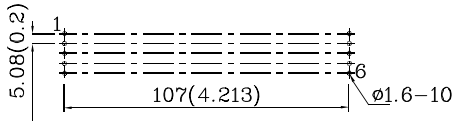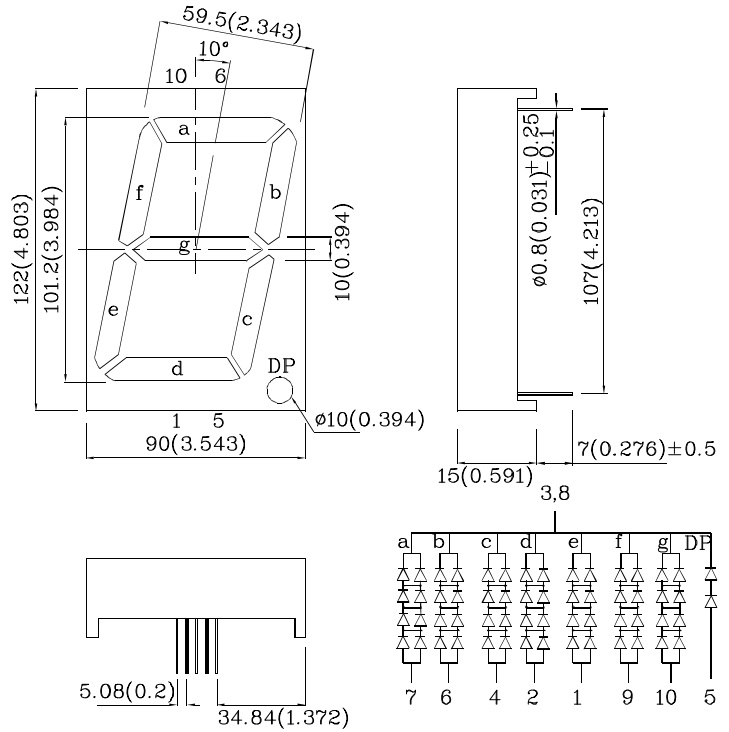**SunLED**

www.SunLEDusa.com

Features

● Low power consumption

● Robust package

● I.C. Compatible

● Standard configuration: Gray face w/ white segments

● Optional black face provides superior color contrast

● RoHS Compliant
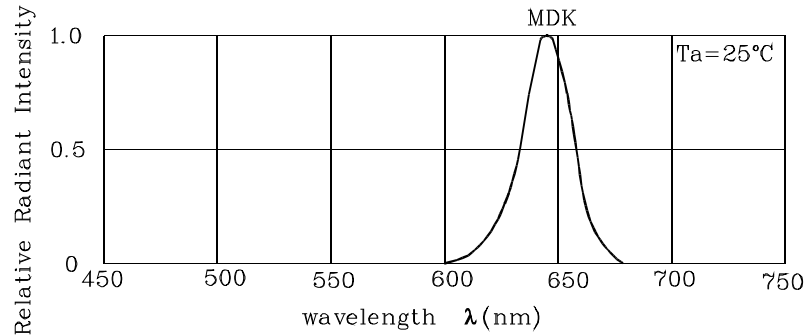
RECOMMENDED PCB LAYOUT

Package Schematics

Notes:
1. All dimensions are in millimeters (inches), Tolerance is ±0.25(0.01")unless otherwise noted.
2. Specifications are subject to change without notice.

Absolute Maximum Ratings (T$_A$=25°C)		MDK (AlGaInP)	Unit
Reverse Voltage (Per Chip)	V$_R$	5	V
Forward Current (Dp)	I$_F$	60 (30)	mA
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width (Dp)	i$_{FS}$	370 (185)	mA
Power Dissipation (Per Chip)	P$_D$	150	mW
Operating Temperature	T$_A$	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +85	
Lead Solder Temperature [2mm Below Package Base]	260°C For 3-5 Seconds		

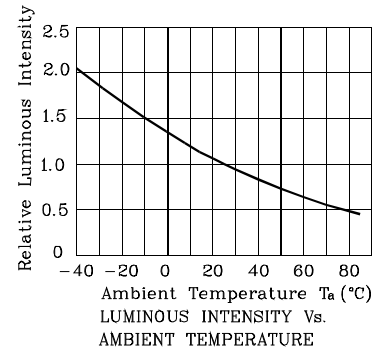| Operating Characteristics (T$_A$=25°C)		MDK (AlGaInP)	Unit
Forward Voltage (Typ.) (Dp) (I$_F$=10mA)	V$_F$	7.4 (3.7)	V
Forward Voltage (Max.) (Dp) (I$_F$=10mA)	V$_F$	10 (5.0)	V
Reverse Current (Max.) (Per Chip) (V$_R$=5V)	I$_R$	10	uA
Wavelength of Peak Emission CIE127-2007* (Typ.) (I$_F$=10mA)	λP	645*	nm
Wavelength of Dominant Emission CIE127-2007* (Typ.) (I$_F$=10mA)	λD	630*	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I$_F$=10mA)	△λ	28	nm
Capacitance (Typ.) (V$_F$=0V, f=1MHz)	C	35	pF

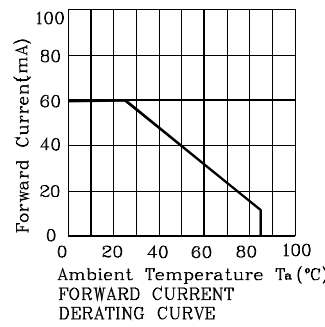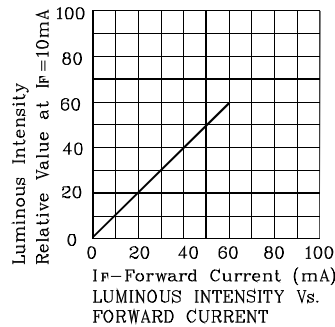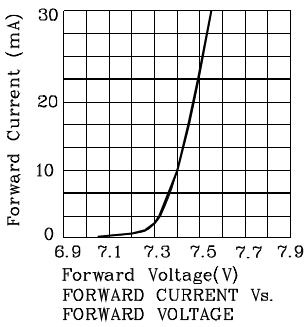| Part Number	Emitting Color	Emitting Material	Luminous Intensity CIE127-2007* (I$_F$=10mA) ucd		Wavelength CIE127-2007* nm λP	Description
			min.	typ.		
XDMDK100C	Red	AlGaInP	88000 31000*	249990 73990*	645*	Common Cathode, Rt.Hand Decimal.

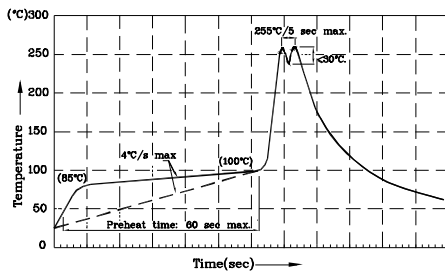*Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

❖ MDK

RELATIVE INTENSITY Vs. CIE WAVELENGTH

FORWARD CURRENT Vs.
FORWARD VOLTAGE

LUMINOUS INTENSITY Vs.
FORWARD CURRENT

FORWARD CURRENT
DERATING CURVE

LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

FORWARD CURRENT Vs.
FORWARD VOLTAGE

LUMINOUS INTENSITY Vs.
FORWARD CURRENT

FORWARD CURRENT
DERATING CURVE

LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE
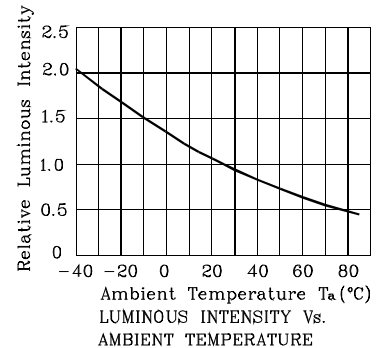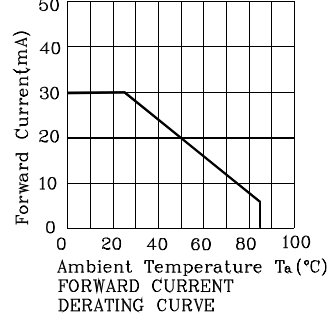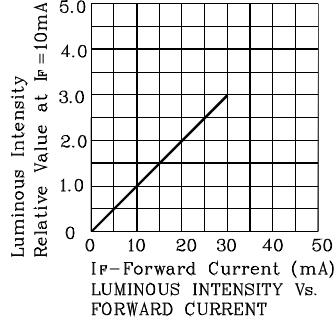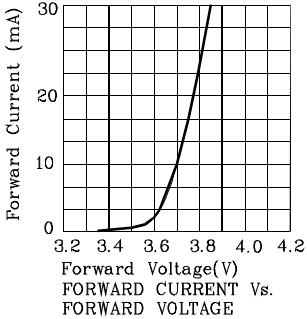
Wave Soldering Profile for Thru-Hole Products (Pb-Free Components)

Notes:
1. Recommend pre-heat temperature of 105℃ or less (as measured with a
   thermocouple attached to the LED pins) prior to immersion in the solder
   wave with a maximum solder bath temperature of 260℃
2. Peak wave soldering temperature between 245℃ ～ 255℃ for 3 sec (5 sec
   max).
3. Do not apply stress to the epoxy resin while the temperature is above 85℃.
4. Fixtures should not incur stress on the component when mounting and
   during soldering process.
5. SAC 305 solder alloy is recommended.
6. No more than one wave soldering pass.
7. During wave soldering, the PCB top-surface temperature should be
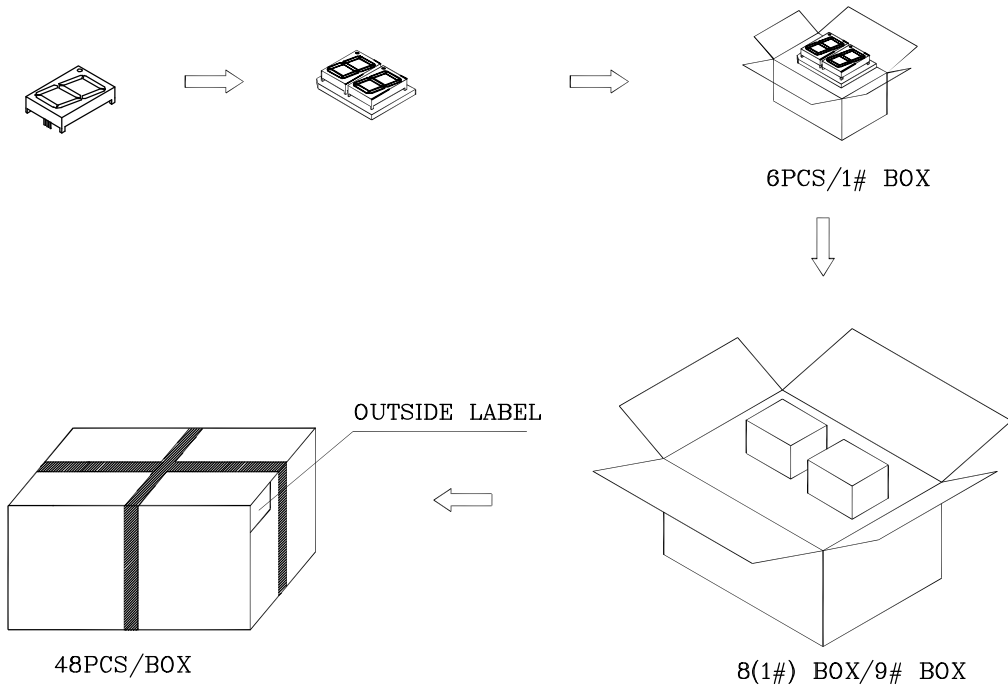   kept below 105℃.

Remarks:

If special sorting is required (e.g. binning based on forward voltage,
luminous intensity / luminous flux, or wavelength),

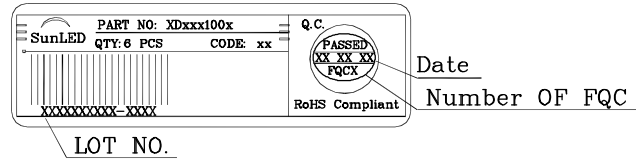the typical accuracy of the sorting process is as follows:

1. Wavelength: +/-1nm

2. Luminous Intensity / Luminous Flux: +/-15%

3. Forward Voltage: +/-0.1V

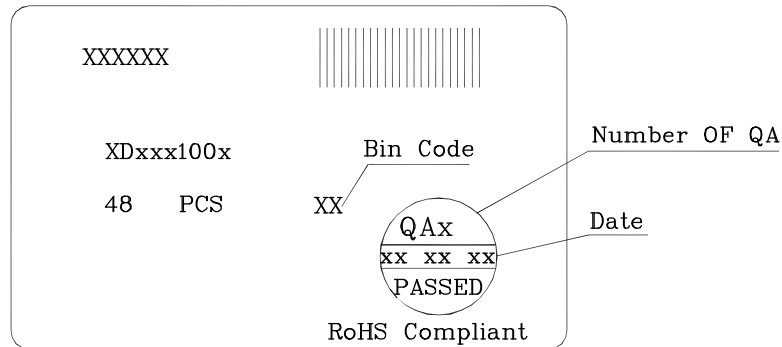Note: Accuracy may depend on the sorting parameters.

www.SunLEDusa.com

PACKING & LABEL SPECIFICATIONS

6PCS/1# BOX

OUTSIDE LABEL

48PCS/BOX

8(1#) BOX/9# BOX

Inside Label On 1#BOX

PART NO: XDxxx100x
QTY: 6 PCS   CODE: xx
SunLED
Q.C.
PASSED
XX XX XX
FQCX
RoHS Compliant
XXXXXXXXXX-XXXX
Date
Number OF FQC
LOT NO.

Outside Label On Box

XXXXXX

XDxxx100x   Bin Code
48   PCS   XX
Number OF QA
QAx
xx xx xx
PASSED
Date
RoHS Compliant

TERMS OF USE

1. Data presented in this document reflect statistical figures and should be treated as technical reference only.
2. Contents within this document are subject to improvement and enhancement changes without notice.
3. The product(s) in this document are designed to be operated within the electrical and environmental specifications indicated on the datasheet.
   User accepts full risk and responsibility when operating the product(s) beyond their intended specifications.
4. The product(s) described in this document are intended for electronic applications in which a person's life is not reliant upon the LED. Please
   consult with a SunLED representative for special applications where the LED may have a direct impact on a person's life.
5. The contents within this document may not be altered without prior consent by SunLED.
6. Additional technical notes are available at http://www.SunLEDusa.com/TechnicalNotes.asp