

# EAUVA2016

## 0.08W Series



### Introduction

The EAUVA2016 product series is a ceramic based LED with high quality and reliability that suitable for UV application.

### Features

- ◆ Low power UVA LED
- ◆ Dimension 2.0mm\*1.6mm\*0.75mm
- ◆ ESD protection up to 8KV
- ◆ RoHS compliant
- ◆ Pb free
- ◆ EU REACH compliant
- ◆ Halogen Free compliant
- ◆ (Br<900ppm,Cl<900ppm,Br+Cl<1500ppm)

### Applications

- ◆ UV Nail
- ◆ UV Counterfeit
- ◆ UV Catch mosquitoes

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## Absolute Maximum Ratings

Parameter	Symbol	Ratings	Unit
Max. DC Forward Current (mA)	$I_F$	20	mA
Power Dissipation	$P_d$	0.08	W
Max. ESD Resistance	$V_B$	8000	V
Max. Junction Temperature	$T_J$	125 <sup>[5]</sup>	°C
Operating Temperature	$T_{Opr}$	-40 ~ +110	°C
Storage Temperature	$T_{Stg}$	-40 ~ +110	°C

**Notes:**

1. Maximum forward current is 20mA (Thermal Pad=25°C).
2. Duty cycle = 1/10@1KHZ
3. The ELUFA series LEDs are not designed for reverse bias use.
4. Thermal Resistance is from junction to backside of component.
5. Maximum junction temperature of UV is 125°C.

## Electro-Optical Characteristic

Parameter	Symbol	Min.	Typ.	Max	Unit	Condition
Radiant Flux	$\Phi_e$	---	15	---	mW	IF=20mA
Forward Voltage	$V_F$	3.4	---	4	V	
Peak Wavelength	$\lambda_p$	---	368	---	nm	
Viewing Angle	$2\theta_{1/2}$	---	125	----	deg	

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Peak Wavelength	$\lambda_p$	---	368	---	nm	
Viewing Angle	$2\theta_{1/2}$	---	125	----	deg	

**Notes:**

1. Radiant flux measurement tolerance: ±10%.
2. The data of luminous flux measured at thermal pad=25°C
3. Typical radiant flux or light output performance is operated within the condition guided by this datasheet.

## Bin Range of Luminous Flux

Bin Code	Min.	Max	Unit	Condition
Q3	15	20	mW	IF=20mA
Q4	20	25		

**Notes:** Radiant flux measurement tolerance:  $\pm 10\%$ .

## Bin Range of Forward Voltage

Group	Bin	Bin Code	Min.	Max	Unit	Condition
C	V1+V2+V3	V1	2.95	3.25	V	IF=20mA
D	V2+V3+V4	V2	3.25	3.55		
E	V3+V4+V5	V3	3.55	3.85		
F	V1+V2	V4	3.85	4.15		

**Notes:** Tolerance of Forward Voltage:  $\pm 0.1V$ .

## Bin Range of Peak Wavelength

Group	Bin	Min.	Max	Unit	Condition
P UVA	1	360	365	nm	IF=20mA
	2	365	370		
	3	370	375		
	4	375	380		
	5	380	385		
	6	385	390		
	7	390	395		
	8	395	400		
	9	400	405		
	0	405	410		

## PN of the EAUVA2016 series: UVA LEDs

The table below is a list of part numbers for the Everlight EAUVA2016 0.08W series UVA LED. Typical view angle is 125°. These clearly listed binning options allow for proper design and implementation into UV applications. The Order Codes below are currently available UVA EAUVA2016 LEDs.

For Example: If you order product using P/N : EAUVA2016BC3, you will be specifying:

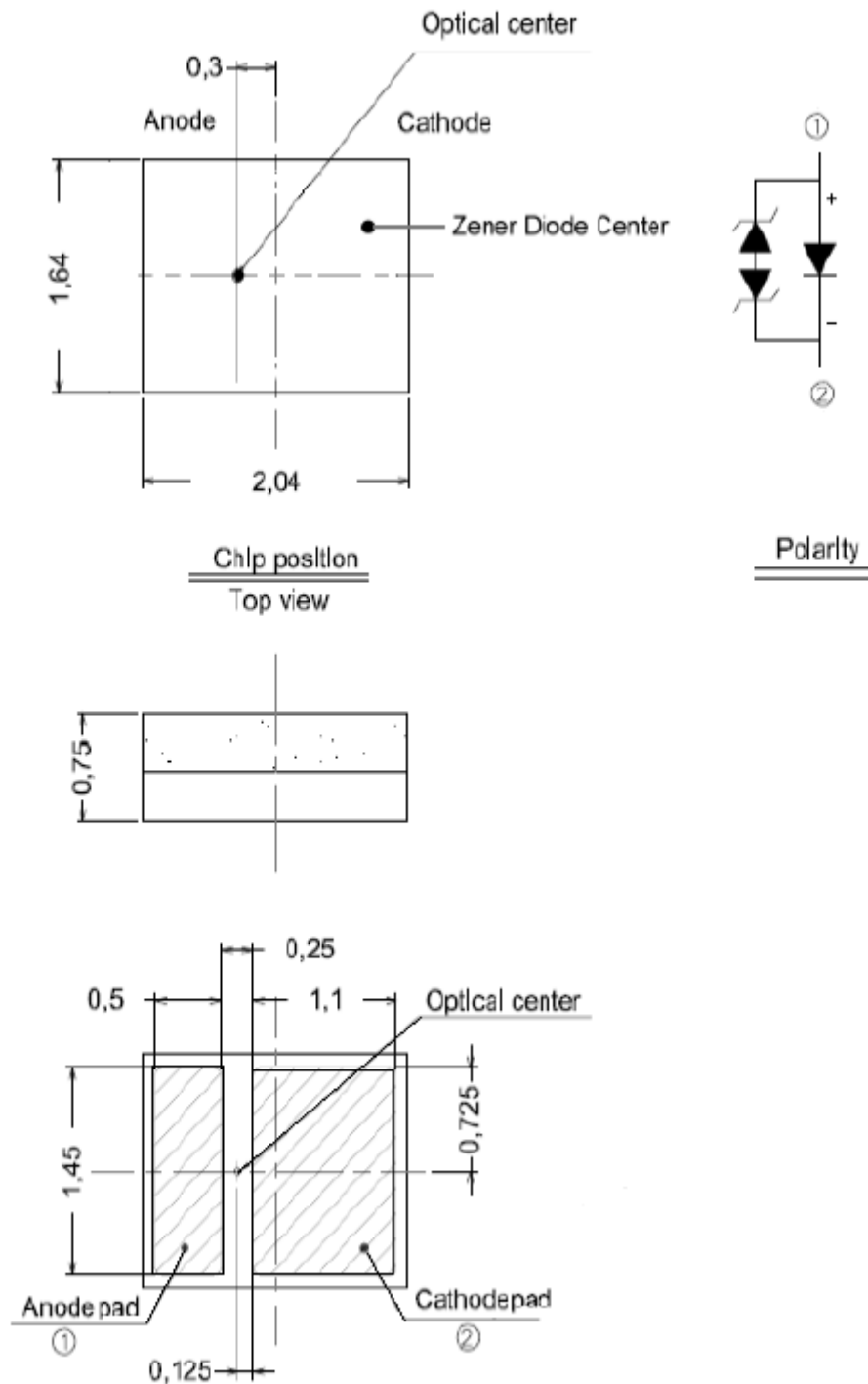


Color	Typ. Peak Wavelength (nm)	Forward Voltage (V)	Minimum Radiant Flux (mW)
UV	368	3.6	15

UV, EAUVA2016 series LEDs at 20mA are listed below

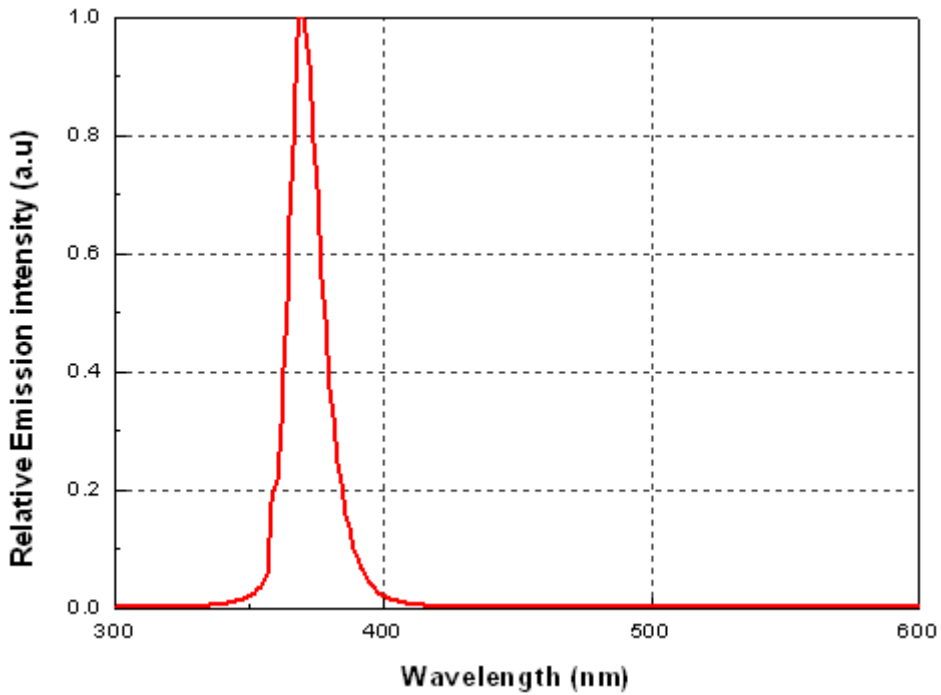
Color	Order Code of EAUVA2016	Minimum Radiant Flux (mW)	Peak Wavelength (nm)	Forward Voltage (V)
Ultraviolet	EAUVA2016BC3	15	365~375	3.4-4
	EAUVA2016BC4	20	365~375	3.4-4
	EAUVA2016EF4	20	380-390	3.2-3.8
	EAUVA2016EF5	25	380-390	3.2-3.8
	EAUVA2016GH4	20	390-400	3-3.6
	EAUVA2016GH5	25	390-400	3-3.6
	EAUVA2016IJ4	20	400-410	3-3.6
	EAUVA2016IJ5	25	400-410	3-3.6

## Mechanical Dimension

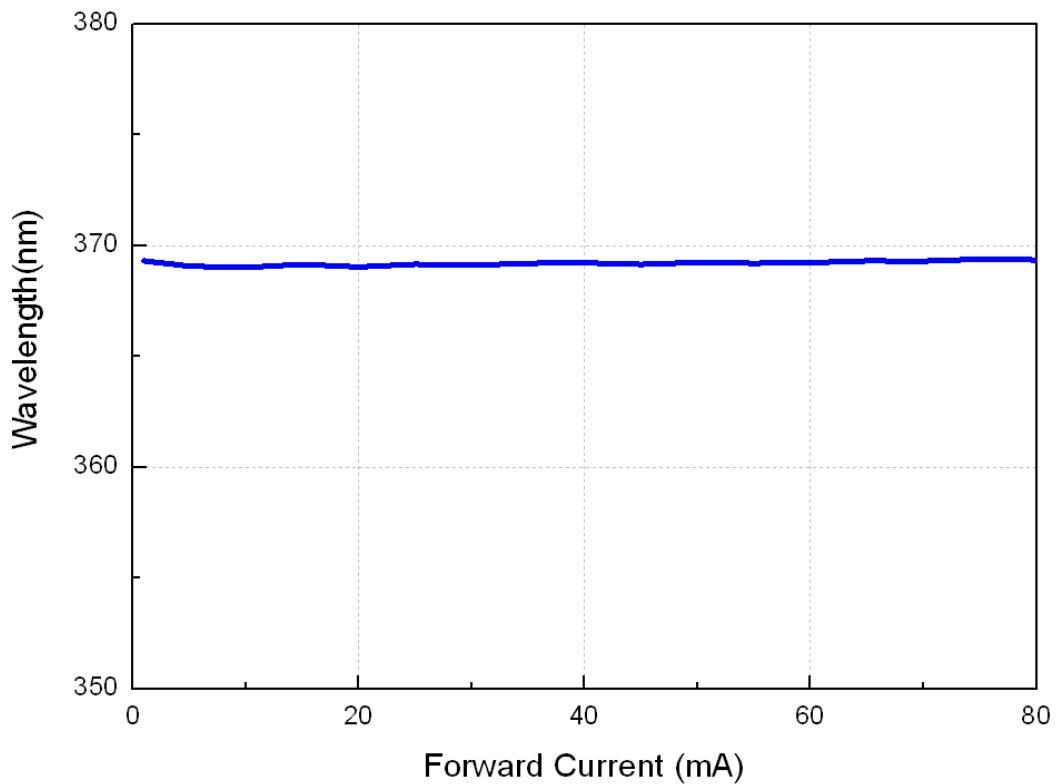


1. Dimensions are in millimeters.
2. Tolerances unless mentioned are  $\pm 0.1\text{mm}$

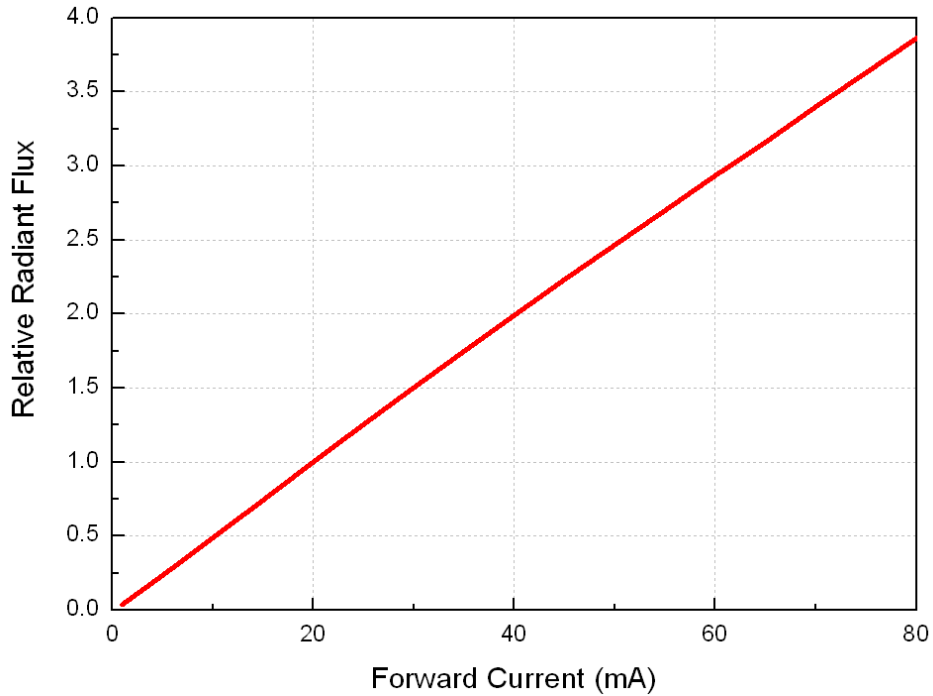
### Typical Characteristics Curves Spectrum @ Thermal Pad Temperature = 25°C



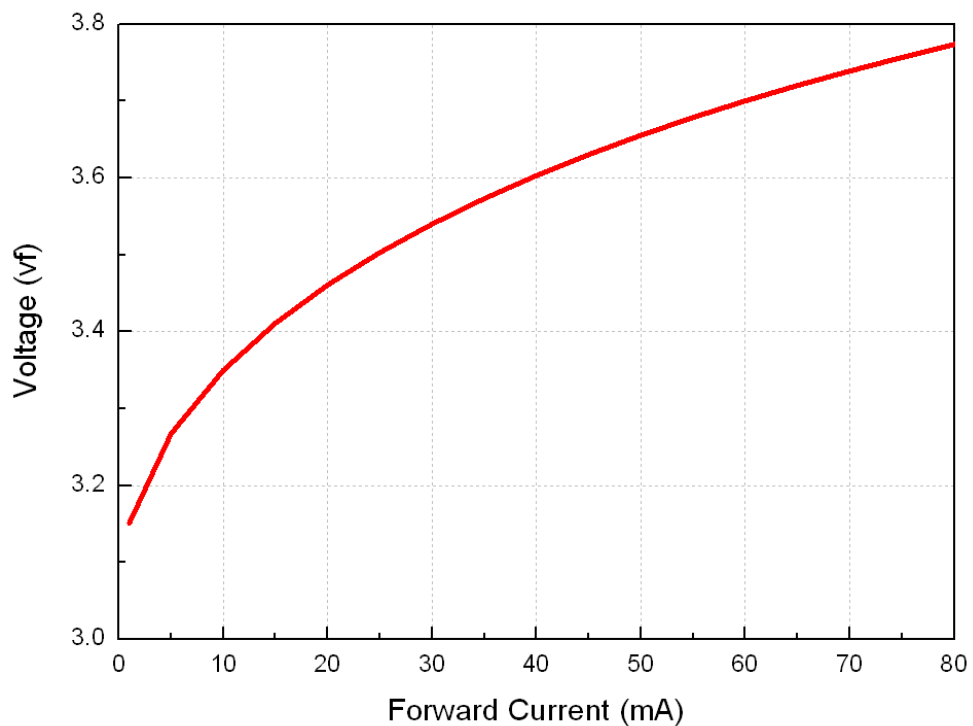
### Forward Current V.S. Peak Wavelength @ Thermal Pad Temperature = 25°C



## Forward Current vs. Relative Radiant Flux @ Thermal Pad Temperature = 25°C



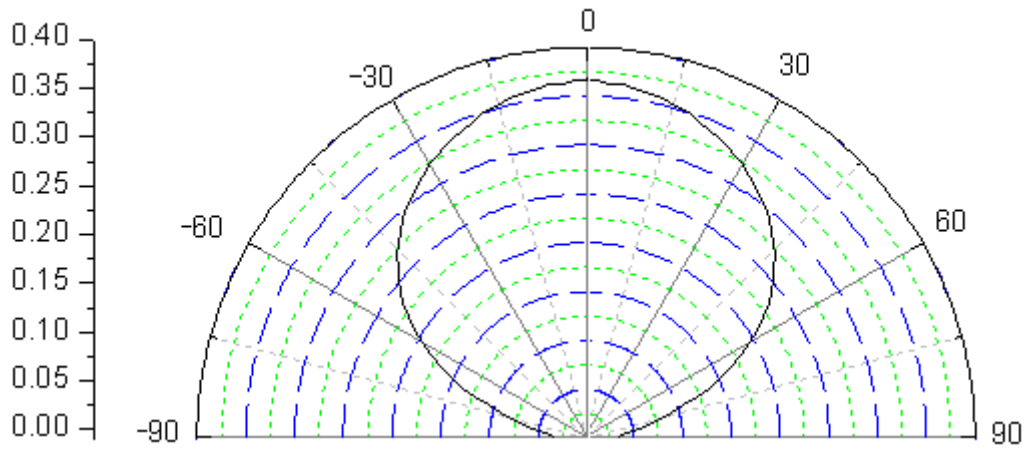
## Forward Voltage vs. Forward Current @ Thermal Pad Temperature = 25°C





## Typical Radiation Patterns

### Typical Diagram Characteristics of Radiation for EAUVA2016



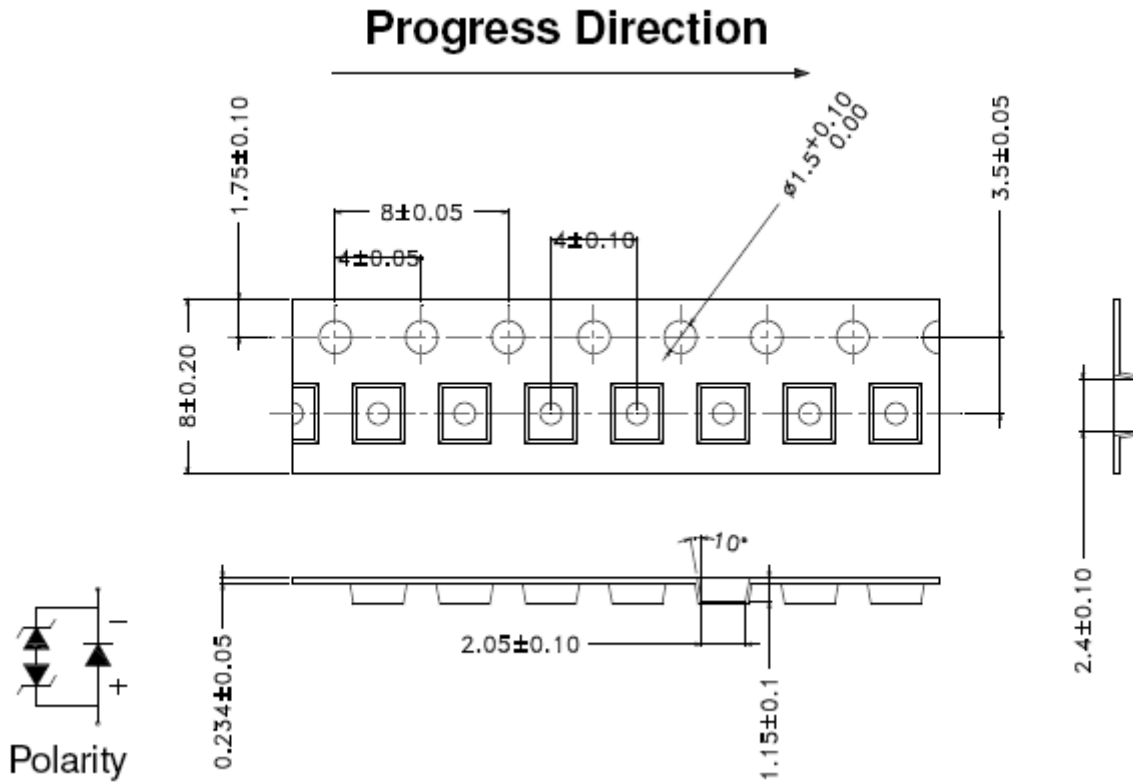
**Notes:**

1.  $2\theta_{1/2}$  is the off axis angle from lamp centerline where the luminous intensity is 1/2 of the peak value.
2. View angle tolerance is  $\pm 5^\circ$ .

## Emitter Tape Packaging

Carrier Tape Dimensions as the following:

Reel: 2000pcs

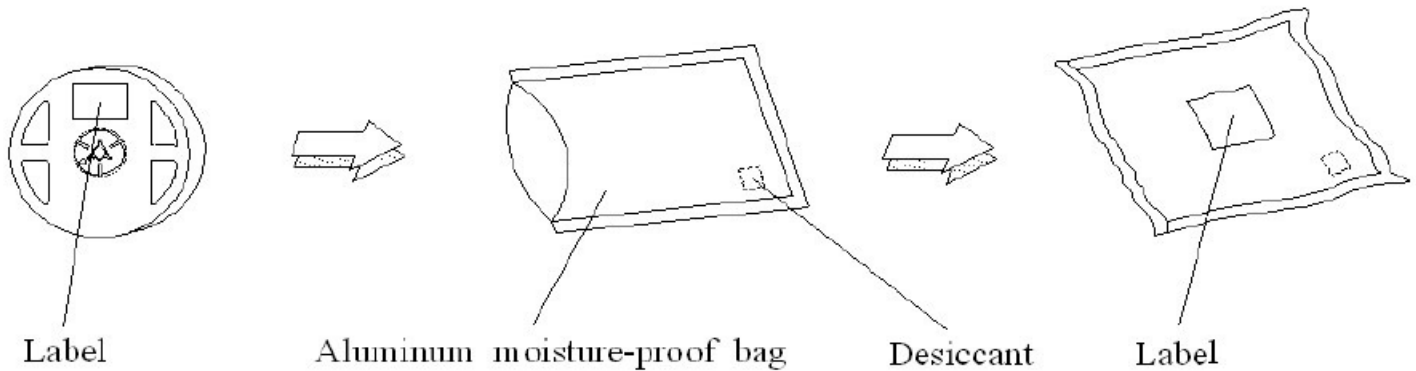


Unit = mm

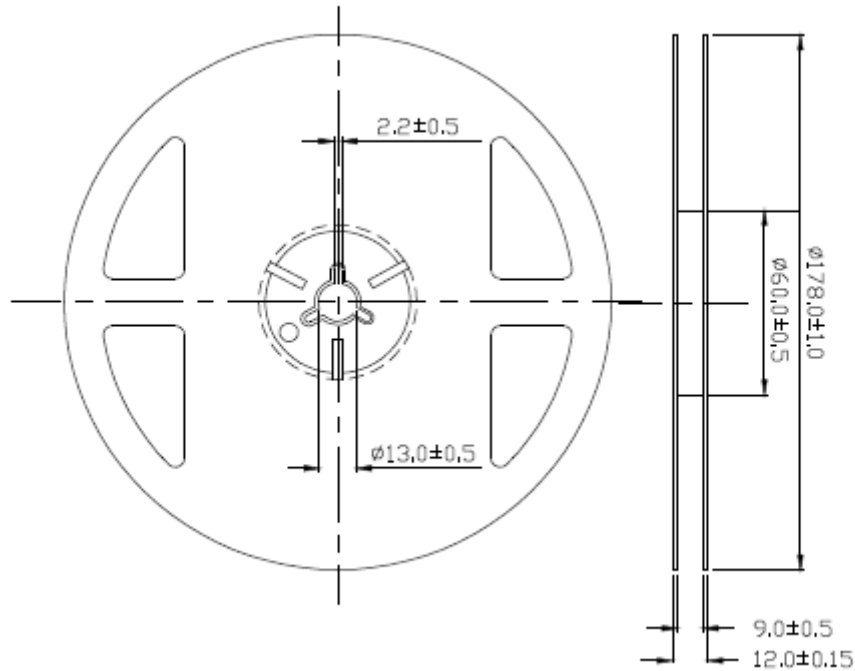
### Notes:

1. Tolerance unless mentioned is  $\pm 0.1$ mm;

## Moisture Resistant Packaging



## Emitter Reel Dimensions



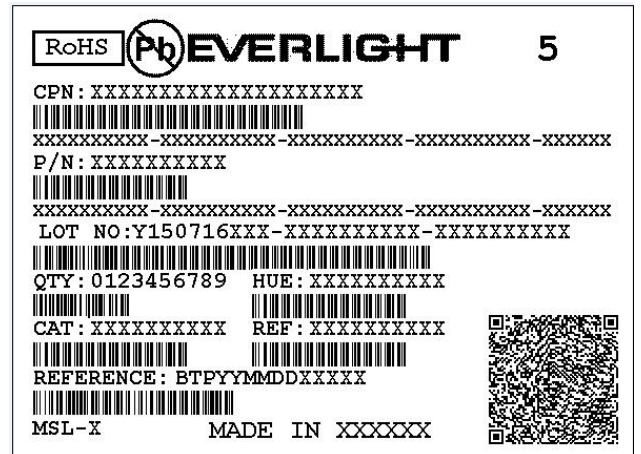
### Notes:

1. Dimensions are in millimeters.
2. Tolerances unless mentioned are  $\pm 0.1$  mm.

## Product Labeling

### Label Explanation

- CPN: Customer Specification (when required)
- P/N : Everlight Production Number
- QTY: Packing Quantity
- CAT: Luminous Flux (Brightness) Bin
- HUE: Color Bin
- REF: Forward Voltage Bin
- LOT No: Lot Number
- MADE IN TAIWAN: Production Place



## Storage Conditions

- Before the package is opened. The LEDs should be stored at 30°C or less and 90%RH or less after being shipped from EVERLIGHT and the storage life limits are 12 months.
- If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions. Baking treatment: 60±5°C for 24 hours.

## DISCLAIMER

- EVERLIGHT reserves the right(s) on the adjustment of product material mix for the specification.
- The product meets EVERLIGHT published specification for a period of twelve (12) months from date of shipment.
- The graphs shown in this datasheet are representing typical data only and do not show guaranteed values.
- When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from the use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
- These specification sheets include materials protected under copyright of EVERLIGHT. Reproduction in any form is prohibited without obtaining EVERLIGHT's prior consent.
- This product is not intended to be used for military, aircraft, automotive, medical, life sustaining or life saving applications or any other application which can result in human injury or death. Please contact authorized EVERLIGHT sales agent for special application request.

## Revision History

Current version: **2017/1/16**  
Device No. DHE-0003120  
Rev. Ver. 3

Page	Subjects (major change in previous version)	Date of change
12	Revise storage conditions and add disclaimer.	2017.1.16
5	Add parts	2017.2.03