

# Edixeon Amber HB Series Datasheet



## Features :

- More energy efficient than incandescent and most halogen lamps
- Low voltage operation
- Instant light
- Long operating life

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## General Information

### Introduction

Edixeon Amber HB series emitters are one of the highest power LEDs in the world by Edison Opto. Edixeon Amber HB series emitters are designed to satisfy more and more Solid-State Lighting High Power signaling, signage and entertainment applications.

### Ordering Code Format

2  
X1
E  
X2
A 1  
X3
0 1  
X4
A X  
X5
1 9  
X6
0 0 0  
X7
0 0 2  
X8

X1		X2		X3		X4		X5	
Type	Component	Series		Wattage		Color			
2	Emitter	E	Edixeon	A1	A1 Series	01	1W	AX	Amber

X6		X7		X8	
Internal code	PCB Board	Serial Number			
19	-	000	-	-	-

## Absolute Maximum Ratings

Parameter	Symbol	Value	Units
DC Forward Current	$I_F$	350	mA
Peak Pulsed Current; (tp≤100μs, Duty cycle=0.25)	$I_{pulse}$	700	mA
Reverse Voltage	$V_R$	5	V
Drive Voltage	$V_D$	5	V
LED Junction Temperature	$T_J$	125	°C
Operating Temperature	-	-30 ~ +110	°C
Storage Temperature	-	-40 ~ +120	°C
ESD Sensitivity (HBM)	-	2,000	V
Manual Soldering Time at 260°C(Max.)	-	5	Sec.

**Notes:**

1. Proper current derating must be observed to maintain junction temperature below the maximum at all time.
2. LEDs are not designed to be driven in reverse bias.
3. tp: Pulse width time

## Characteristics

Parameter	Symbol	Value	Units
Viewing Angle	$2\theta_{1/2}$	120	Degree
Thermal resistance	-	10	°C/W
$\Delta V_f/\Delta T$	$\Delta V_f/\Delta T$	-2	mV/°C
Wavelength	$\lambda_d$	588-592	nm
JEDEC Moisture Sensitivity	-	Level 2a <b>Floor Life</b> Conditions: ≤30°C / 60% RH <b>Soak Requirements(Standard)</b> Time (hours): 120+1/-0 Conditions: 60°C / 60% RH	-

**Notes:**

1. Wavelength is measured with an accuracy of ± 0.5nm.
2. Viewing angle is measured with an accuracy of ±10 Degree.
3. CIE\_x/y tolerance: ±0.005.

## Luminous Flux Characteristic

Luminous Flux Characteristics at  $I_f=350\text{mA}$ ,  $T_j=25^\circ\text{C}$

Color	Wattage (W)	Group	Min. Luminous Flux (lm)	Max. Luminous Flux (lm)	Forward Current (mA)	Order Code
Amber	1	T0	66.5	86.5	350	2EA101AX19000002
		U0	86.5	110		

**Note:**

Flux is measured with an accuracy of  $\pm 10\%$ .

## Voltage Bin Structure

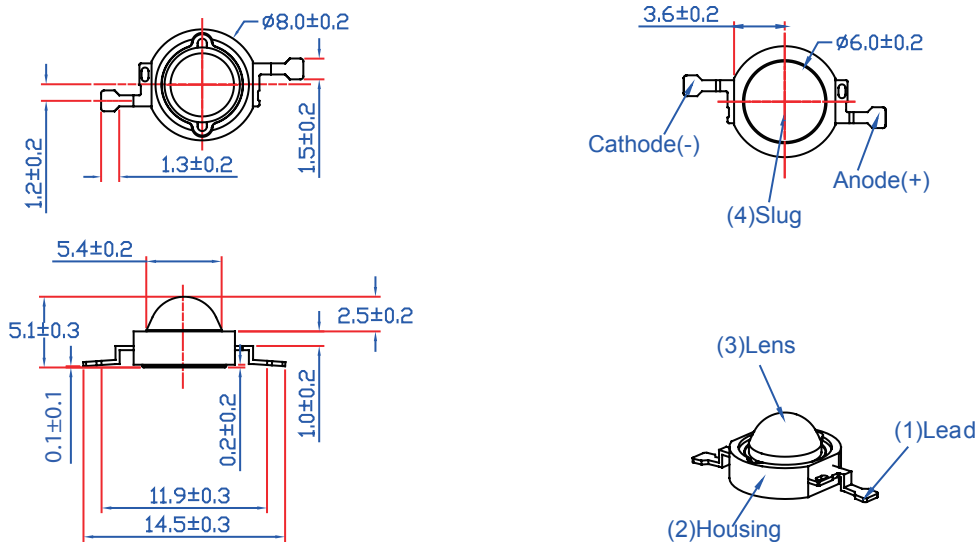
Group	Min. Voltage (V)	Max. Voltage (V)
V01	2.8	3.1
V02	3.1	3.4
V03	3.4	3.7


**Note:**

Forward voltage measurement allowance is  $\pm 0.06\text{V}$ .

## Mechanical Dimensions

### Emitter Type Dimension



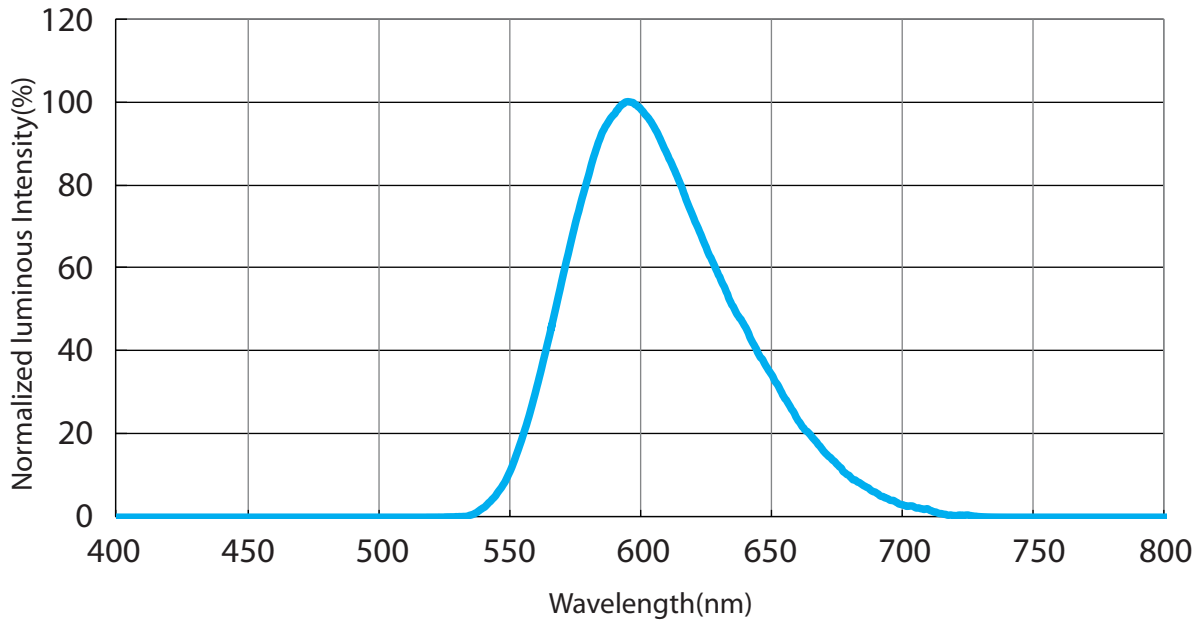
Emitting Color	Slug at the bottom of the electrode	Circuit
Amber	No electrode	

**Notes:**

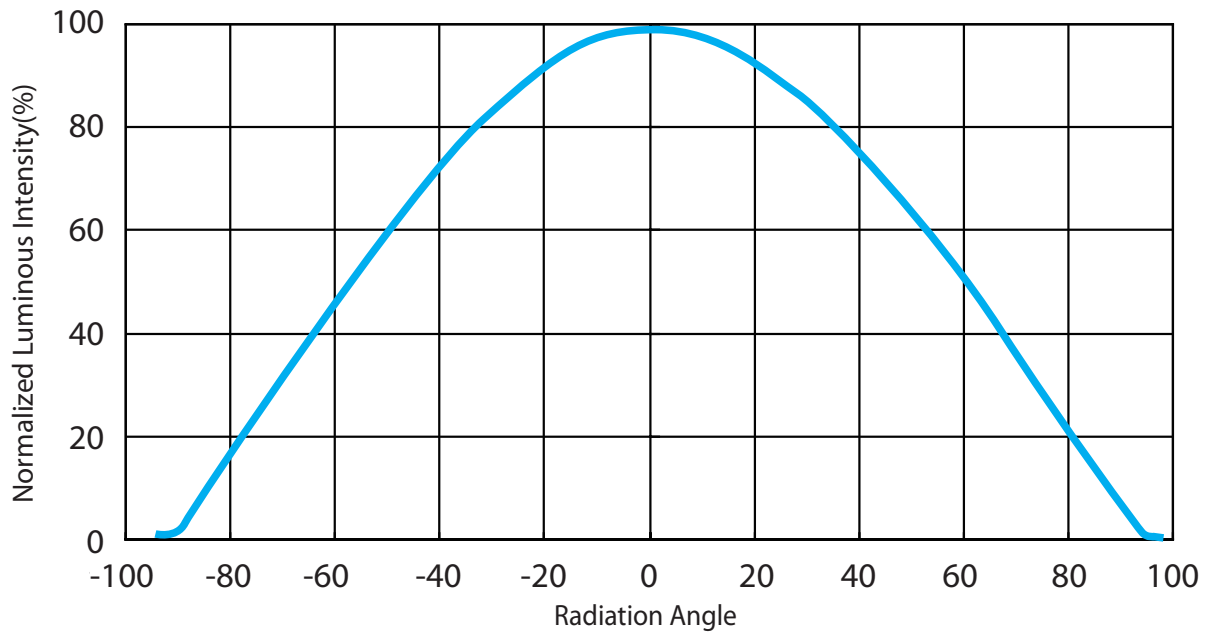
1. All dimensions are in mm.
2. It is strongly recommended that the temperature of lead doesn't exceed 55°C.
3. It is important that the slug can't contact aluminum surface, It is strongly recommended that there should coat a uniform electrically isolated heat dissipation film on the aluminum surface.

## Characteristic curve

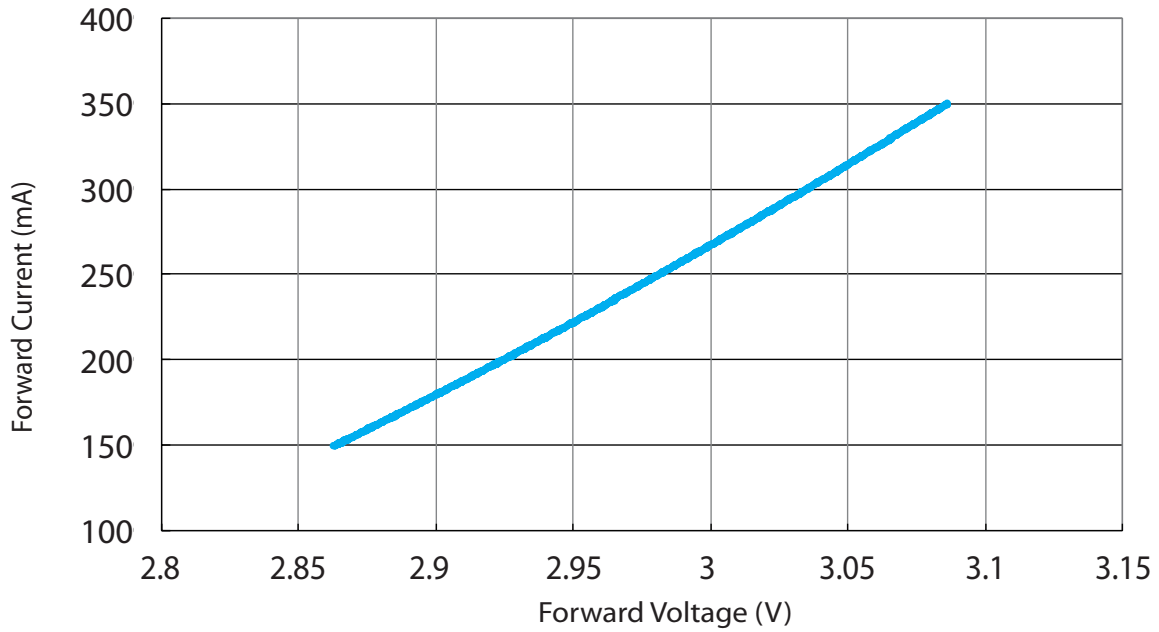
### Color Spectrum



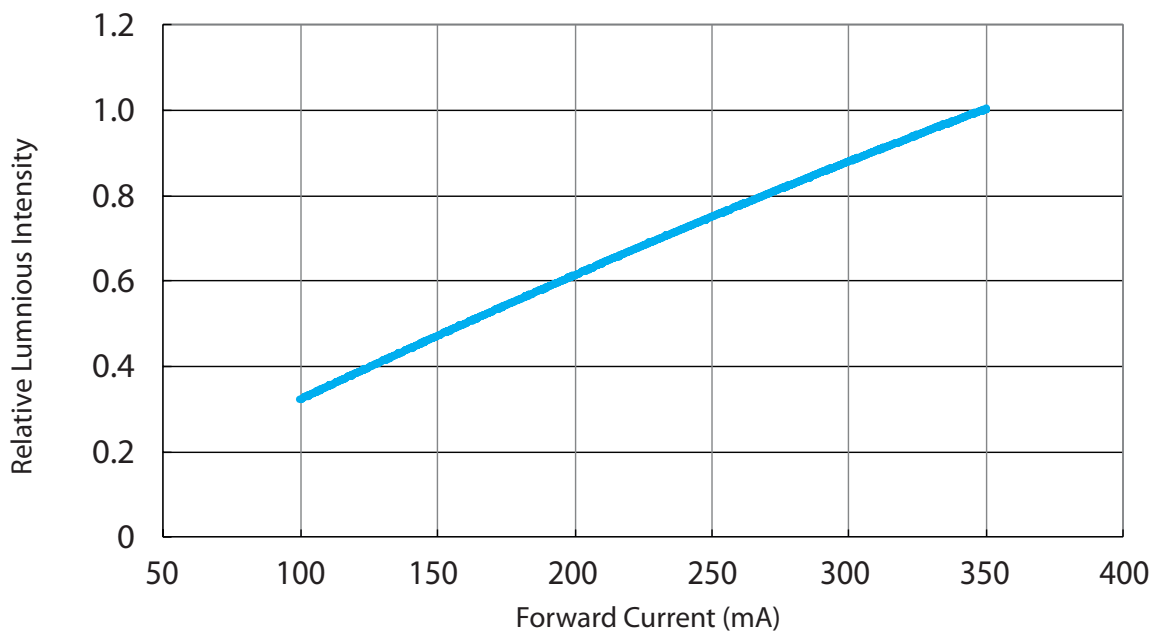
### Beam Pattern



### Forward Current vs. Forward Voltage

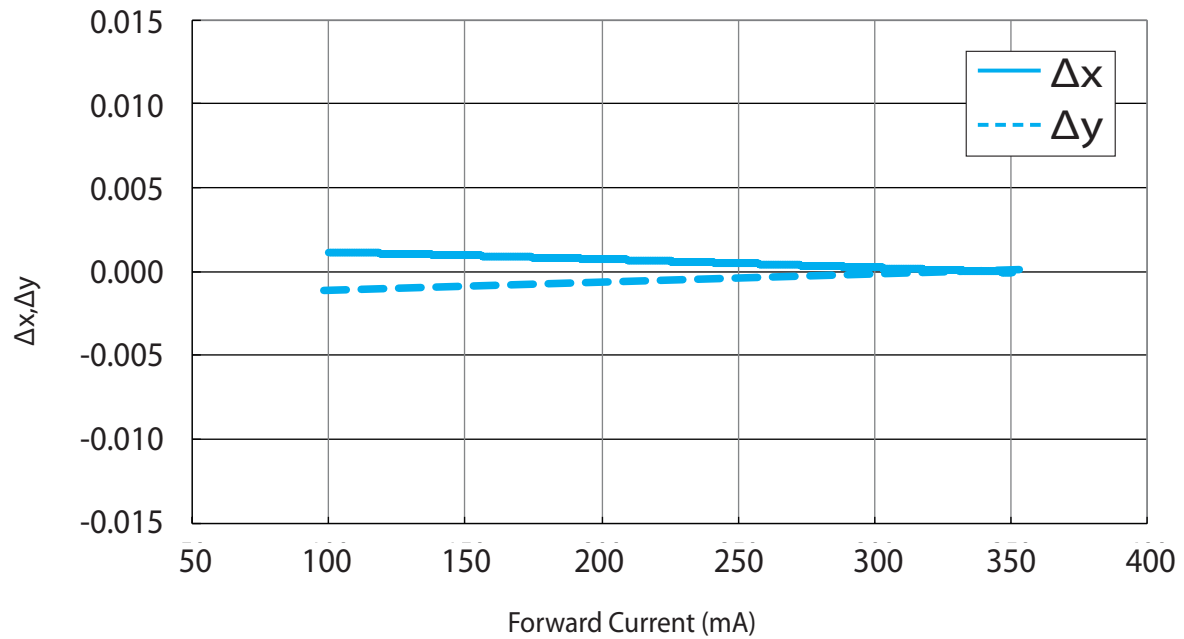


### Relative Intensity vs. Forward Current

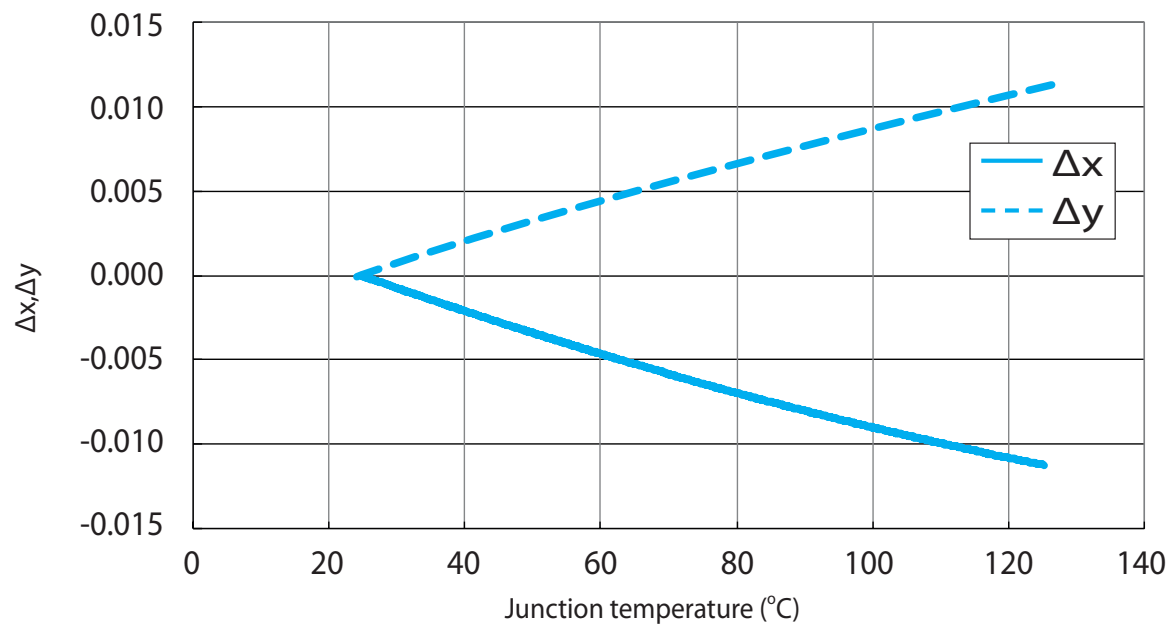




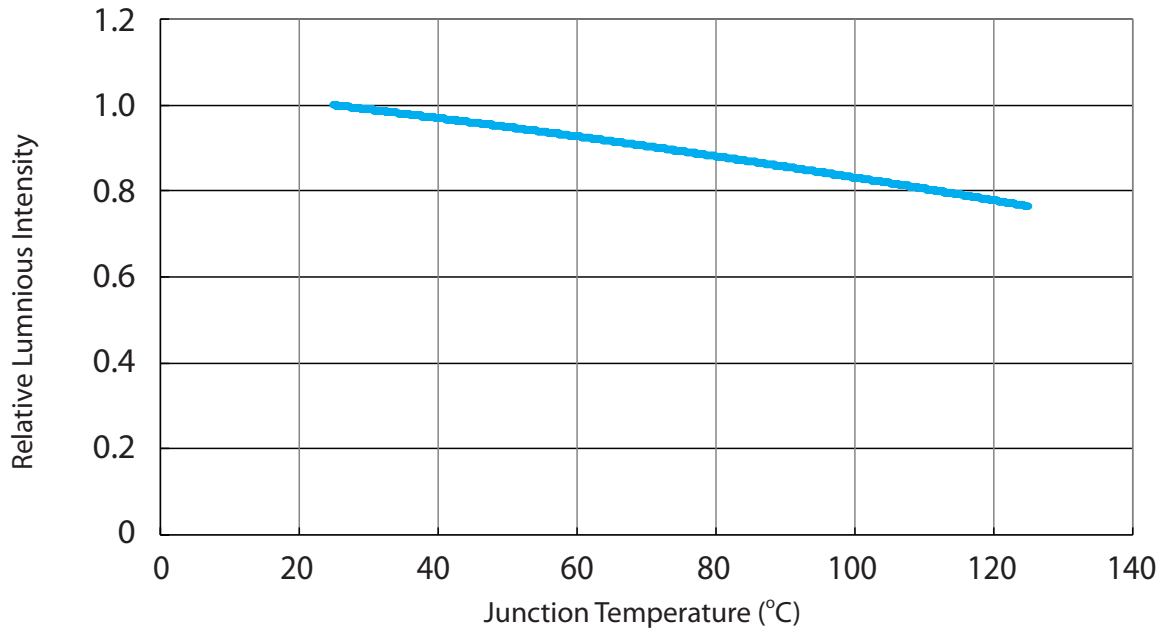
### $\Delta x, \Delta y$ vs. Forward Current



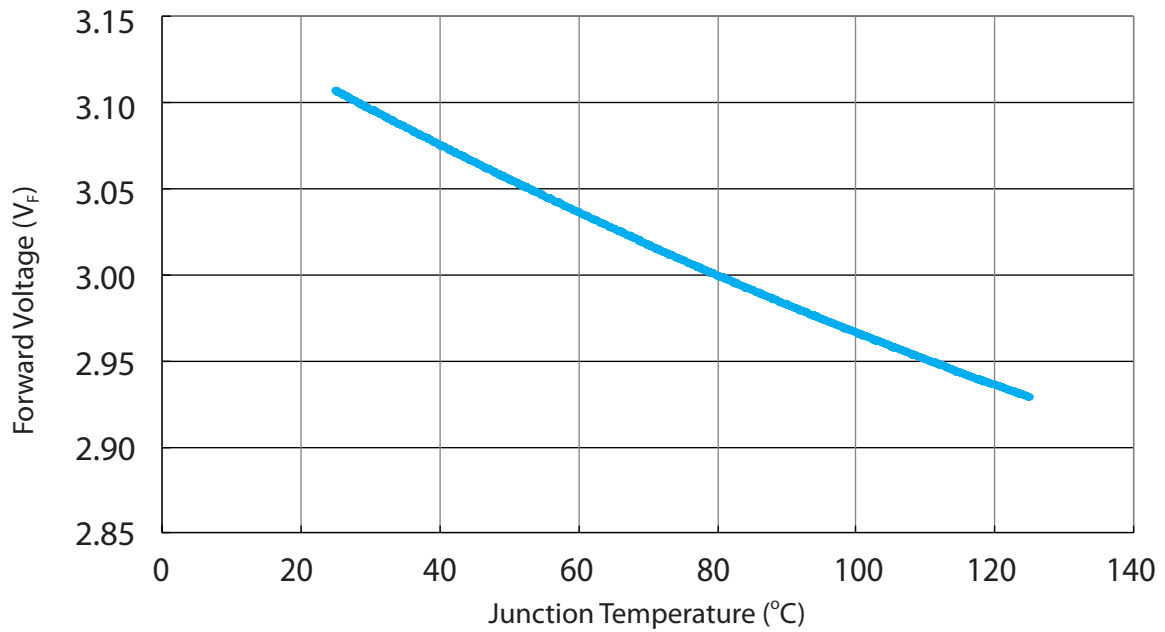
### $\Delta x, \Delta y$ vs. Junction Temperature



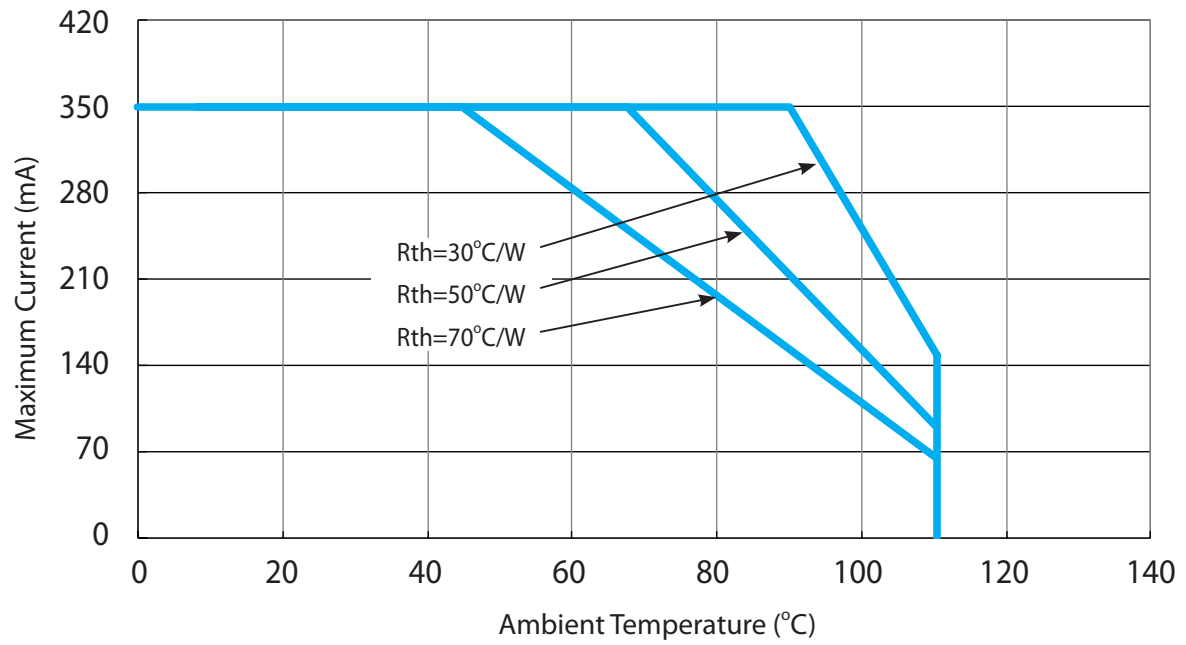
### Relative Luminous Flux vs. Junction Temperature



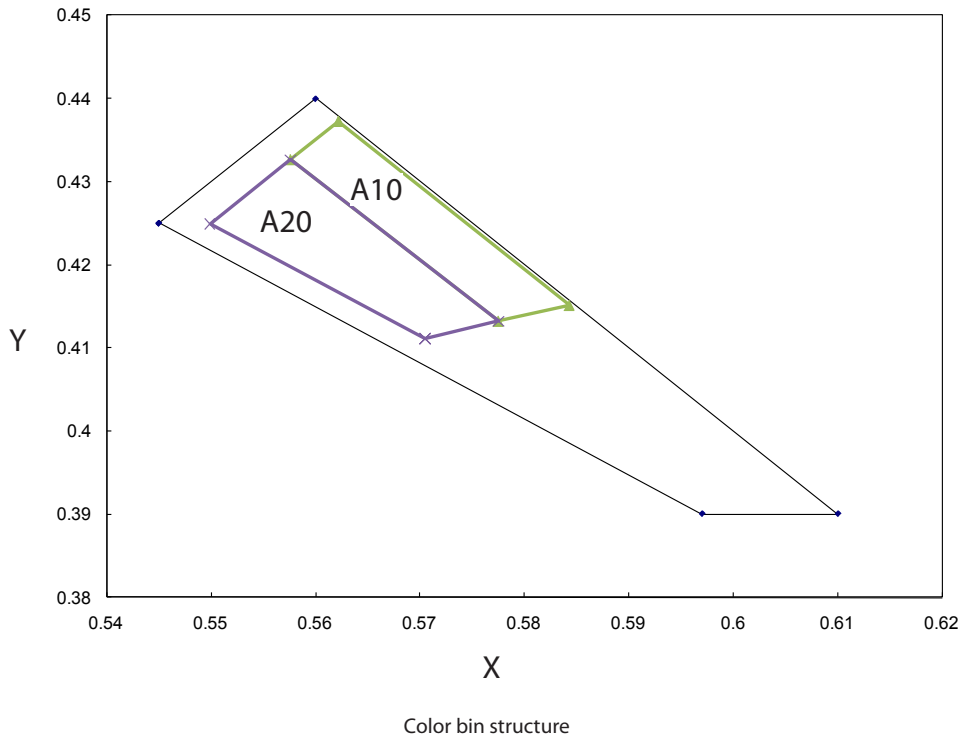
### Forward Voltage vs. Junction Temperature



### Maximum Current vs. Ambient Temperature



## Color Bins

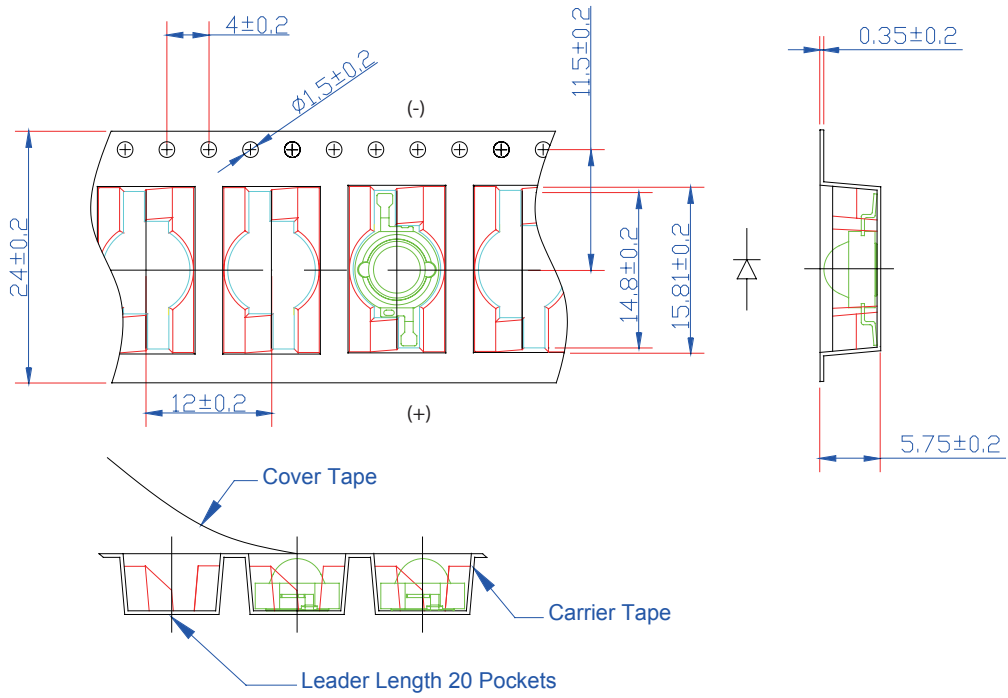


### Amber HB Series bin Coordinate

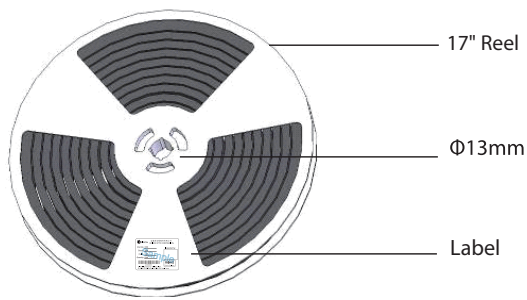
Group	X	Y
A10	0.5622	0.4372
	0.5576	0.4326
	0.5775	0.4132
	0.5843	0.4151
A20	0.5705	0.4111
	0.5775	0.4132
	0.5576	0.4326
	0.5499	0.4249

## Product Packaging Information

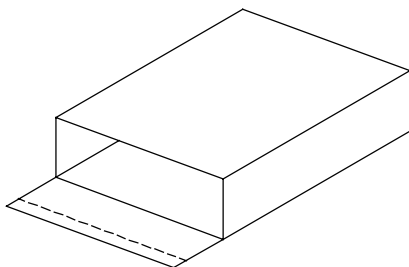
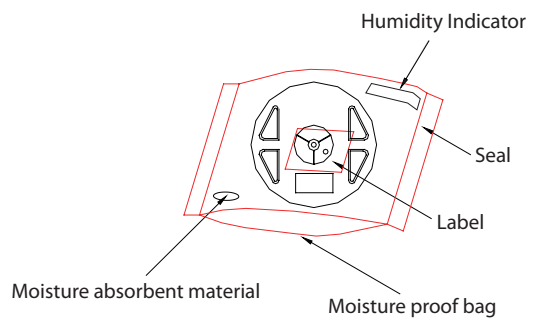
### Tape and Reel Dimension



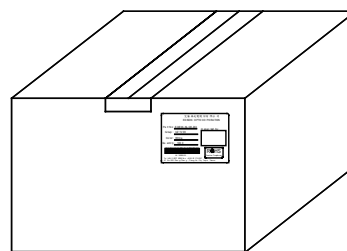
### Edixeon Emitter



1000pcs LEDs inside



2 bags in 1 box



5 boxes in 1 carton

Note : 445\*410\*415 (Tolerance : ±5mm)

## Revision History

Versions	Description	Release Date
1	Establish order code information	2015/03/06

## About Edison Opto

Edison Opto is a leading manufacturer of high power LED and a solution provider experienced in LDMS. LDMS is an integrated program derived from the four essential technologies in LED lighting applications- Thermal Management, Electrical Scheme, Mechanical Refinement, Optical Optimization, to provide customer with various LED components and modules. More Information about the company and our products can be found at [www.edison-opto.com](http://www.edison-opto.com)

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