

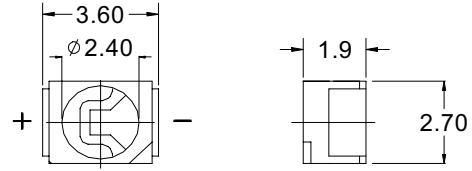


BVS-301BA4

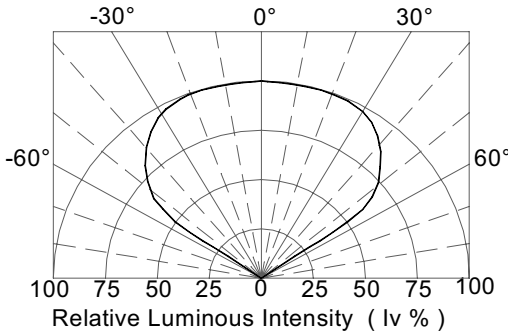
PACKAGE CONFIGURATION

DESCRIPTION

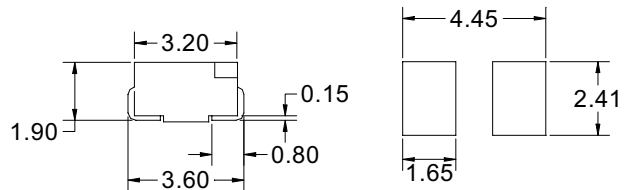
Dice Material : GaN Blue
Light Color : Blue Color
Lens Color : Water Transparent
ESD : 2000V (HBM)



RADIATION PATTERN



**INFRARED/VAPOR PHASE
REFLOW SOLDERING**



Tolerance ± 0.25 mm

ABSOLUTE MAXIMUM RATINGS AT Ta = 25 °C

PARAMETER	MAX.	UNIT
Power Dissipation	100	mW
Continuous Forward Current	25	mA
Peak Forward Current (1/10 Duty Cycle , 0.1ms Pulse Width)	100	mA
Reverse Voltage	5	V
Derating Linear From 25 °C	0.4	mA/°C
Operating Temperature Range	-30 to + 80	°C
Storage Temperature Range	-40 to + 100	°C
Reflow Soldering Condition 245 °C for 10 seconds		

ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta = 25 °C

SYMBOL	PARAMETER	TEST COND.	MIN.	TYP.	MAX.	UNIT
V _F	Forward Voltage	I _F = 20 mA		3.2	4	V
I _R	Reverse Current	V _R = 5V			10	μ A
λ_p	Peak Emission Wavelength	I _F = 20 mA		465		nm
λ_d	Dominant Wavelength	I _F = 20 mA		470		nm
2 $\theta_{1/2}$	Viewing Angle	I _F = 20 mA		110		Deg

BIN GRADE LIMITS (I_F = 20 mA) LUMINOUS INTENSITY / mcd

Bin	C	D	E	F	G	H
Min.	168	218	280	360	465	600
Max.	218	280	360	465	600	780

Tolerance $\pm 15\%$ mcd

*Bright View reserves the rights to alter specifications and remove availability of products at any time without notice.

*Dominant Wavelength, λ_d is according to CIE Chromaticity Diagram base on color of lamps.

* $\theta_{1/2}$ is the off-axis angle where the luminous intensity is one half the on-axis intensity.

*These products are sensitive to static electricity. Caution must be taken strictly to avoid static electricity.



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TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

FIG. 1 Forward Current vs. Forward Voltage
($T_a = 25^\circ\text{C}$)

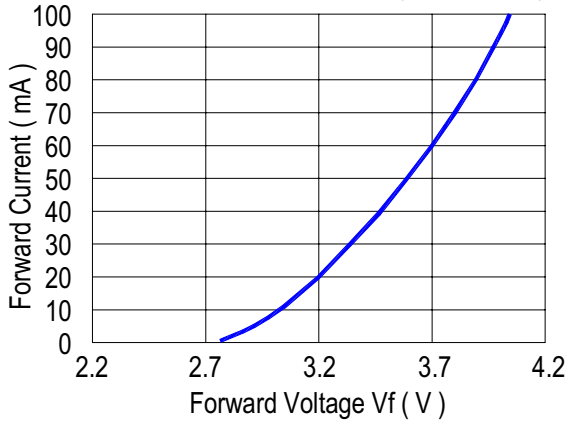


FIG. 2 Relative Intensity vs. Forward Current
($T_a = 25^\circ\text{C}$)

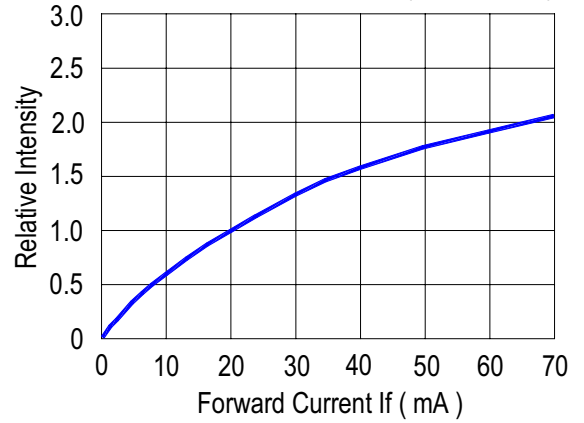


FIG. 3 Forward Voltage vs. Temperature

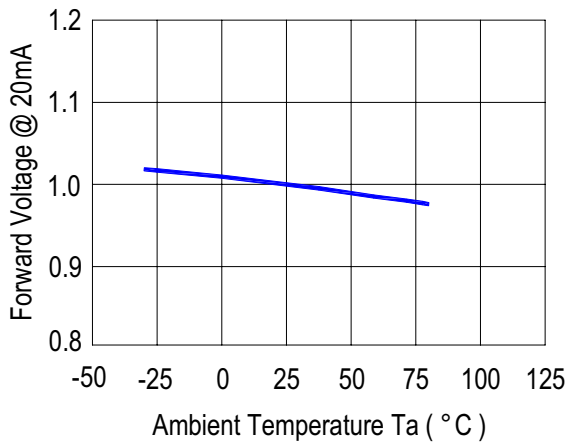


FIG. 4 Relative Intensity vs. Temperature

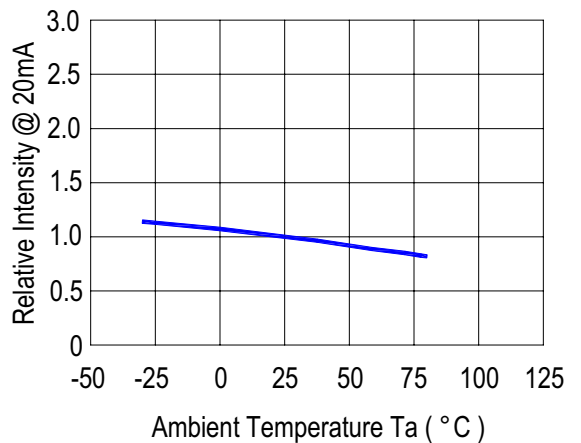


FIG. 5 Relative Intensity vs. Wavelength (λ_p)
($T_a = 25^\circ\text{C}$)

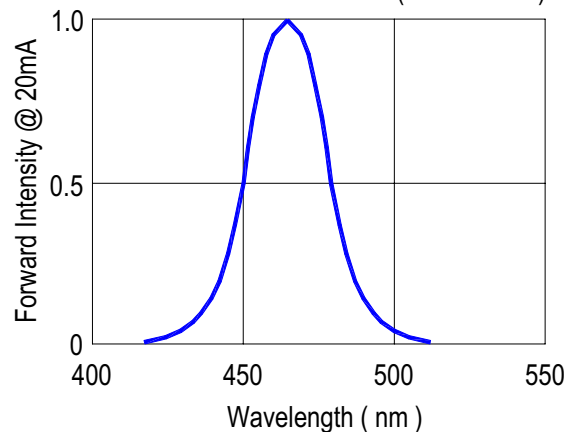
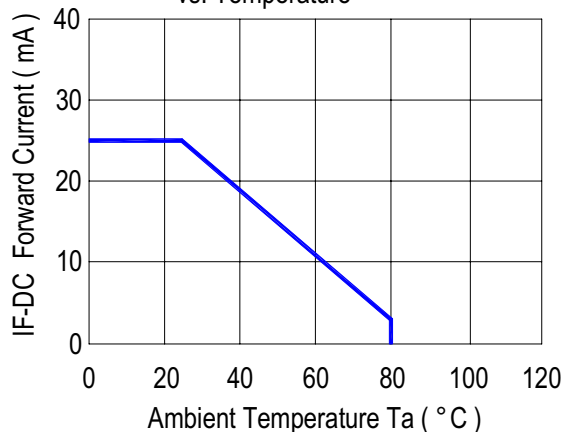


FIG. 6 Maximum Forward Current
vs. Temperature





BRIGHT VIEW
ELECTRONICS CO.,LTD

CAUTION FOR CLASS 1 ESD (MACHINE MODE)

Gallium Nitride (GaN) based light emitting diodes (LEDs) are extremely sensitive to electrostatic discharge (ESD). Users are strongly recommended to take necessary meter to test the static and avoid ESD when handling these products.

Bright View's BA, GN, WI series products are GaN based materials and are classified as "Class 1", (ESD endurance 50V or lower), any manufacturing site or workstation where GaN devices are handled should be rated and controlled at 50V or below.

Proper grounding of products or machines (via $1M\Omega$), using static dissipative mats, static dissipative containers, static dissipative working uniforms and shoes are considered to be effective against ESD.

An ionizer is recommended in the facility or environment where ESD may be generated easily, and soldering iron with a grounded tip is also recommended.

To install a protection device in the LED circuit to ensure the surge current and voltage not exceeding the max rating during on/off switching.

When inspecting the final products in which LEDs are assembled, it is recommended to check whether the assembled LEDs are damaged by ESD or not. It is simple to find damaged LEDs by light-on or a VF test at lower current (below 1mA is recommended).

EDS damaged LEDs will show some unusual characteristics such as the remarkable increasing of leak current, the forward voltage become lower, or the LEDs do not light on at the low current.

DOC. NO.:S-QW-K011
2006/03/17 -A



Apply to BVS-3XX 、 1XX series.

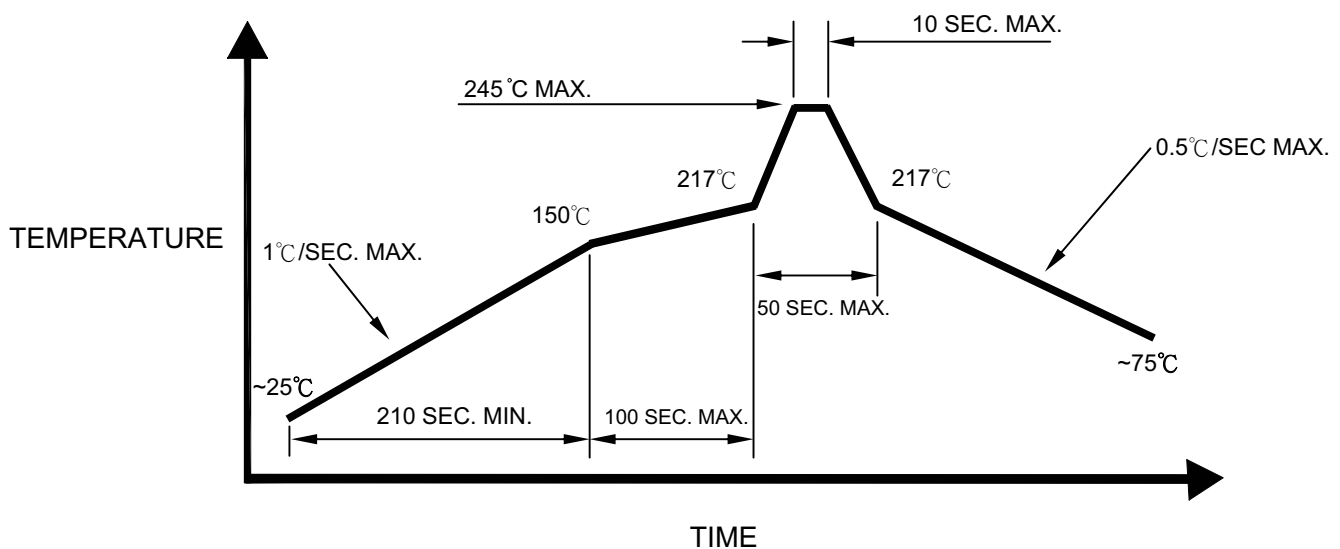
Description:

(1) Manual soldering (We do not recommend this method strongly.)

- (1.1) To prevent cracking, please bake (65°C, 24hrs) before soldering.
- (1.2) Temperature at tip of iron: 250°C Max. (25W)
- (1.3) It's banned to load any stress on the resin during soldering.
- (1.4) Soldering time: 3 sec. Max. (one time only)

(2) Reflow Soldering

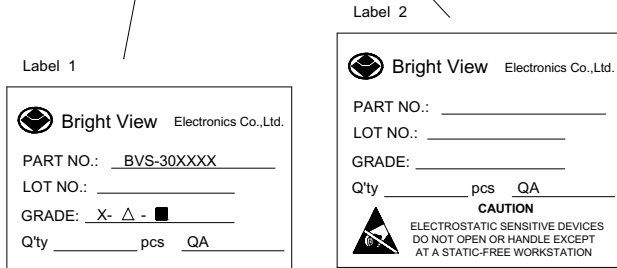
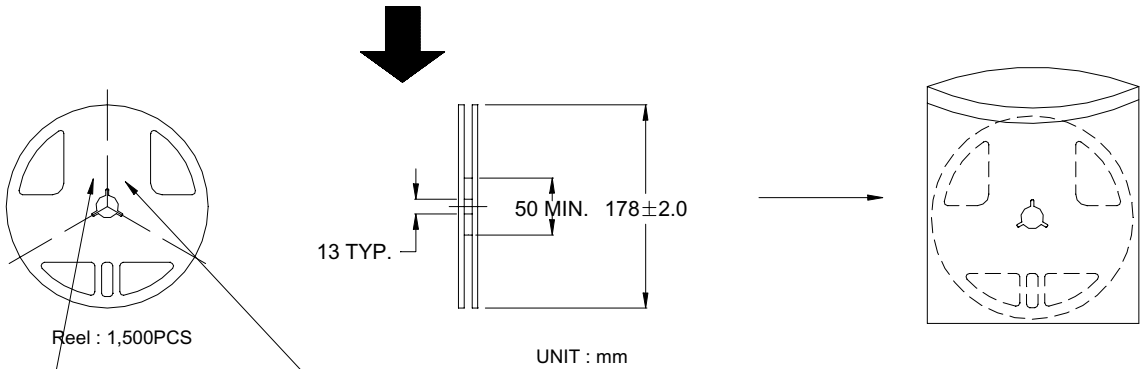
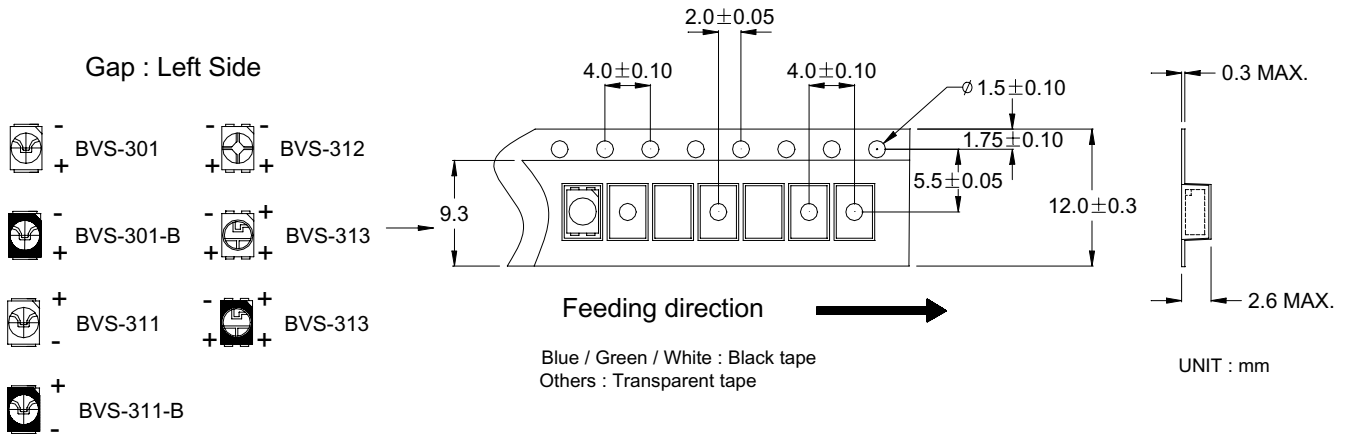
- (2.1) To prevent cracking, please bake (65°C, 24hrs) before soldering.
- (2.2) When soldering, do not put stress on the LEDs during heating.
- (2.3) Never take next process until the component is cooled down to room temperature after reflow.
- (2.4) After soldering, do not warp the circuit board.
- (2.5) The recommended reflow soldering profile (measuring on the surface of the LED resin) is following:



The reflow temperature 240°C~245°C is recommended and the soldering temperature should be not higher than 245°C (one time only)

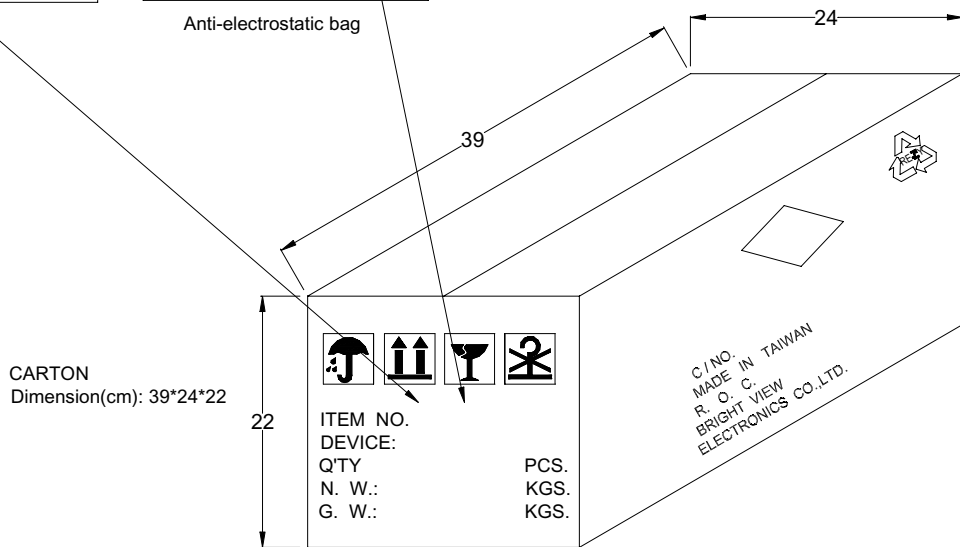


TOP LEDS PACKING (A)



Normal

X: Bin grade
△: Wavelength
■: Vf



Carton : 20 Reels
Total : 30,000PCS