DATASHEET

ELUA3535OGB
0.9W Series

Introduction

The ELUA3535OGB product series is a ceramic based LED with high quality and reliability that suitable for UV application.

Features

- Low power UVA LED
- Dimension 3.5mm*3.5mm*2.35mm
- ESD protection up to 2KV
- RoHS compliant
- Pb free
- EU REACH compliant
- Halogen Free compliant
- (Br<900ppm,Cl<900ppm,Br+Cl<1500ppm)

Applications

- UV Sterilization System
- UV Photo-catalyst
- UV Sensor Light

Product Nomenclature

ELUA3535OGB-PXXXXYY3240250-V31M

EL = Everlight

UA = UVA

3535 = 3.5mm x 3.5mm Package

O = Package Material: Al_2O_3

G = Coating: Ag

B = Angle: 120°

P = Peak Wavelength

XXXX = Wavelength Range [1]

YY = Minimum Radiant Flux Spec [2]

3240 = Forward Voltage Spec: 3.2~4.0V

250 = Forward Current: 250mA

V = Chip Type: Vertical

3 = Chip Size: 30mil

1 = Chip QTY: 1 chip

M = Process Type: Molding

Notes:

1. Wavelength Range

Symbol	Description
6070	360~370nm

2. Minimum Radiant Flux Spec

Symbol	Description
T3	400mW

Absolute Maximum Ratings

Parameter	Symbol	Ratings	Unit
Max. DC Forward Current (mA)	I_F	500	mA
Max. ESD Resistance	V_B	2000	V
Thermal Resistance	R_{th}	6.76	℃/W
Max. Junction Temperature	T_J	100	°C
Operating Temperature	T_{Opr}	-10 ~ +85	°C
Storage Temperature	T_{Stg}	-40 ~ +100	°C

PN of the ELUA3535OGB series: UVA LEDs

Order Code of ELUC3535OGB	Minimum Radiant Flux (mW)	Typical Radiant Flux (mW)	Maximum Radiant Flux (mW)	Peak Wavelength (nm)	Forward Voltage (V)	Forward Current (mA)
ELUA3535OGB-P6070T33240250-V31M	400	450	500	360-370	3.2-4.0	250

Product Binning

Radiant Flux Bins

Bin Code	Minimum Radiant Flux (mW)	Maximum Radiant Flux (mW)
T3	400	450
T4	450	500

Notes:

1.Radiant flux measurement tolerance: ±10%.
2.Forward voltage bins are defined at I_F=250mA operation.

Peak Wavelength Bins

Bin Code	Minimum Peak Wavelength (nm)	Maximum Peak Wavelength (nm)
U36	360	370

Notes:

1.Peak Wavelength measurement tolerance: ±1nm.
2.Forward voltage bins are defined at I_F=250mA operation.

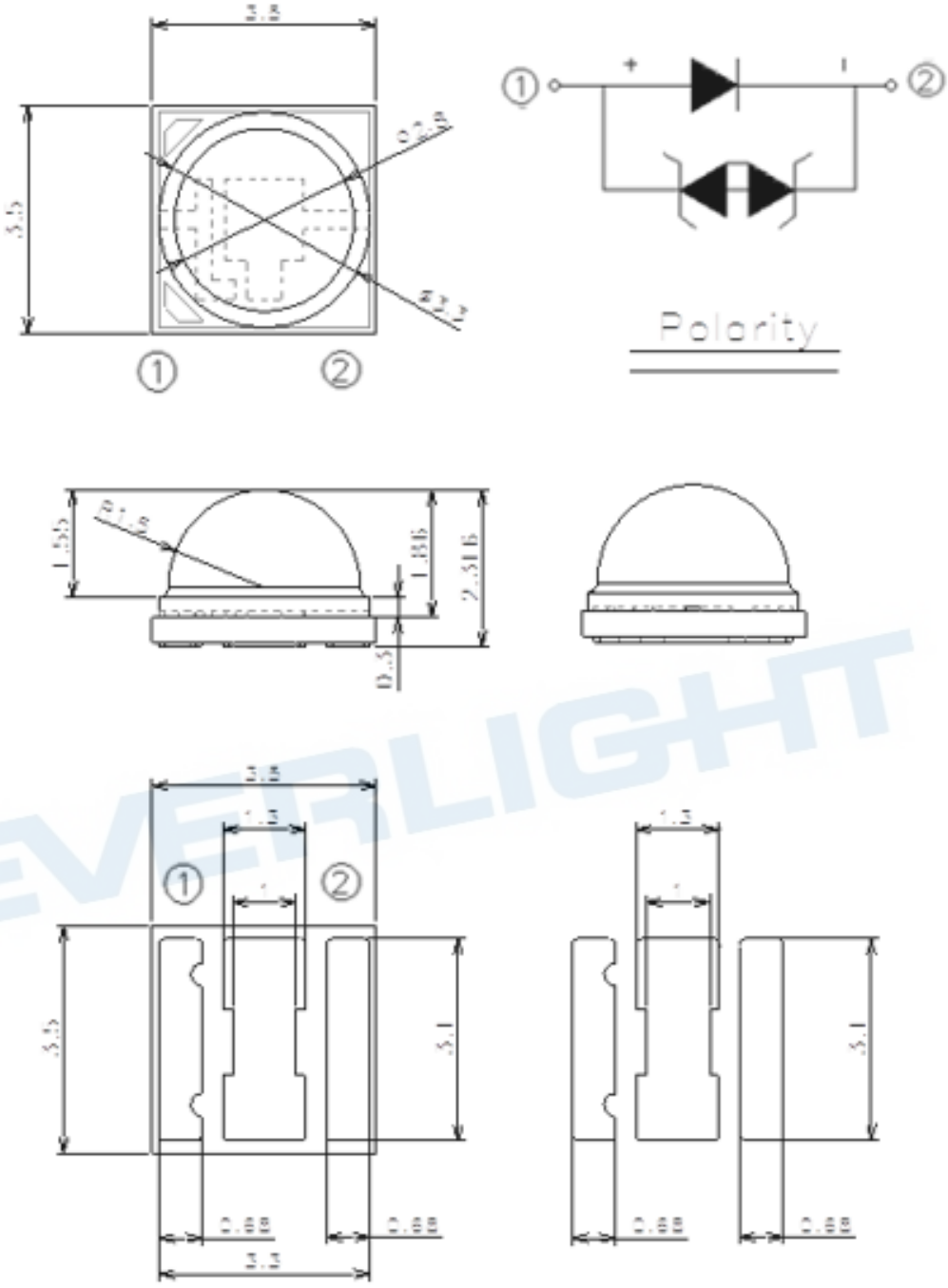
Forward Voltage Bins

Bin	Minimum Forward Voltage (V)	Maximum Forward Voltage (V)
3234	3.2	3.4
3436	3.4	3.6
3638	3.6	3.8
3840	3.8	4.0

Notes:

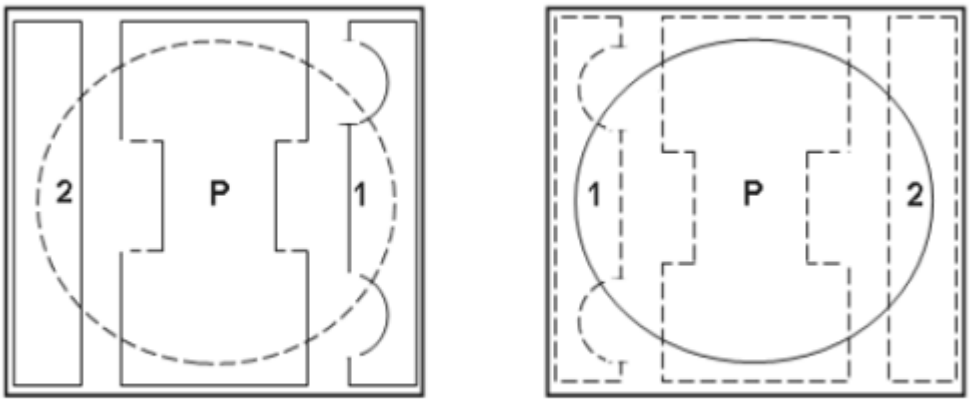
1.Forward voltage measurement tolerance: ±2%.
2.Forward voltage bins are defined at I_F=250mA operation.

Mechanical Dimension



1. Dimensions are in millimeters.
2. Tolerances unless mentioned are ± 0.1mm

Pad Configuration



BOTTOM VIEW TOP VIEW

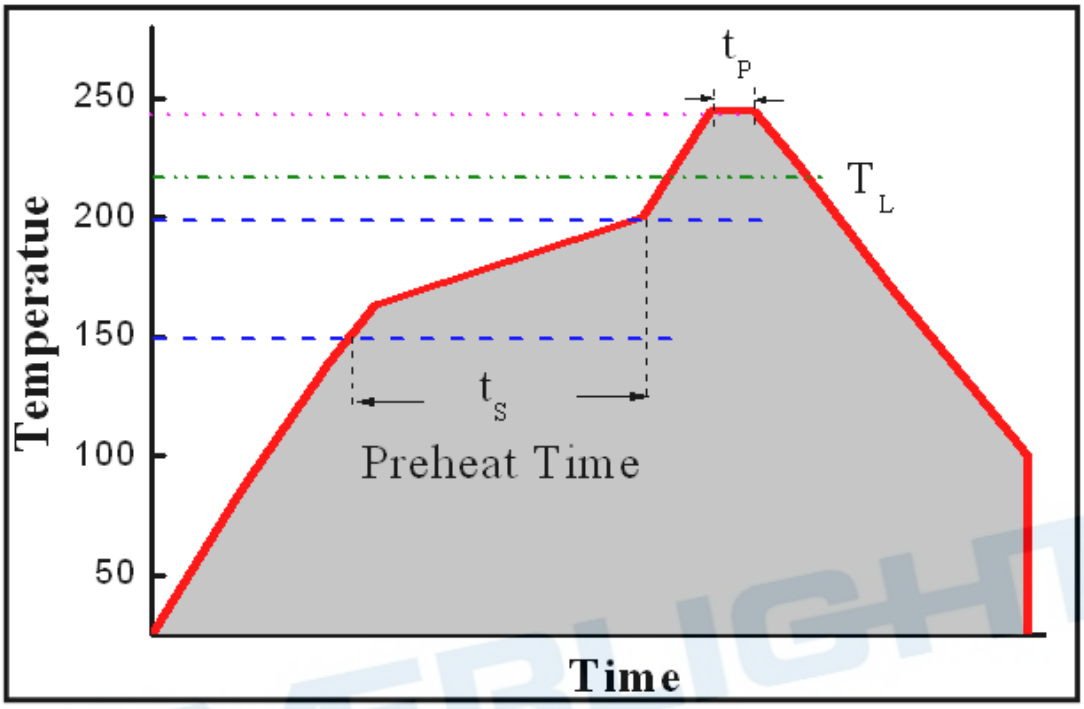
PAD	FUNCTION
1	CATHODE
2	ANODE
P	THERMAL PAD

Reflow Soldering Characteristics

For Reflow Process

a. ELUA series are suitable for SMT processes.

b. Curing of glue in oven must be according to standard operation flow processes.



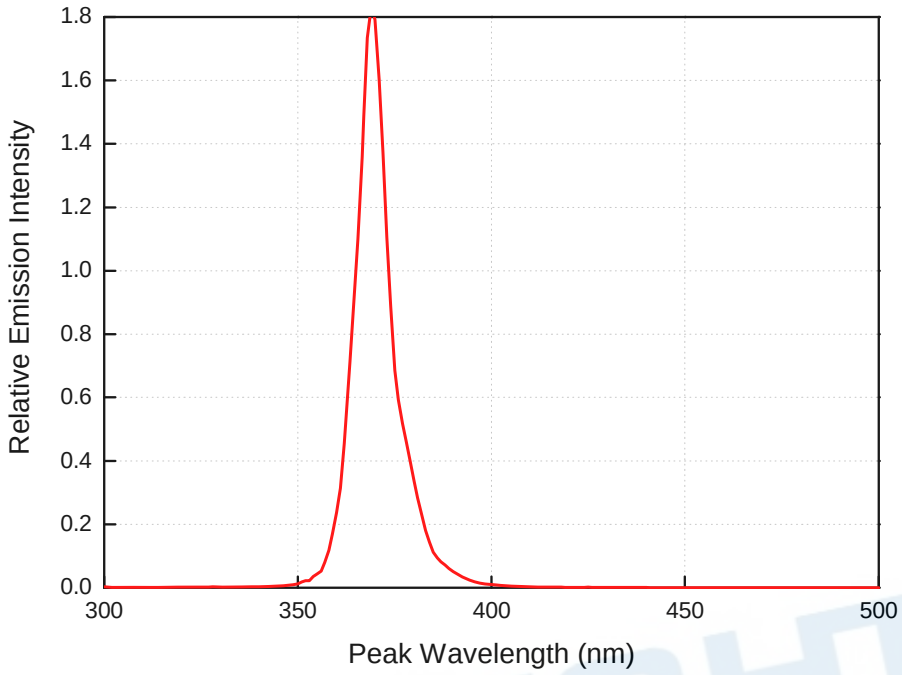
Profile Feature	Lead Free Assembly
Ramp-Up Rate	2-3 ℃/S
Preheat Temperature	150-200 ℃
Preheat Time (t_S)	60-120 S
Liquid Temperature (T_L)	217 ℃
Time maintained above T_L	60-90 S
Peak Temperature (T_P)	240±5 ℃
Peak Time (t_P)	Max 20 S
Ramp-Down Rate	3-5 ℃/S

c. Reflow soldering should not be done more than twice.

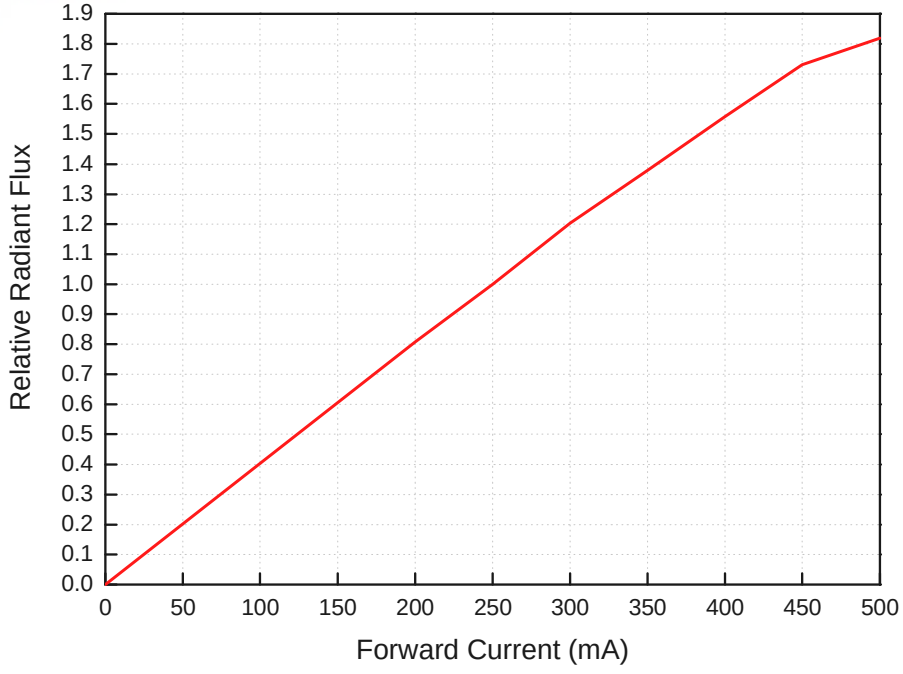
d. In soldering process, stress on the LEDs during heating should be avoided.

e. After soldering, do not bend the circuit board.

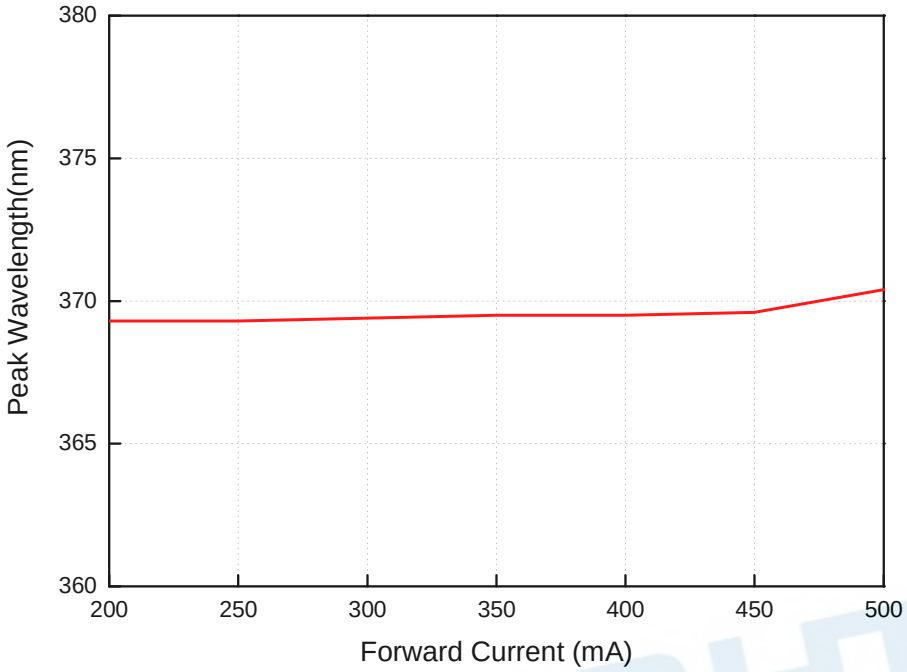
Typical Characteristics Curves Spectrum
@ Thermal Pad Temperature = 25℃



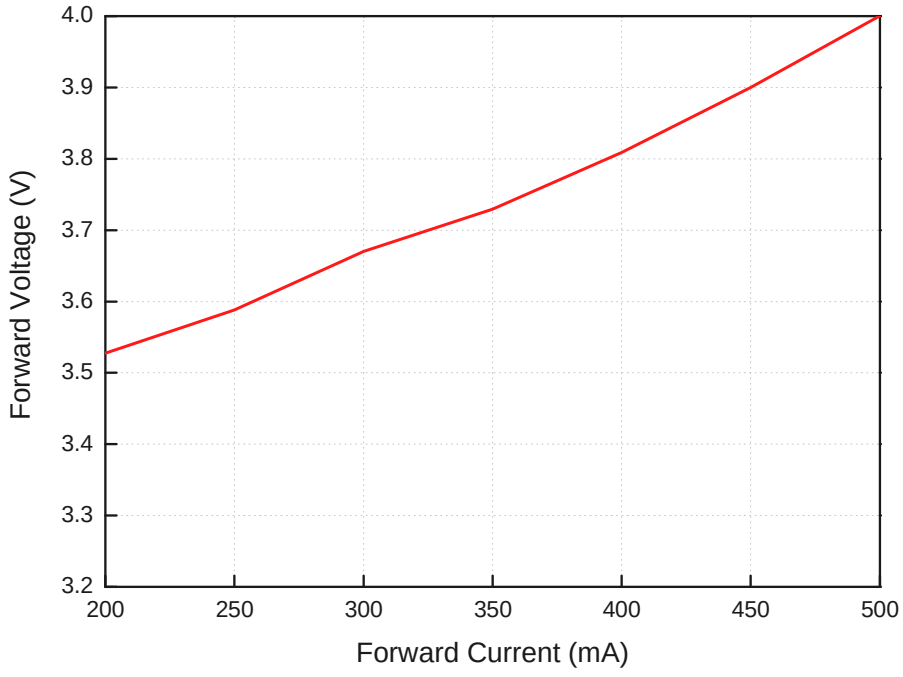
Relative Radiant Flux vs. Forward Current
@ Thermal Pad Temperature = 25℃



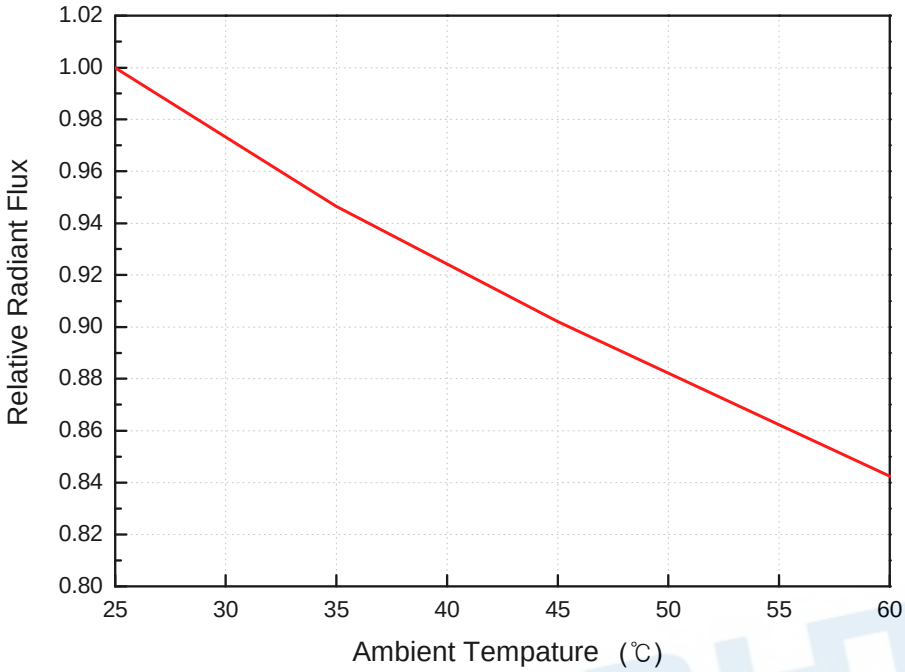
Peak Wavelength vs. Forward Current
@ Thermal Pad Temperature = 25℃



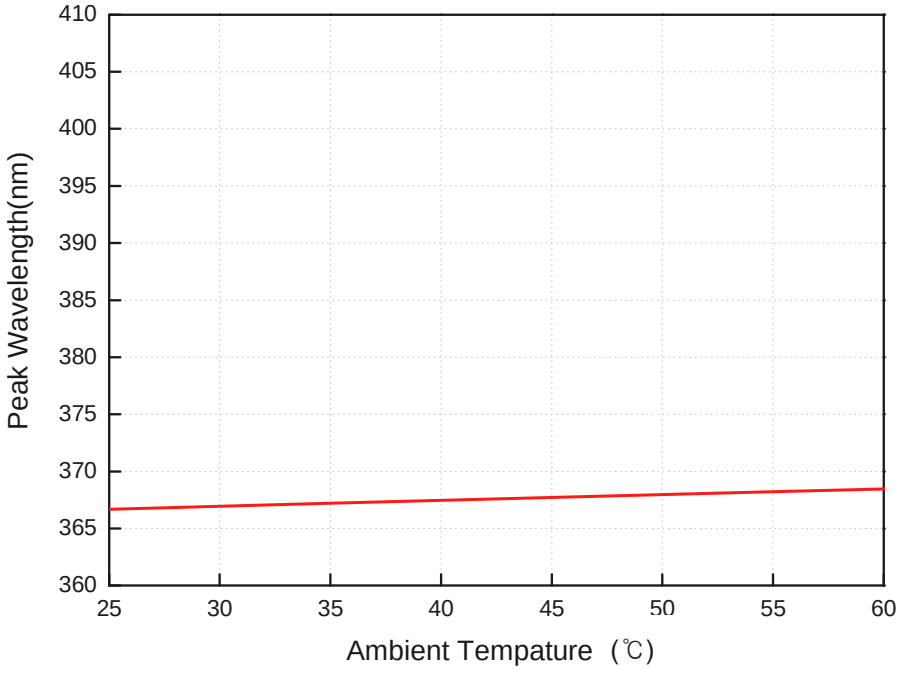
Forward Voltage vs. Forward Current
@ Thermal Pad Temperature = 25℃



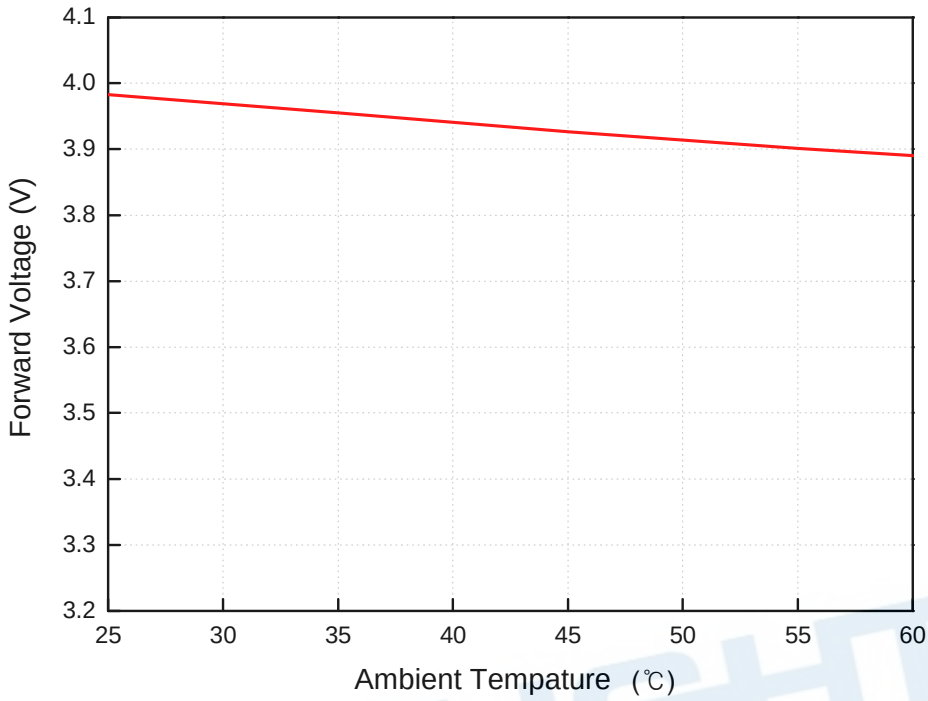
Relative Radiant Flux vs. Ambient Temperature
@ Forward Current = 250mA



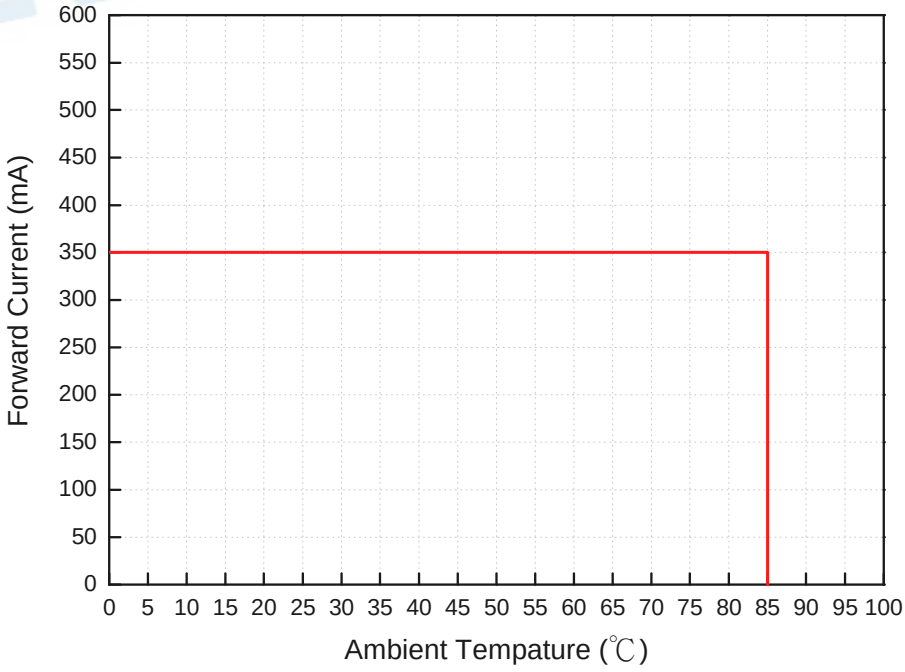
Peak Wavelength vs. Ambient Temperature
@ Forward Current = 250mA



Forward Voltage vs. Ambient Temperature
@ Forward Current = 250mA

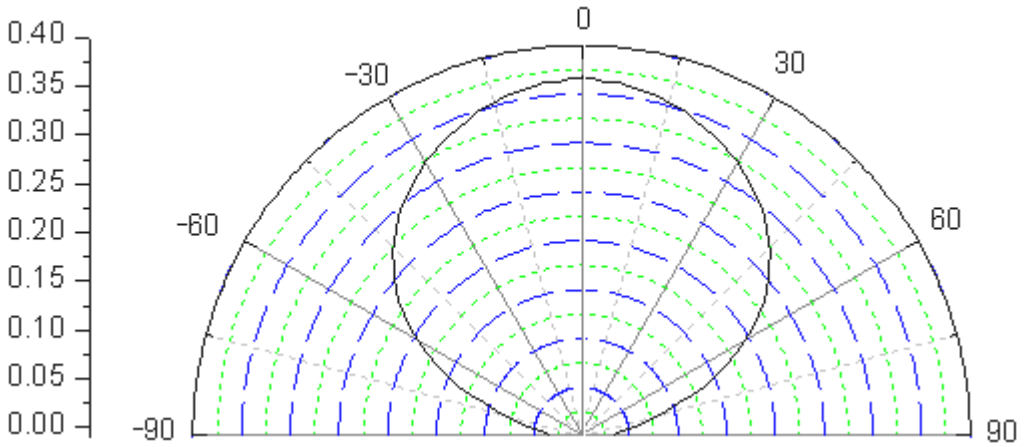


Derating Curve



Typical Radiation Patterns

Typical Diagram Characteristics of Radiation for ELUA3535OGB



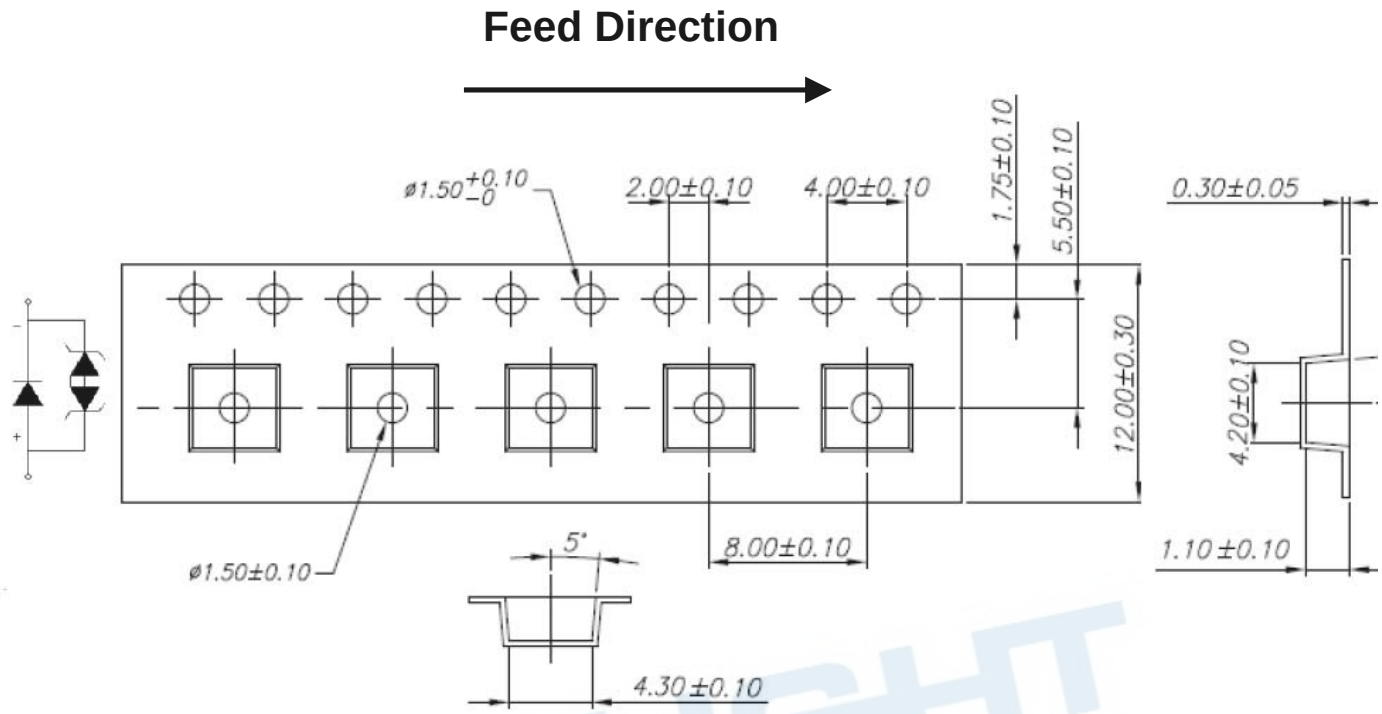
Notes:

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 ± 5°.

Emitter Tape Packaging

Carrier Tape Dimensions as the following:

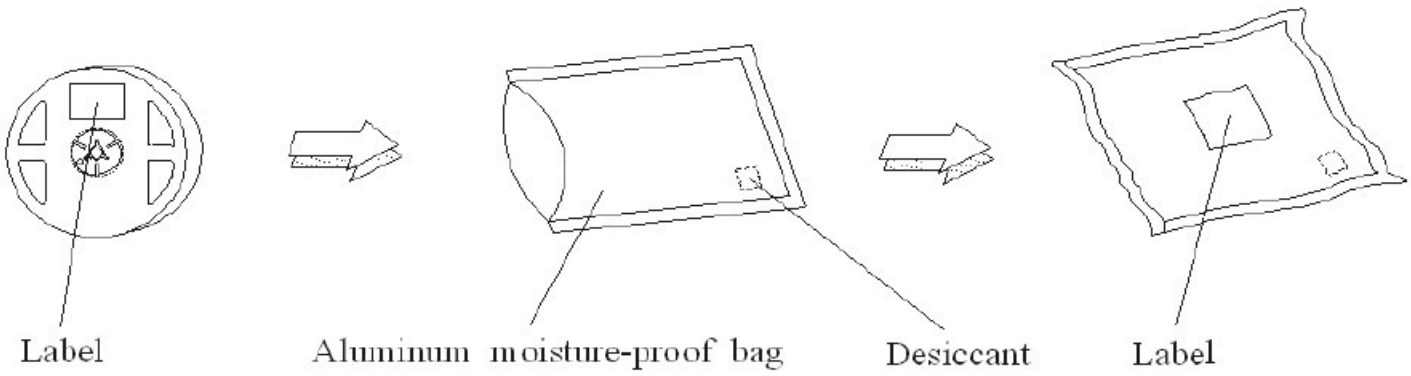
Reel: 800pcs



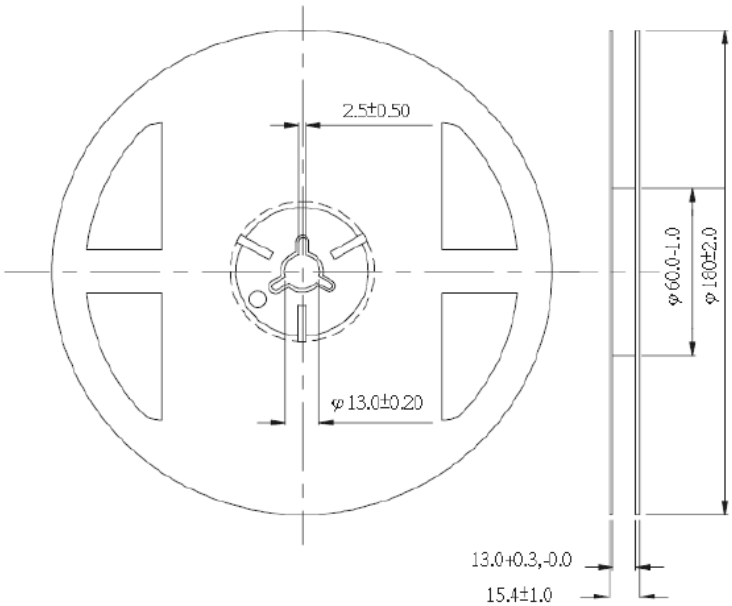
Note

1. Tolerance unless mentioned is ±0.1mm;
2. Packing amount is 200/400/600/800 pcs per reel

Moisture Resistant Packaging



Emitter Reel Dimensions



Notes:

1. Dimensions are in millimeters.
2. Tolerances unless mentioned are ±0.1mm.

Label Explanation

CPN: Customer Specification (when required)

P/N : Everlight Production Number

QTY: Packing Quantity

CAT: Luminous Flux (Brightness) Bin

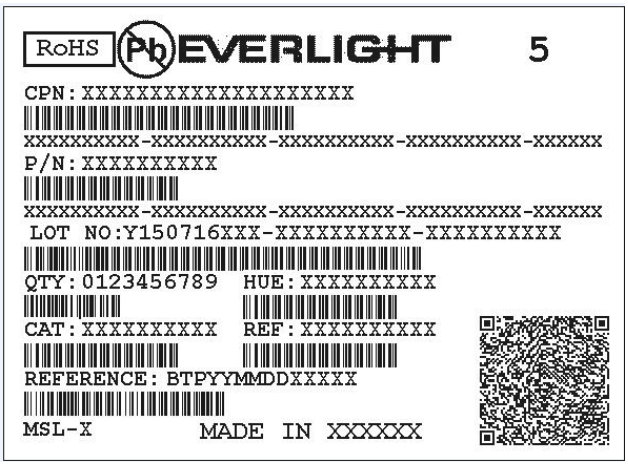
HUE: Color Bin

REF: Forward Voltage Bin

LOT No: Lot Number

MADE IN TAIWAN: Production Place

Product Labeling



Storage Conditions

- Before the package is opened: The LEDs should be stored at 30°C or less and 85%RH or less after being shipped from Everlight and the storage life limits are 1 year. The LEDs can be stored up to 3 years if in a sealed container with a nitrogen atmosphere and moisture absorbent material.
- After opening the package: The LED's floor life is 168H under 30°C or less and 60% RH or less. If unused LEDs remain, it should be stored in moisture proof packages.
- 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℃ 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.
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