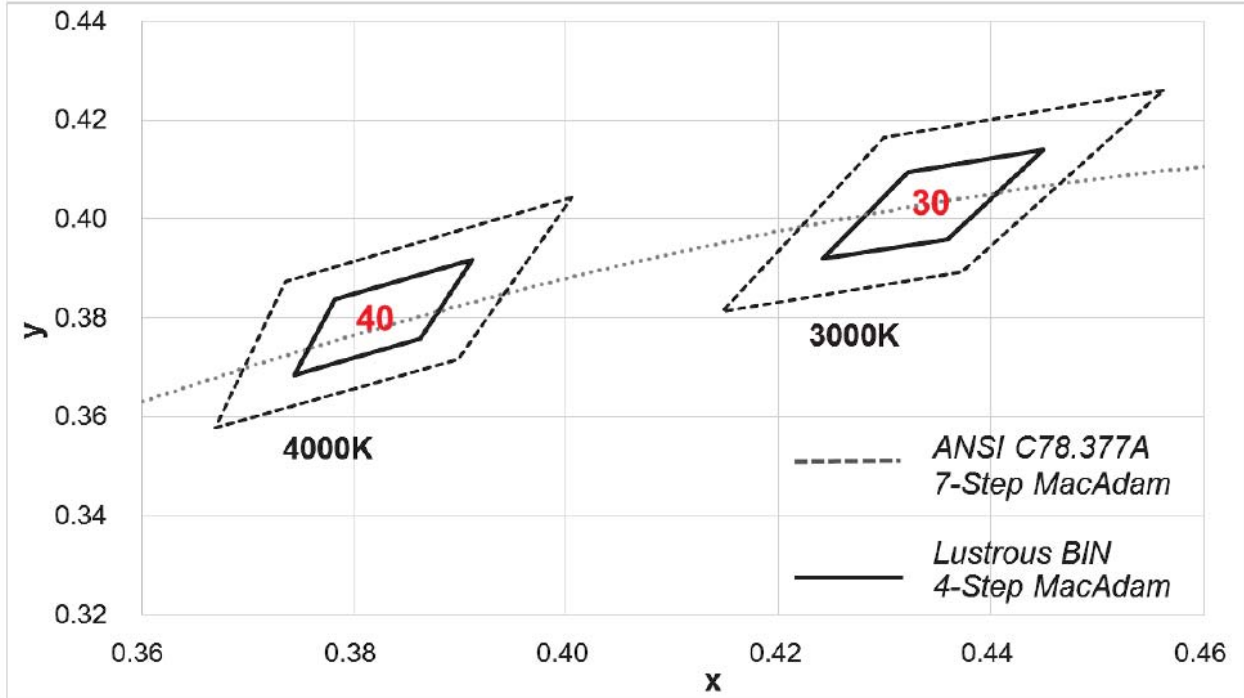


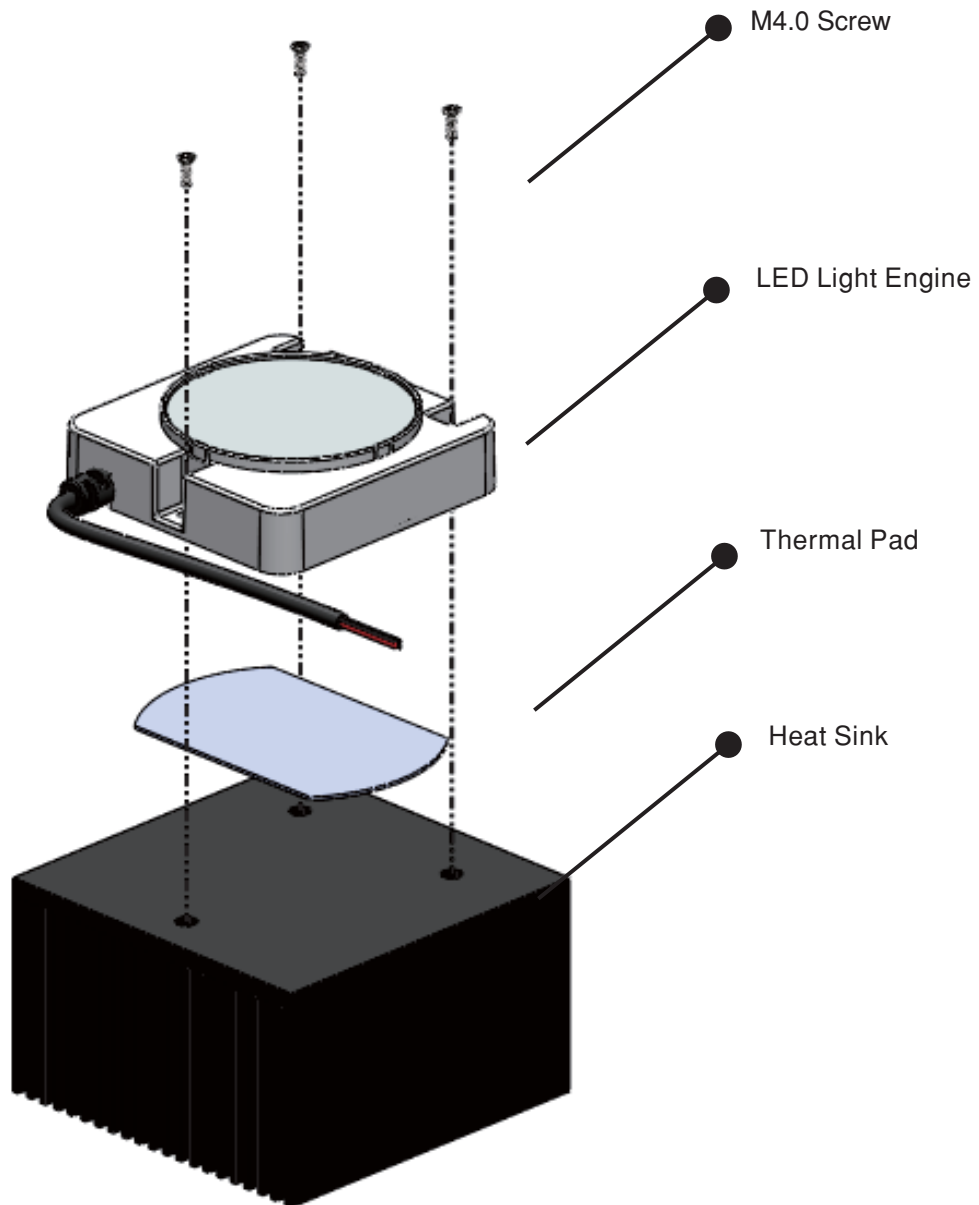
Table.2

BIN CODE	CCT (K)	Chromaticity Coordinate (CIE 1931-xy)								Center	
		x1	y1	x2	y2	x3	y3	x4	y4		
30	3000	0.4242	0.3919	0.4322	0.4096	0.4449	0.4141	0.4359	0.3960	0.4338	0.4030
40	4000	0.3744	0.3685	0.3782	0.3837	0.3912	0.3917	0.3863	0.3758	0.3818	0.3797

Note1 : Chromaticity is measured in Chromaticity Coordinate ( CIE 1931-xy ) with tolerance rate of  $\pm 0.005$ .



### Recommended Installation Guide



### Installation

1. Do not touch the lighting emitting area(LES) during assembly
2. If the product used under the following conditions, please review the design of the fixture is or not.
  - wet or damp location.
  - salty environment.
  - exposed to corrosive gas such as Cl, S, H<sub>2</sub>S, NH<sub>3</sub>, SO<sub>2</sub>, NO<sub>x</sub> and so on.
  - exposed to dust, fluid or oil.
3. As thermal pad is used for thermal interface material (TIM), its thermal conductivity and dielectric properties should be examined to ensure the product life and safety.
4. This LED light engine needs to be built into a class 1 luminaire. When it is built into a class II compliance luminaire, the protection with the required safety standards has to be ensured by the luminaire manufacturer.
5. This LED light engine might interfere with displays and cameras due to modulation.

