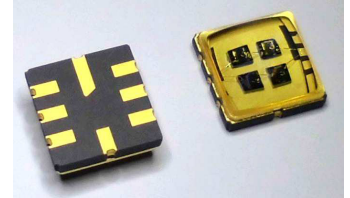
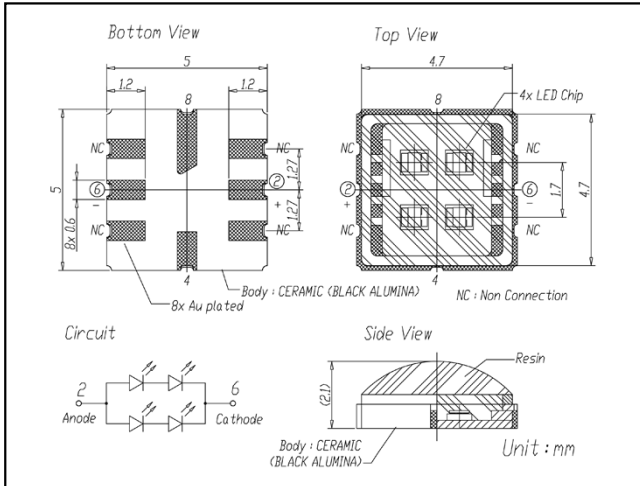


MODEL xFxVG-2D004 series

5.0x5.0mm SMD Dome Top Type

Mechanical Specifications and Materials (Unit:mm)



Product ID

- 280nm: DF8VG-2D004**
- 310nm: UF1VG-2D004**
- 325nm: UF3VG-2D004**
- 340nm: UF4VG-2D004**

Terminal land connections
 2 Anode
 6 Cathode
 8, 4 GND

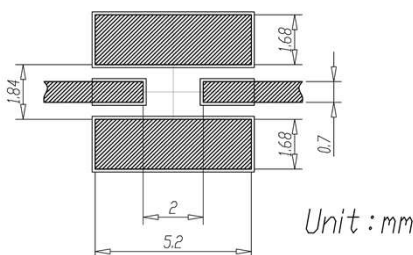
Typical Optical-Electrical Characteristics (I_F=40mA, T_a=25°C)

Item	Symbol	Unit	DF8VG	UF1VG	UF3VG	UF4VG
Peak Wavelength	λ_p	nm	280±10	310±5	325±5	340±5
Radiant Flux	P _o	mW	8.7±1.5	10.5±1.5	14.9±1.5	16.4±1.5
Full Width at Half Maximum	$\Delta\lambda$	nm	12	15	11	9
Forward voltage	V _F	V	12±1	12±1	8±1	7.9±1
Viewing Half Angle	2 $\theta_{1/2}$	deg.	176	176	176	176

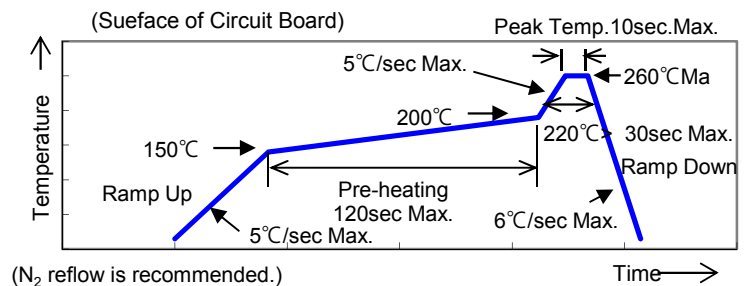
Absolute Maximum Ratings

Item	Symbol	Unit	Ambient Temperature	
Forward Current	I _{Fmax}	mA	80	T _a =25°C
Operating Temperature	T _{OPR}	°C	-20 ~ +80	
Storage Temperature	T _{STG}	°C	-30 ~ +85	
Soldering Temperature	T _{SOL}	°C	260	(within 10sec)

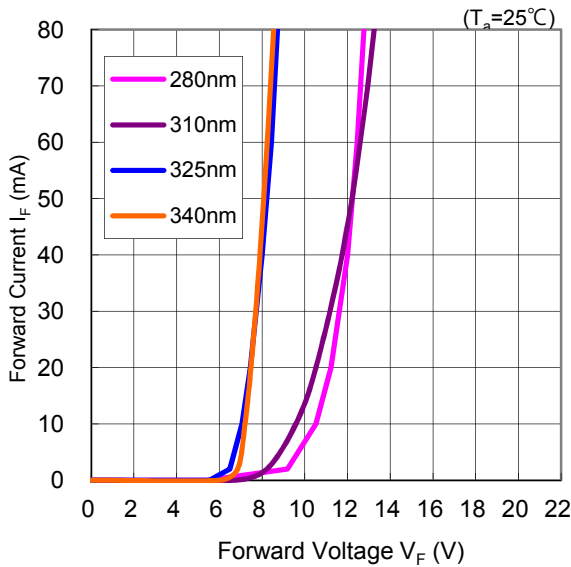
Recommended solder pad



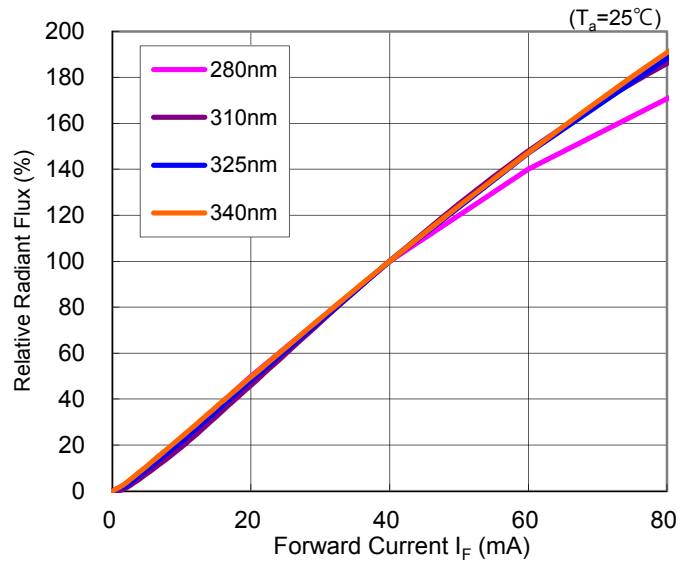
Reflow soldering profile



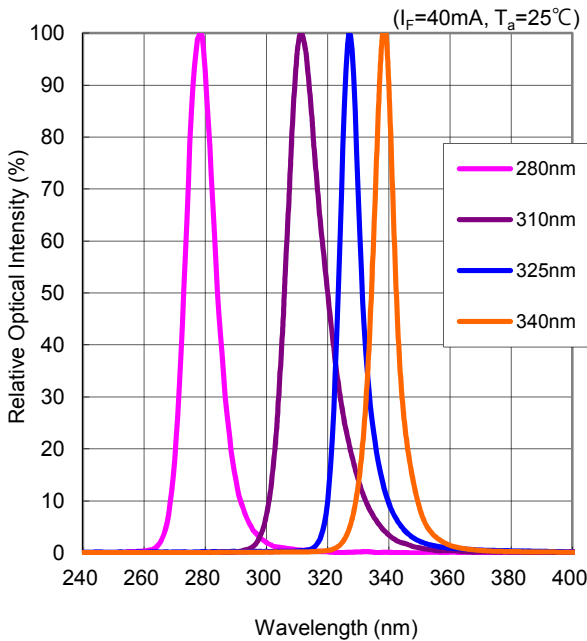
Forward Current vs Forward Voltage



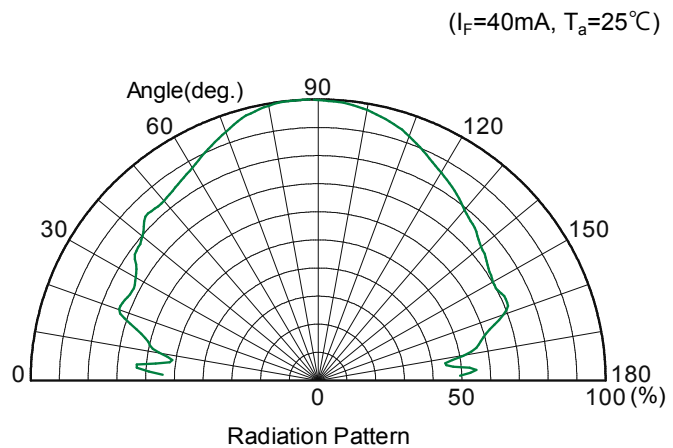
Forward Current vs Radiant Flux





Spectrum

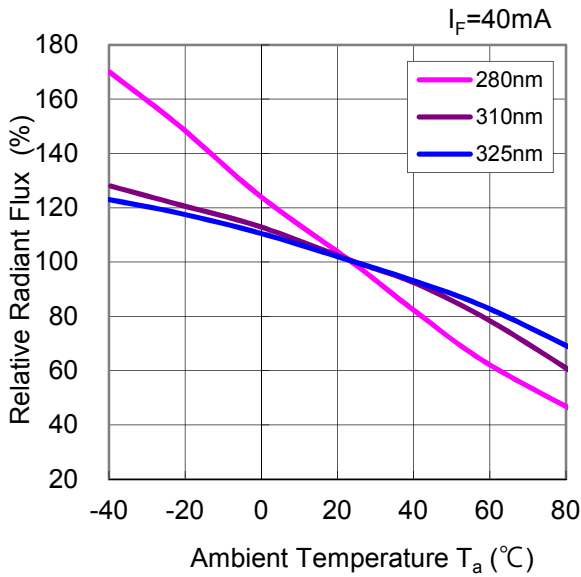


Radiation Pattern

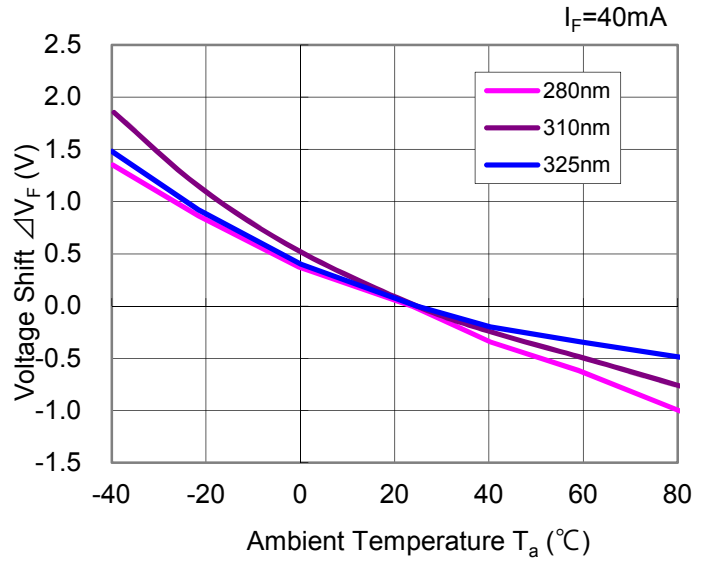


	 CAUTION
	<ul style="list-style-type: none"> - LEDs emit very strong UV radiation. - Don't look directly into the LED light. UV radiation can harm your eyes. - To prevent even inadequate exposure, wear protective eyewear. - If LEDs are embedded in devices, please indicate warning labels against the UV light LED used. - Keep out of reach of children. - Specification and dimension are subject to change for improvement without notice.

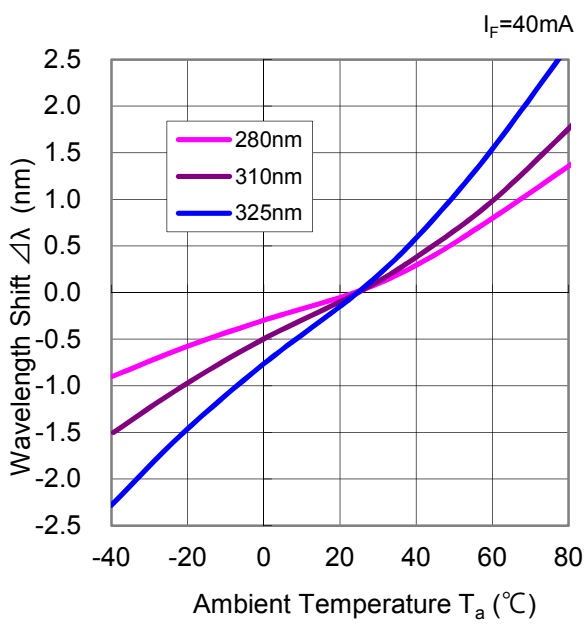
Radiant Flux vs Ambient Temperature



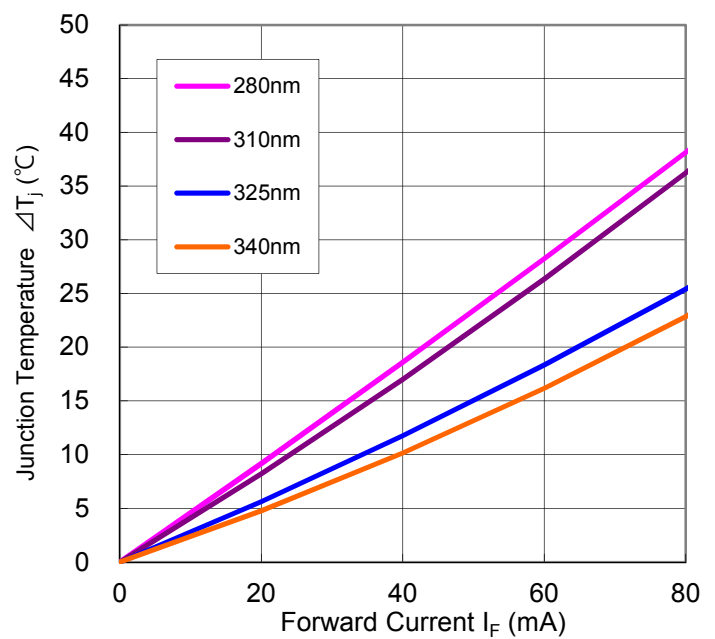
Voltage Shift vs Ambient Temperature



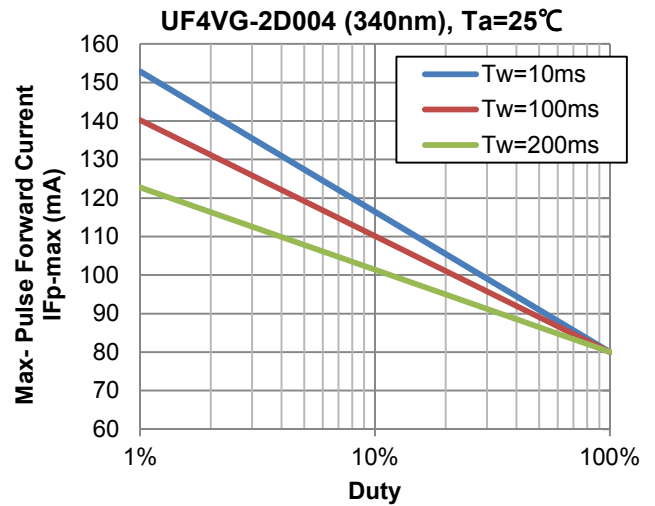
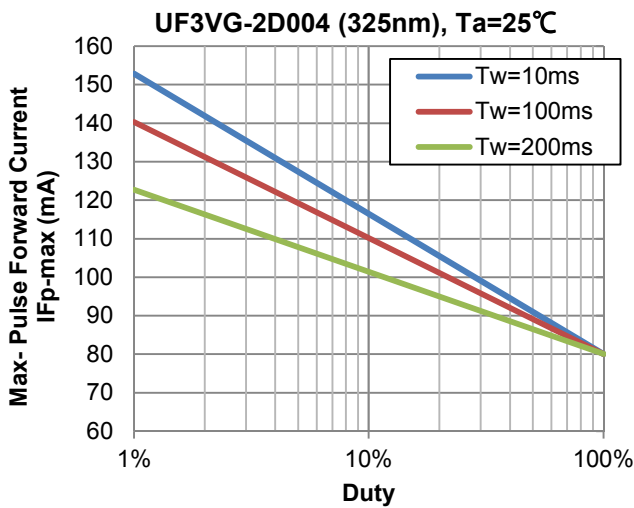
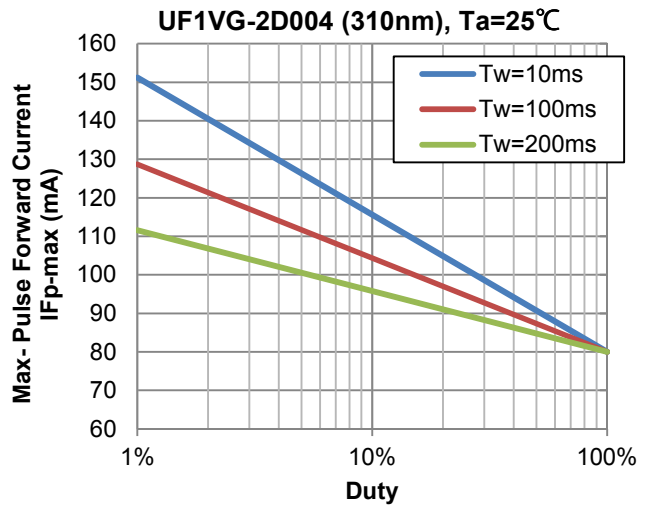
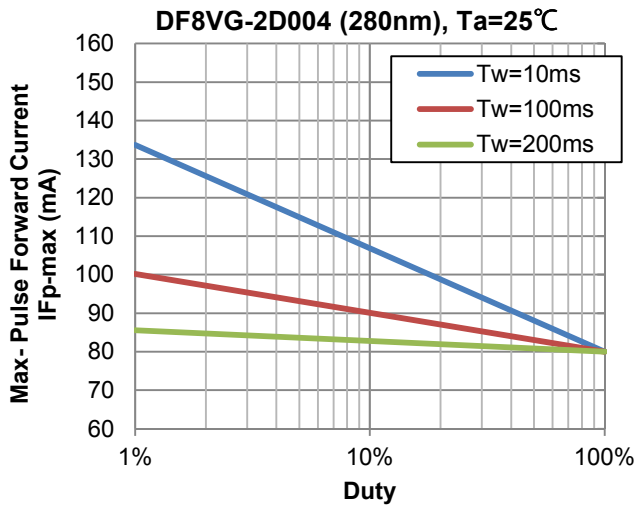
Wavelength Shift vs Ambient Temperature



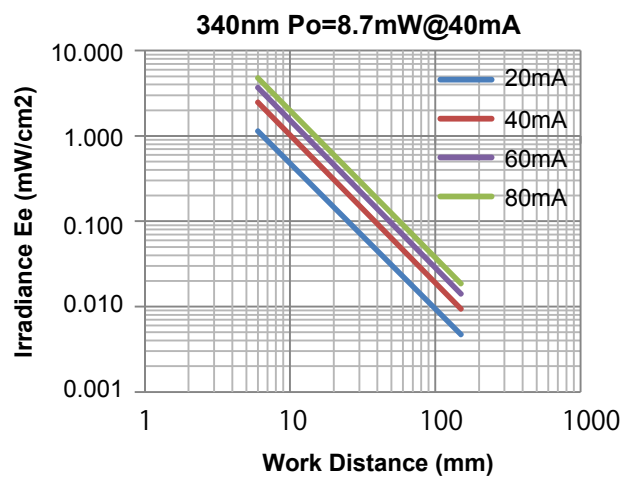
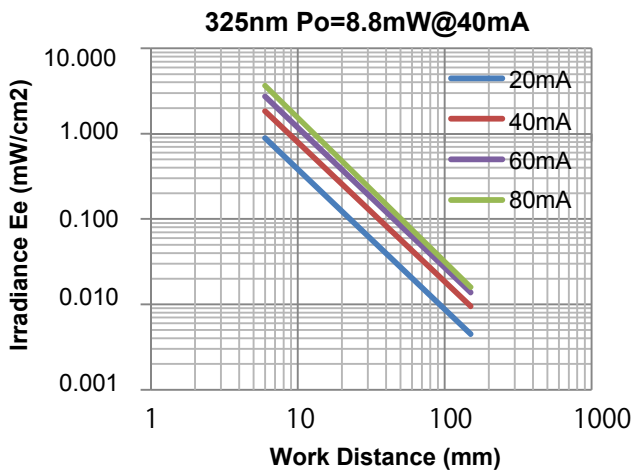
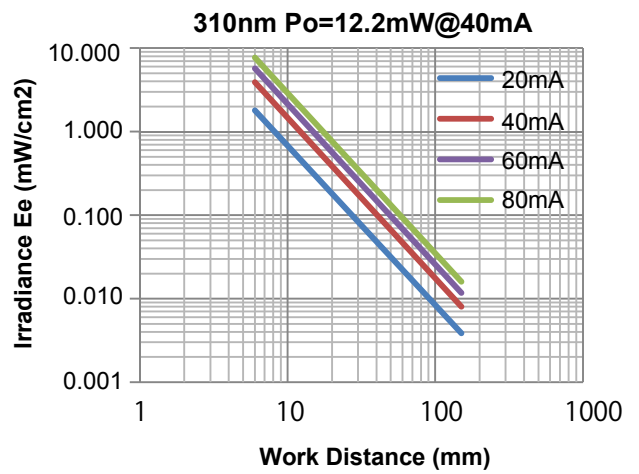
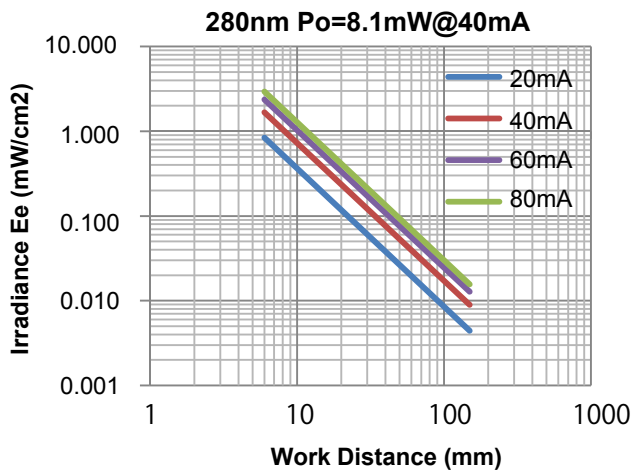
Junction Temperature vs Forward Current



Max-Pulse Forward Current vs Duty



Irradiance vs Work Distance



CAUTIONS on the implementation

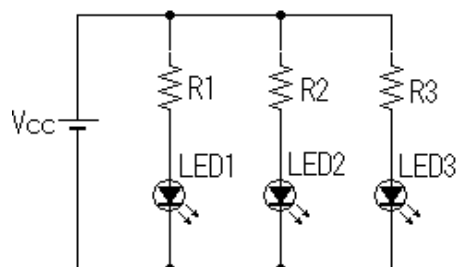
- Static electricity or surge voltage damages the LEDs, It is recommended that a wrist band or an anti-electrostatic glove be used when handling the LEDs.
- Please use the good substrate (Metal base boards, such as aluminum and copper etc.) of thermal conductivity. Use of the bad thermally conductive substrate based on FR-4 is not recommended.
- When you mount LED, please do not continue giving the temperature over 260°C to a device (Please do not use the soldering iron).
- When you mount LED using a constant temperature bath (oven), preset temperature shall be 250°C, and please once the heating of 8 minutes to close the door.

CAUTIONS on Use

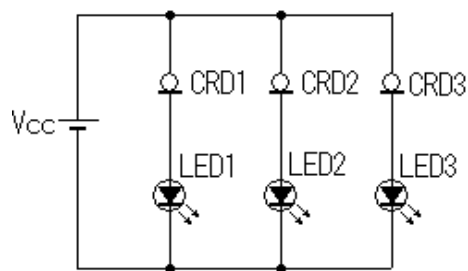
- Please perform circuitry not to exceed absolute maximum rating for every LED.
- It recommends carrying out a Constant Current drive for every LED.
- A circuit (A) is recommended when driving LED with Constant Voltage. There is a possibility that current flowing in the LED due to influence of variations in the forward voltage of the LED varies in circuit (B).

Recommended Circuit in Parallel Mode:

(A-1)



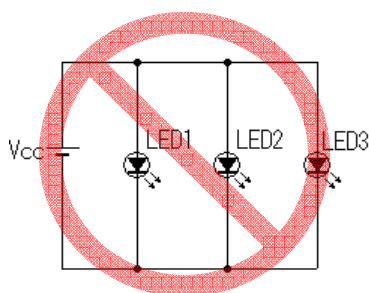
(A-2)



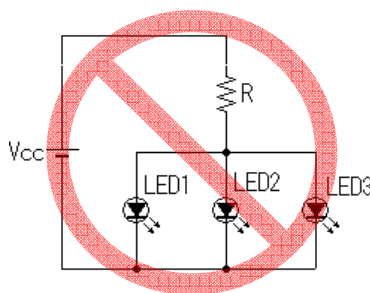
Separate Resistors or CRD(Current Regulative Diode) must be used for each LED.

Abnormal Circuit: Please avoid such a circuit.

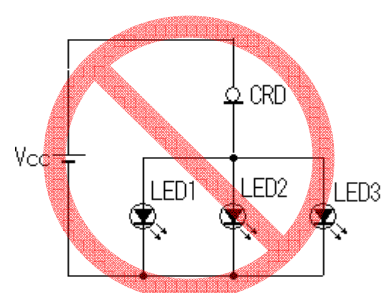
(B-1)



(B-2)




(B-3)



The current through the LEDs may very due to the variation in LED forward voltage.

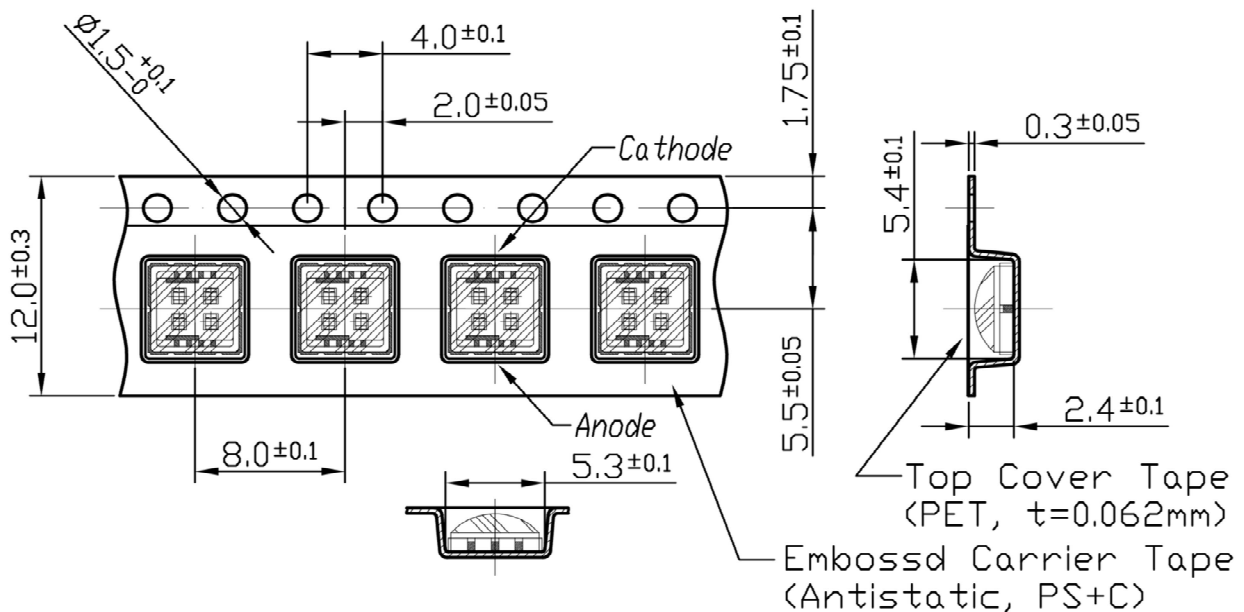
- As the instantaneous current does not flow in the LED, or gradually increased from 0mA current, and by using the series resistance for such LED, suppressing transient currents in the forward direction.

- Please do not connected in reverse polarity.
The use of this product in the forward current drive.
Also please pay attention voltage is not applied in both forward and reverse it is off.
- Heat dissipation device with a heat dissipation performance of more than a certain amount is essential. If you want to use it to implement the multiple LED, large cooling unit is required.
Thermoelectric Cooler/water cool is highly recommended. (Not Included)
- Including the ambient temperature, the surface temperature of the substrate that you use is, please heat dissipation designed to be below 40 °C.
- If you are driven by a pulse current of LED, please attach the protective circuit to absorb the undershoot of the current.
- When used outdoors, please use by applying enough waterproof, humidity measures, the salt damage.

 Please note that your use of the conditions failed to notes written above it will be not guaranteed.

Packing of Products

Taping Outline Dimensions



Issued September 2014.

SPEC information (included design, dimension, and typical data) would be changed without prior notice.

Lead (Pb) Free Product – RoHS Compliant