

Features

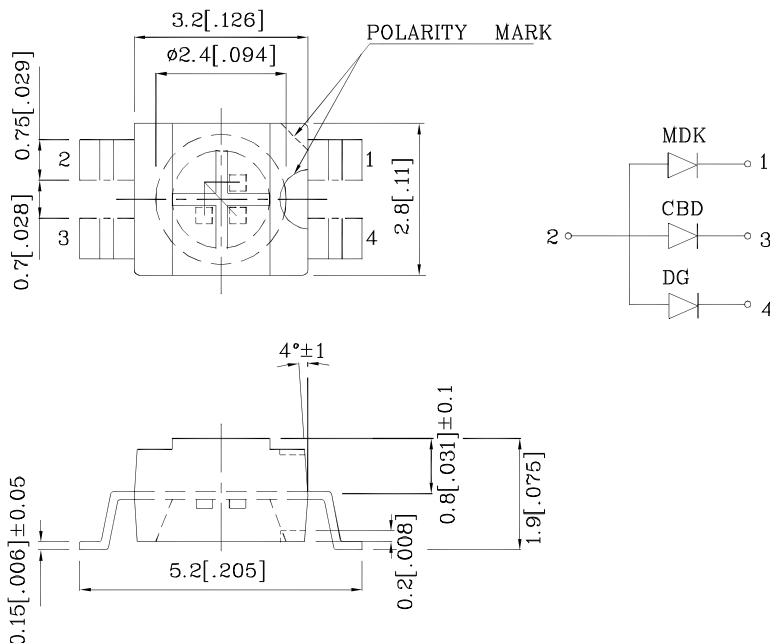
- Suitable for all SMT assembly and solder process.
- Available on tape and reel.
- Package: 1500pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.2(0.008")$ unless otherwise noted.
3. Specifications are subject to change without notice.

Absolute Maximum Ratings (TA=25°C)		MDK (AlGa InP)	CBD (InGa N)	DG (InGa N)	Unit
Reverse Voltage	VR	5	5	5	V
Forward Current	IF	30	30	30	mA
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	iFS	185	150	150	mA
Power Dissipation	PD	75	120	123	mW
Operating Temperature	TA	-40 ~ +85			°C
Storage Temperature	Tstg	-40 ~ +85			



Operating Characteristics (TA=25°C)		MDK (AlGaInP)	CBD (InGaIn)	DG (InGaIn)	Unit
Forward Voltage (Typ.) (IF=20mA)	VF	1.95	3.3	3.3	V
Forward Voltage (Max.) (IF=20mA)	VF	2.5	4.0	4.1	V
Reverse Current (Max.) (VR=5V)	IR	10	50	50	uA
Wavelength Of Peak Emission (Typ.) (IF=20mA)	λ P	650	468	515	nm
Wavelength Of Dominant Emission (Typ.) (IF=20mA)	λ D	630	470	525	nm
Spectral Line Full Width At Half-Maximum (Typ.) (IF=20mA)	$\Delta\lambda$	28	25	30	nm
Capacitance (Typ.) (VF=0V, f=1MHz)	C	35	100	45	pF

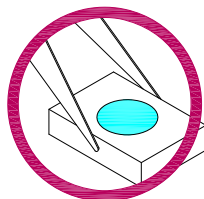
Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity (IF=20mA) mcd	Wavelength nm λ P	Viewing Angle 2 θ 1/2
				min.	typ.	
XZMDKCBDDG45S-9	Red	AlGaInP	Water Clear	110	347	650
	Blue	InGaN		36	79	468
	Green	InGaN		380	597	515
Published Date : JUL 28, 2010		Drawing No : XDSB4904		V1	Checked : B.L.LIU	
P.1/7						

Handling Precautions

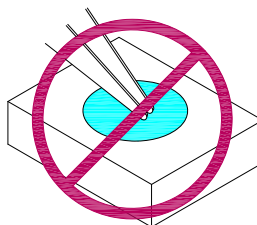
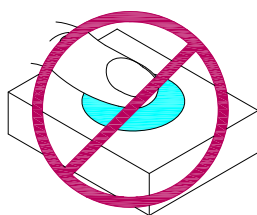
Compare to epoxy encapsulant that is hard and brittle, silicone is softer and flexible. Although its characteristic significantly reduces thermal stress, it is more susceptible to damage by external mechanical force.

As a result, special handling precautions need to be observed during assembly using silicone encapsulated LED products. Failure to comply might lead to damage and premature failure of the LED.

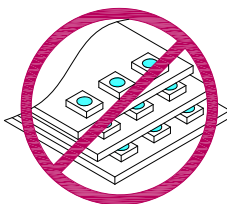
1. Handle the component along the side surfaces by using forceps or appropriate tools.



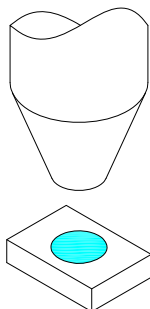
2. Do not directly touch or handle the silicone lens surface. It may damage the internal circuitry.

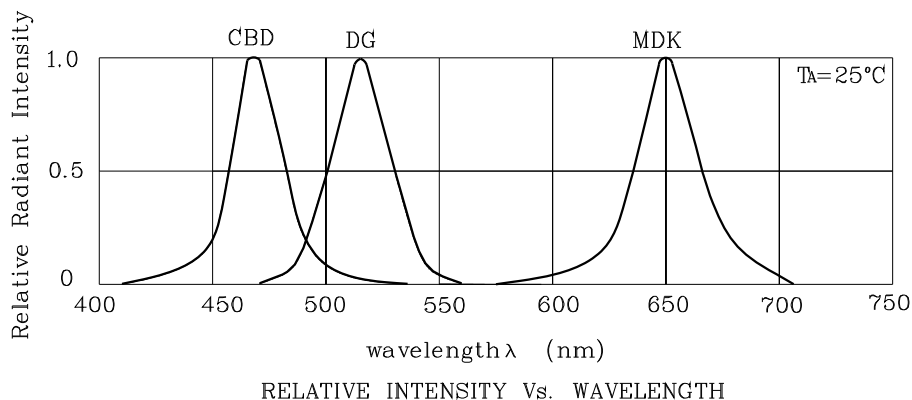


3. Do not stack together assembled PCBs containing exposed LEDs. Impact may scratch the silicone lens or damage the internal circuitry.

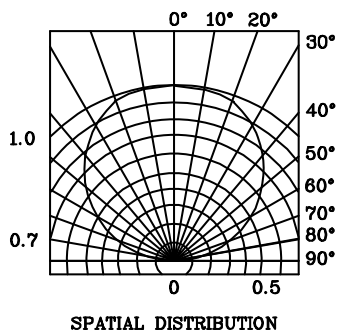
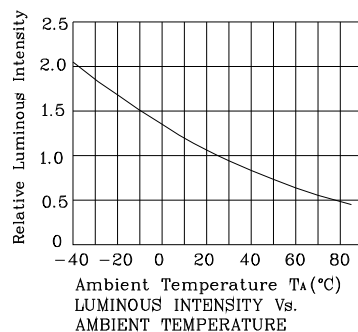
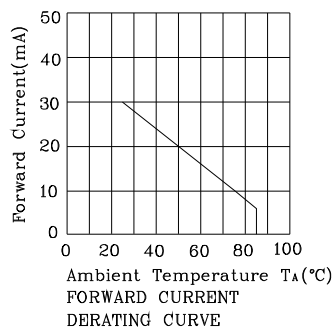
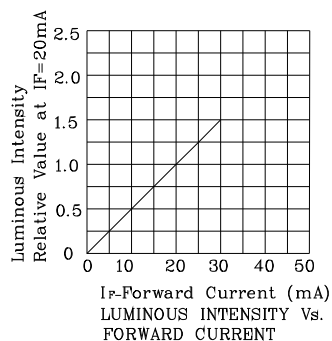
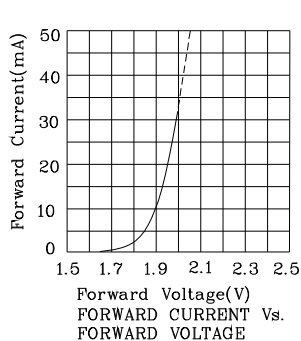


4. During surface-mounting, the pickup capillary diameter should be larger than the silicone lens to insure the capillary does not scratch or damage the lens.

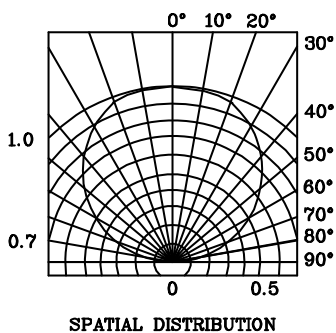
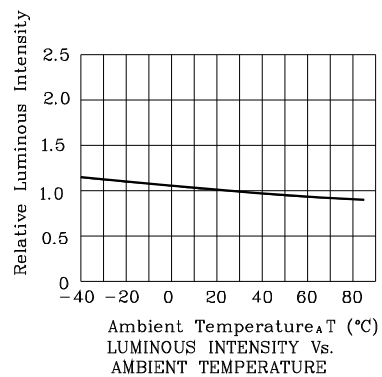
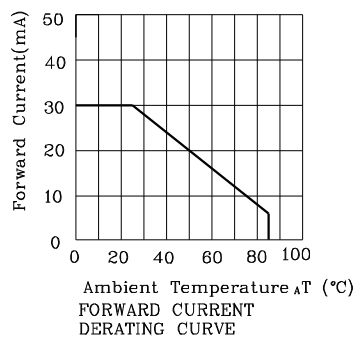
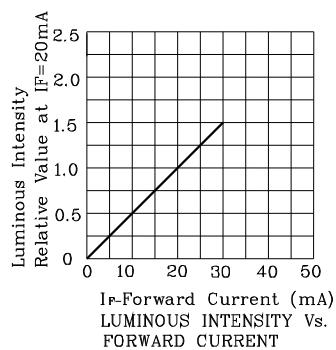
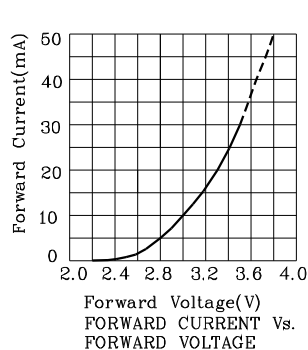




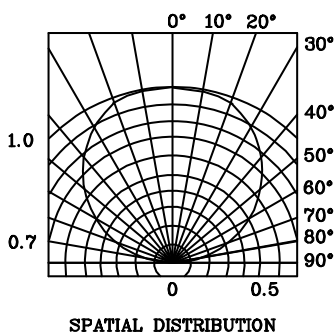
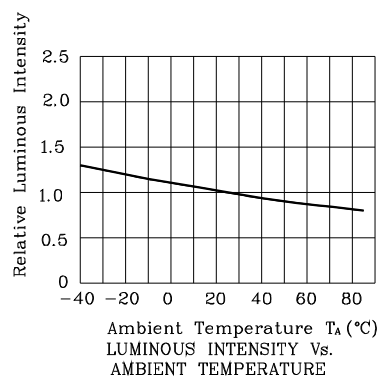
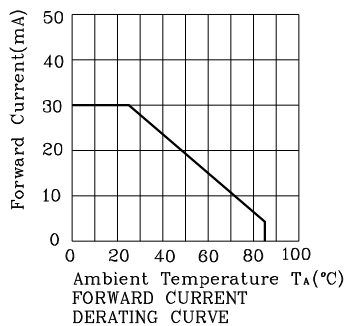
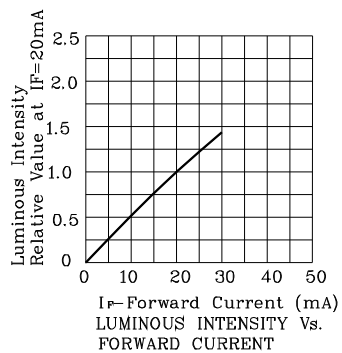
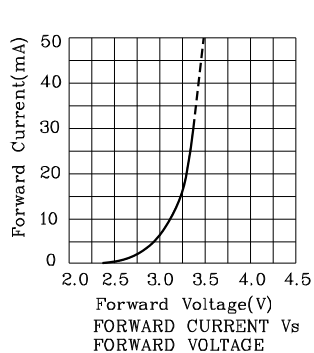
❖ MDK



❖ CBD

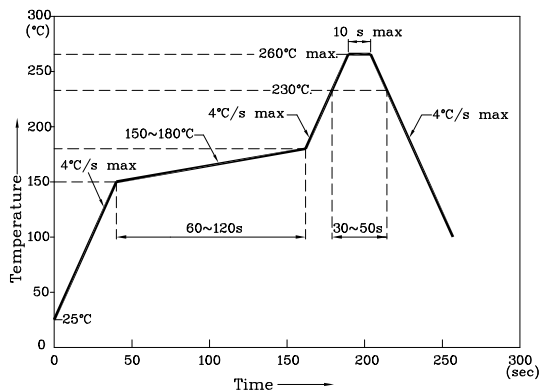


❖ DG



Reflow soldering is recommended and the soldering profile is shown below.
Other soldering methods are not recommended as they might cause damage to the product.

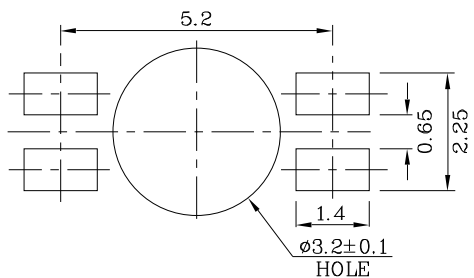
Reflow Soldering Profile For Lead-free SMT Process.



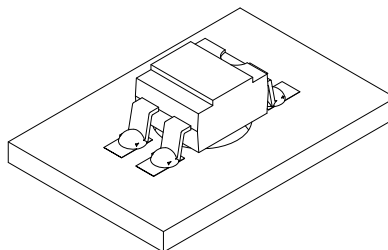
NOTES:

1. Maximum soldering temperature should not exceed 260°C.
2. Recommended reflow temperature: 145°C~260°C.
3. Do not put stress to the epoxy resin during high temperatures conditions.

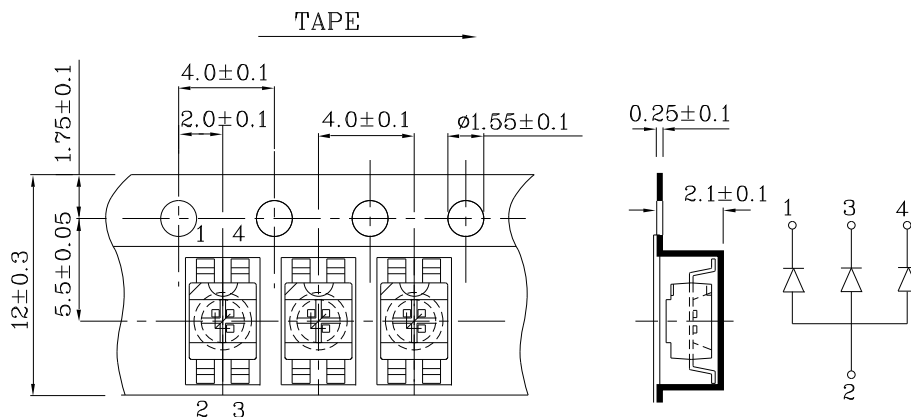
❖ **Recommended Soldering Pattern**
(Units : mm; Tolerance: ± 0.1)



❖ **The device has a single mounting surface. The device must be mounted according to the specifications.**



❖ **Tape Specification (Units : mm)**



Remarks:

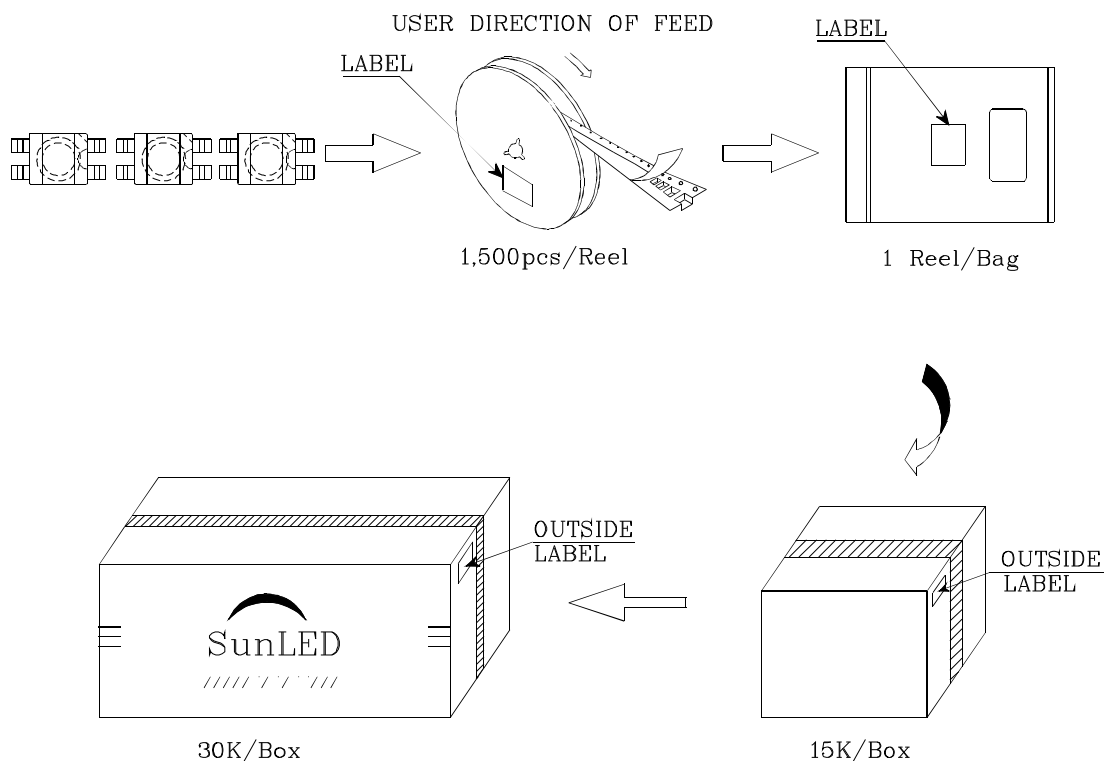
If special sorting is required (e.g. binning based on forward voltage, Luminous intensity/ luminous flux, or wavelength), the typical accuracy of the sorting process is as follows:

1. Wavelength: ± 1 nm
2. Luminous intensity/ luminous flux: $\pm 15\%$
3. Forward Voltage: ± 0.1 V

Note: Accuracy may depend on the sorting parameters.

PACKING & LABEL SPECIFICATIONS

XZMDKCBDDG45S-9



SunLED

Q.C. Q C

XX XX. XXXX

PASSED

P/NO : XZxxx45x-9	
QTY : 1,500 pcs	CODE: XXX
S/N : XX	
LOT NO :	
 XXXXXXXXXXXXXXXXXXXXXXX	
RoHS Compliant	