Bright View Electronics

BVZ-916EA4

■ Description

- Dice Material： AlGaInP Orange Red
- Light Color： Orange Red Color
- Lens Color： Water Transparent

■ Features

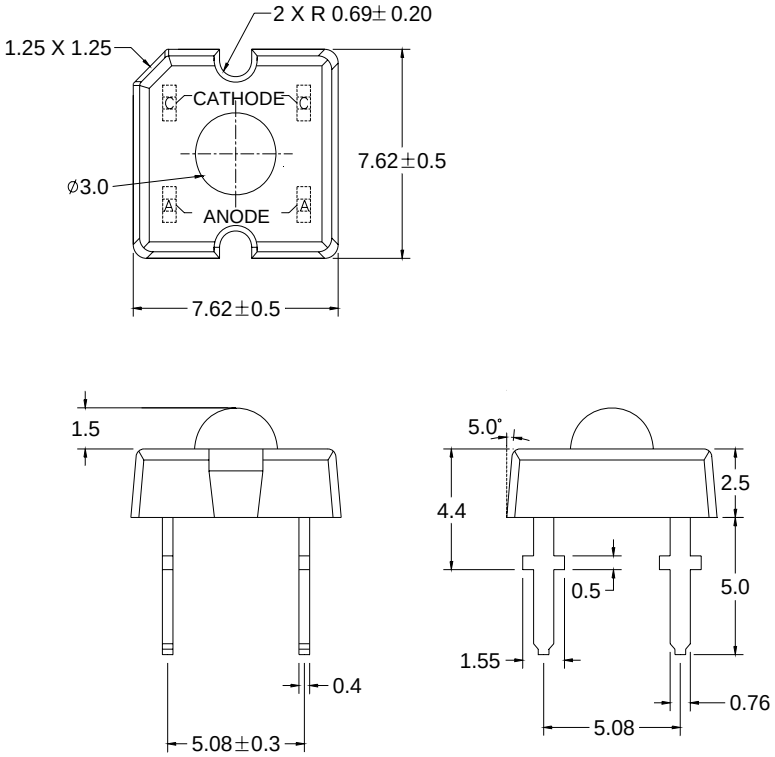
- High Luminace
- Uniform Color
- Low Power Consumption
- Low Thermal Resistance
- Low Porile
- Packged in tubes for use with automatic insertion equipment
- Pb-free/RoHS compliant

■ Applications

- Automotive exterior lighting
- lectronic Singns and Sinals
- Special Lighting Applocation
- Sign and channel letter
- IR-free decoration lighting
- Automotive exterior (stop-tail-turn,CHMSL,mirror side repeat)
- Edge-lit signs (exit, point of sale)
- Advertisement and entertainment

■ Outline Dimensions： (mm)

Tolerance：± 0.25 mm



■ Part Numbering System：

B V Z - 9 1 6 E A 4

- 4 — Lens Color Code
- A — Dice Code
- E — Lens Configuratuion Code
- 916 — Product Code

■ Sub Part Numbering：

Please also refer to the label on product bags and cartons.

■ Absolute Maximum Ratings at Ta = 25 ℃

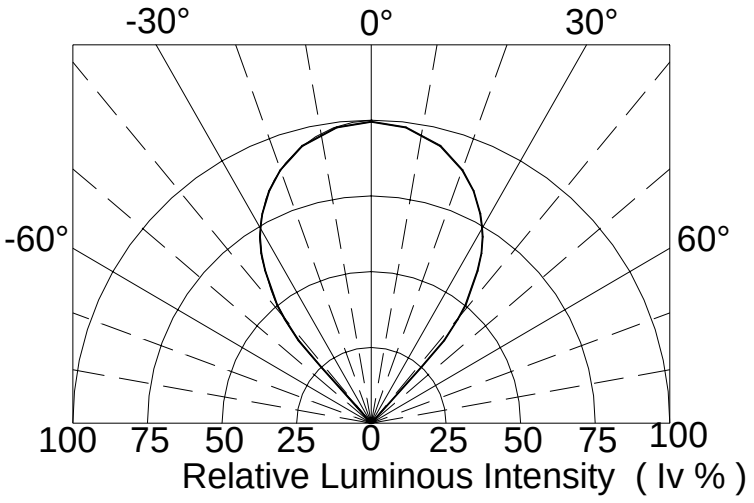
PARAMETER	MAX.	UNIT
Power Dissipation	140	mW
Continuous Forward Current	50	mA
Peak Forward Current (1/10 Duty Cycle , 0.1ms Pulse Width)	100	mA
Reverse Voltage	5	V
Operating Temperature Range	－30 to ＋ 85	°C
Storage Temperature Range	－40 to ＋ 100	°C
Lead Solder Temperature (1.5mm Below Seating Plane)	260 °C for 5 seconds	

■ Electro-Optical Characteristicsat at Ta = 25 ℃

PARAMETER	SYMBOL	TEST CONDITION	VALUES			UNIT
			MIN.	TYP.	MAX.	
Forward Voltage	V_F	I_F=50mA	—	2.1	2.8	V
Reverse Current	I_R	V_R= 5V	—	—	100	μA
Peak Emission Wavelength	λp	I_F=50mA	—	621	—	nm
Dominant Wavelength	λd	I_F=50mA	—	615	—	nm
Viewing Angle at 50% Iv	2θ 1/2	I_F=50mA	—	80	—	Deg.
Luminous Intensity / Total Flux	IV / ΦV		—	0.54	—	cd/lm
Thermal Resistance	IV	I_F=50mA	3.6	4.7	—	lm

■ Radiation Characteristic：

Ta=25℃



■ Bin Grade Limits (I_F = 50 mA) LUMINOUS INTENSITY / Im

Tolerance：± 15%

Bin	G	H	I
Min.	3.6	4.7	6.0
Max.	4.7	6.0	7.8

Please contact our sales department for more information.

■ Bin Grade Limits (I_F = 50 mA) Chromaticity Coordinates

Bin	AE	AF	AG	AH
Min.	610	614	618	622
Max.	614	618	622	626

Please contact our sales department for more information.

■ Bin Grade Limits (I_F = 50 mA) Forward Voltage

Bin	18	20	22	24
Min.	1.8	2.0	2.2	2.4
Max.	2.0	2.2	2.4	2.6

Please contact our sales department for more information.

Characteristics Data

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

FIG. 1 Forward Current vs. Forward Voltage (Ta = 25 °C)

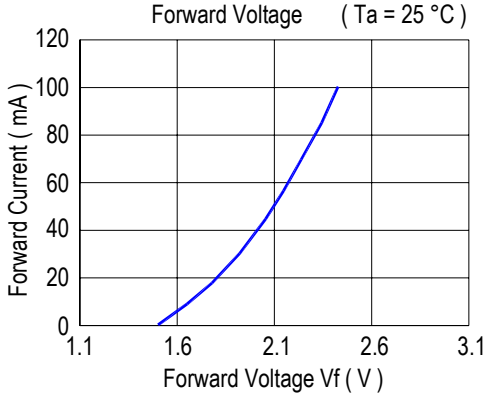


FIG. 2 Relative Luminous Intensity vs. Forward Current (Ta = 25 °C)

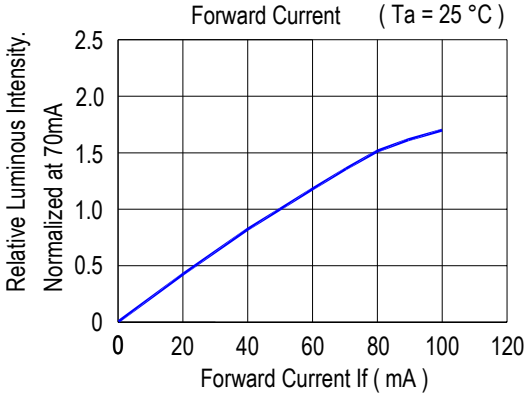


FIG. 3 Relative Forward Voltage vs. Temperature

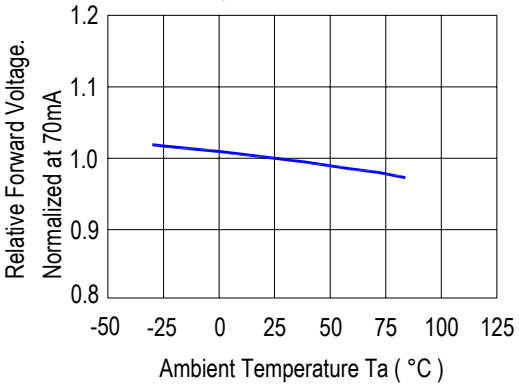


FIG. 4 Relative Luminous Intensity vs. Temperature

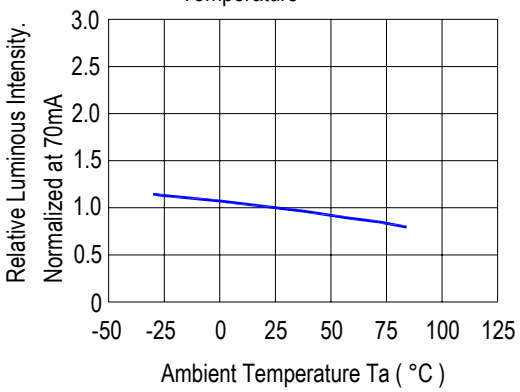


FIG. 5 Relative Intensity vs. Wavelength (λp) (If =70mA , Ta = 25 °C)

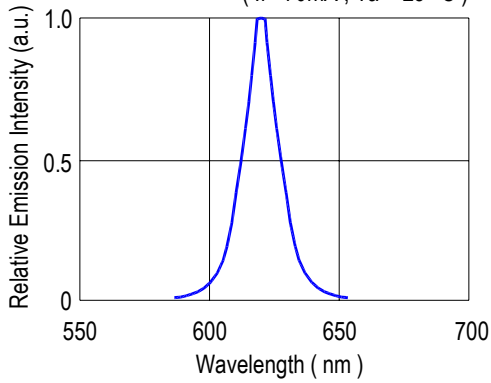
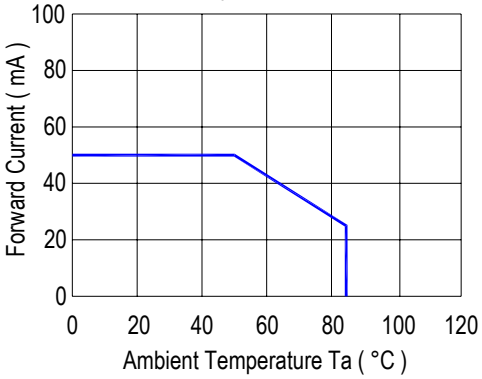
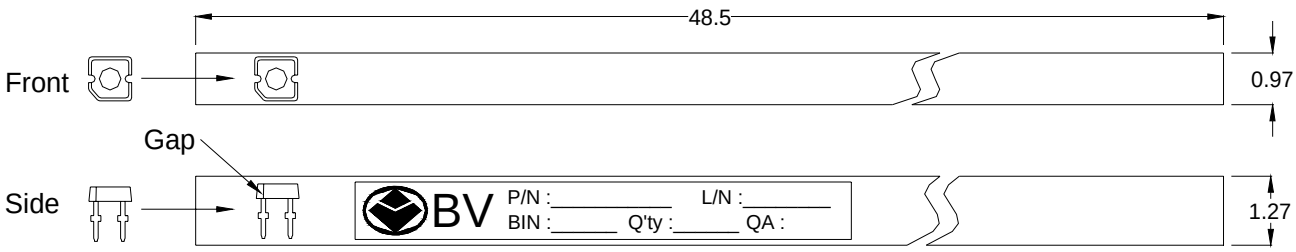


FIG. 6 Maximum Forward Current vs. Temperature

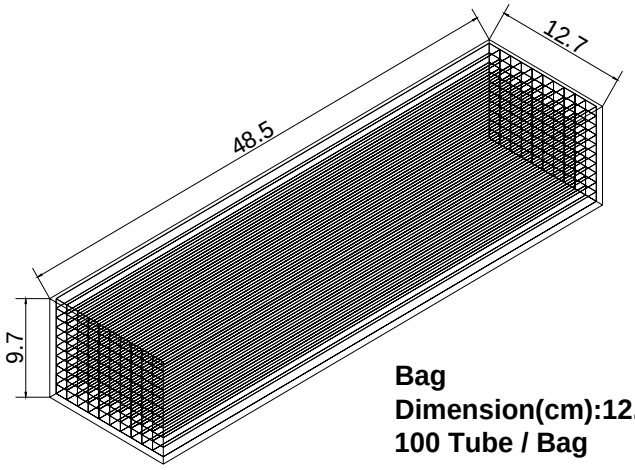


■ Packaging :

■ Package Carrier Tape Dimensions :

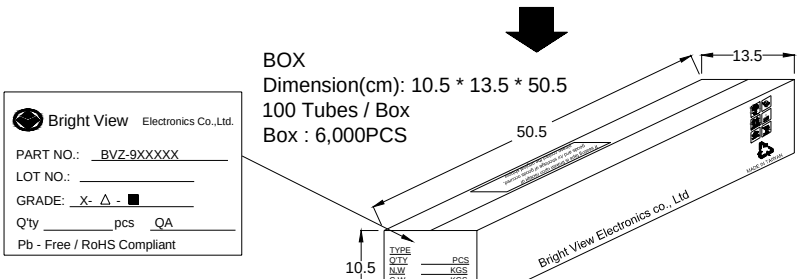


■ Package the Carrier Bag Dimensions:

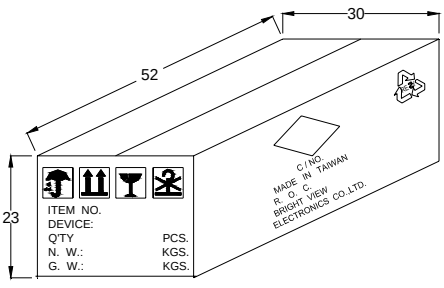


Bag
Dimension(cm):12.7*9.7*48.5
100 Tube / Bag

■ Package Reel Dimensions :



X: Bin grade
△: Wavelength
■: Vf



CARTON
Dimension(cm): 23*30*52

4 Boxes / Carton
Total : 24,000PCS

■ **Cautions :**

(1) Storage Conditions

The LEDs should be kept at 30℃ or less and 60% RH or less and should be used within a year and should be soldered within 168 hours (7days) after opening the package.

(2) Heat Generation

∗ The thermal design of the end product is very important. It is necessary to avoid intense heat generation and operate within the maximum ratings given in this specification.

∗ The operating current should be decided after considering the ambient maximum temperature of LEDs.

(3) Cleaning

∗ Isopropyl alcohol is recommended to be used as a solvent for cleaning the LEDs.

∗ Before cleaning, a pre-test should be done to confirm whether any damage to the LEDs will occur.

(4) Soldering

∗ Bright View LEDs use a copper alloy lead frame which provides a high thermalconductivity. Thermal stress such as soldering heat may reduce the reliability of the product;particular caution should be used to avoid damage prior to and during soldering.

Although the recommended soldering conditions are specified in the below table, dip soldering at the lowest possible temperature is desirable.

When it is necessary to clamp the LEDs to prevent soldering failure,it is important to the mechanical stress on the LEDs.

Solder the LED no closer than 1.6mm from the base of the stopper.

Dip soldering and hand solding should not be done more than one time.

A rapid-rate process is not recommended for cooling the LED down from the peak temperature.

Cut the LED leadframes at room temperature. Cutting the leadframes at high temperature may cause failure of the LEDs.

∗ Recommended soldering conditions.

Hand Soldering		Dip Soldering	
Temperature	350℃ Max.	Pre-Heat	120℃ Max.
Soldering Time	3 seconds Max.	Pre-Heat Time	60 seconds Max.
Position	No closer than 1.6mm from the base of the stoper.	Solder Bath Temperature	260℃ Max.
		Dipping Time	5 seconds Max.
		Dipping Position	No lower than 1.6 mm from

(5) Other

- ∗ Care must be taken to ensure that the reverse voltage will not exceed the absolute maximum rating when using the LEDs with matrix drive.
- ∗ The LED light output is strong enough to injure human eyes. Precaution must be taken to prevent looking directly at the LEDs with unaided eyes for more than a few seconds.
- ∗ The LEDs described here are intended to be used for ordinary electronic equipment, please consult Bright View's sales department in advance for information on applications.
- ∗ The appearance and specifications of the product may be modified for improvement without notice.