NMOP-10133-LSx

SURFACE MOUNT LED TAPE AND REEL

Product Series Model:

Part No.	Viewing Angle
NMOP-10133-LSA	(X)150° (Y)100°
NMOP-10133-LSD	(X)100° (Y)60°
NMOP-10133-LSE	57°

Device Selection Guide

Material	Color	
	Emitted	Lens
AlGaAs	Infrared	Water Clear

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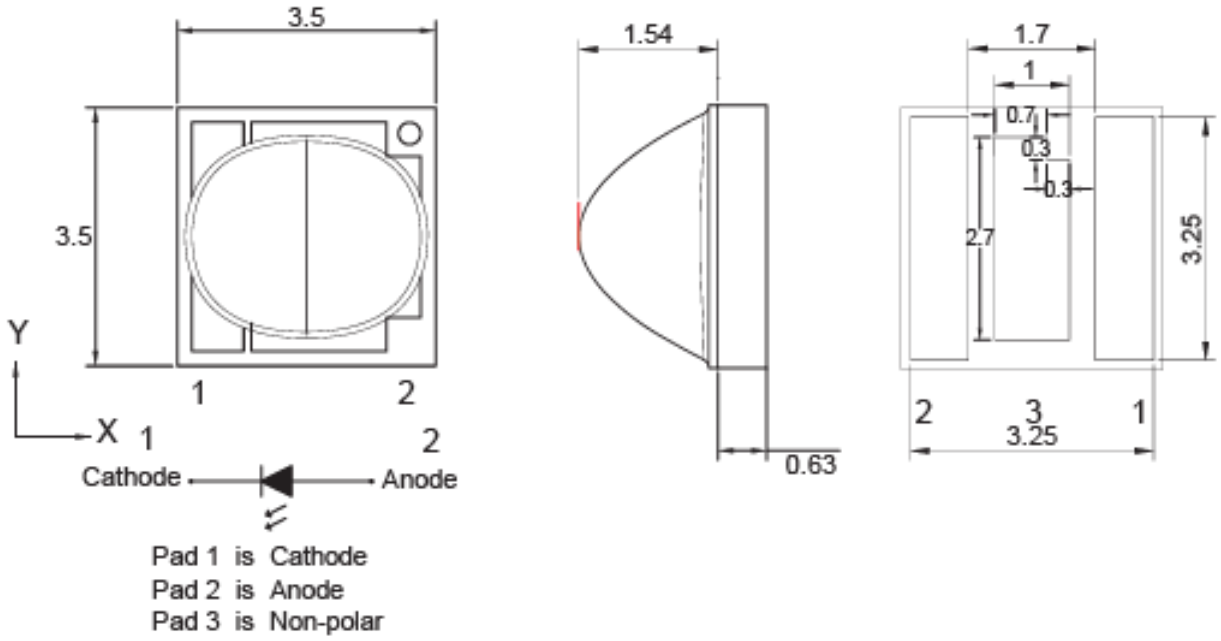
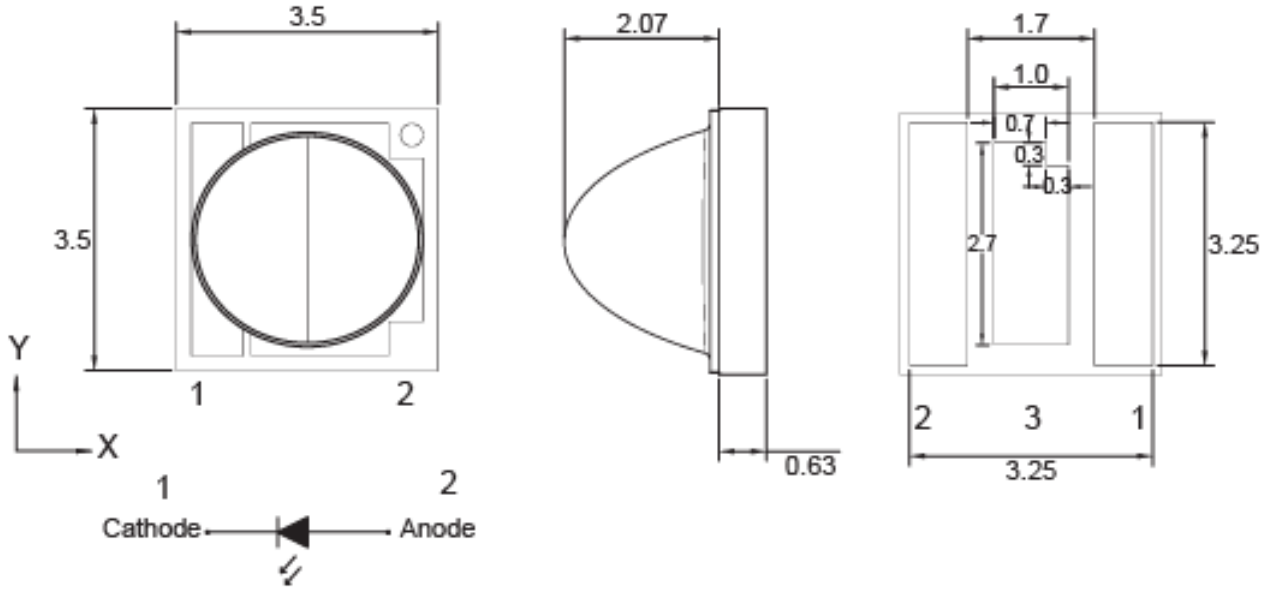
Package Dimensions

NMOP-10133-LSA



Pad 1 is Cathode
Pad 2 is Anode
Pad 3 is Non-polar

NMOP-10133-LSD



Pad 1 is Cathode
Pad 2 is Anode
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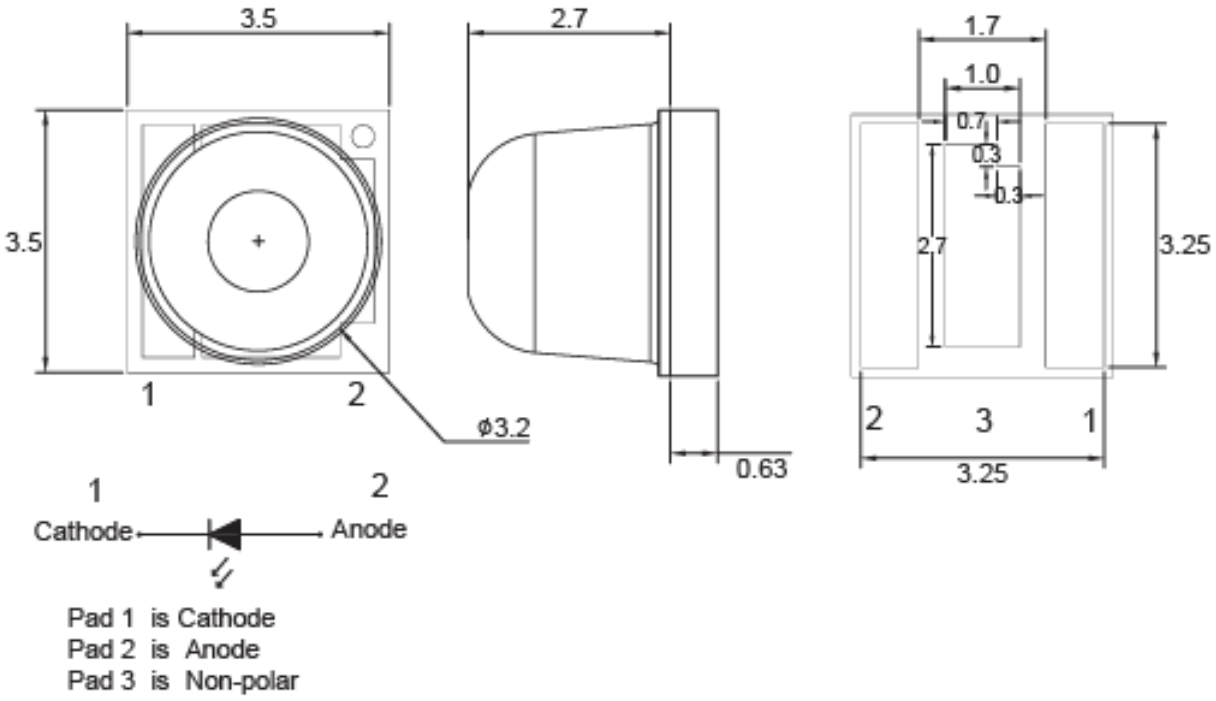
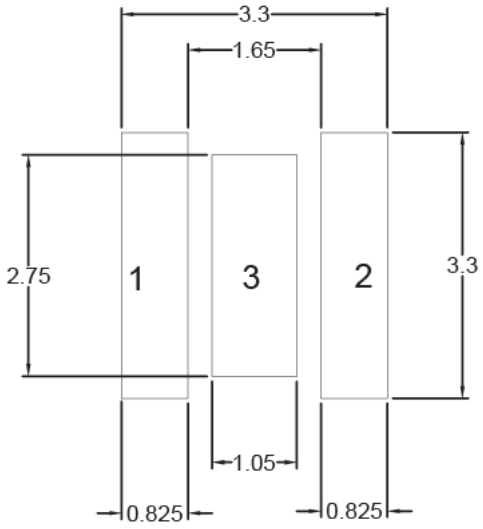
Package Dimensions

NMOP-10133-LSE



Note : 1. All dimension are in millimeter tolerance is ±0.2mm unless otherwise noted.
2. Specifications are subject to change without notice.

Recommended Soldering Pad Dimensions



Note : The tolerances unless mentioned is ±0.1mm,Unit=mm.

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Absolute Maximum Ratings at Ta=25° C

Parameter	Symbol	Ratings	UNIT
Power Consumption	P_{tot}	5.5	W
DC Forward Current	I_F	1500	mA
Reverse Current (VR=5V)	I_r	10	μA
Peak pulse current Duty 1/10@10KHz	I_{FP}	2000	mA
ESD Sensitivity	HMB 100pf/1.5KΩ	2K	V
	MM 200pf/0Ω	150	V
LED junction Temperature	Tj	145	°C
Thermal resistance	Rth j-s	8	°C/W
Operating Temperature	Topr	-40 ~ +125	°C
Storage Temperature	Tstg	-40 ~ +125	°C
Soldering Temperature	Tp	260	°C

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Typical Electrical & Optical Characteristics (Ta=25° C)

Radiant Intensity	Symbol	Min.	Typ.	Max.	Unit	Condition
NMOP-10133-LSA	Ie	300	430	---	mW/sr	IF=1A
		---	640	---		IF=1.5A
NMOP-10133-LSD	Ie	430	600	---	mW/sr	IF=1A
		---	900	---		IF=1.5A
NMOP-10133-LSE	Ie	620	840	---	mW/sr	IF=1A
		---	1260	---		IF=1.5A

Note : 1.The forward voltage data did not including ±0.1V testing tolerance.
2.The radiant intensity data did not including ±15% testing tolerance.

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Radiant Flux	Φe	---	1400	---	mW	IF=1A
		---	2100	---		IF=1.5A
Peak Emission Wavelenght	λP	---	940	---	nm	IF=1A
Spectral Line Half Width	Δλ	---	40	---	nm	IF=1A
Forward Voltage	VF	2.7	---	3.6	V	IF=1A
		---	3.4	---		IF=1.5A

Viewing Angle	Symbol	Value	Unit	Condition
NMOP-10133-LSA	2θ 1/2	(X)150 (Y)100	deg	IF=1A
NMOP-10133-LSD		(X)100 (Y)60		IF=1A
NMOP-10133-LSE		57		IF=1A

Note : 1.The forward voltage data did not including ±0.1V testing tolerance.
2.The radiant intensity data did not including ±15% testing tolerance.

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Typical Electro-Optical Characteristics Curve

Fig.1 Relative Intensity VS. Forward Current

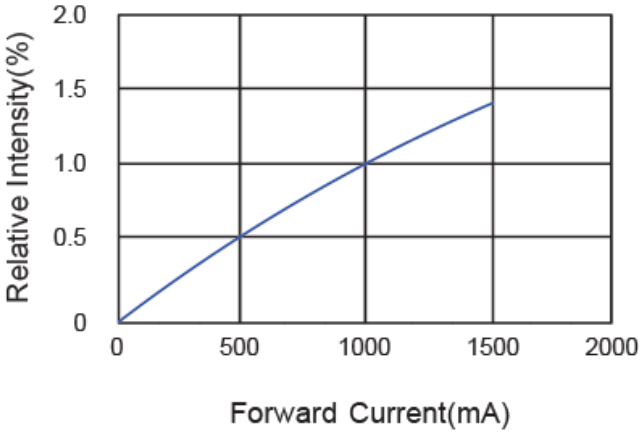

Fig.2 Forward Current VS. Ambient Temperature

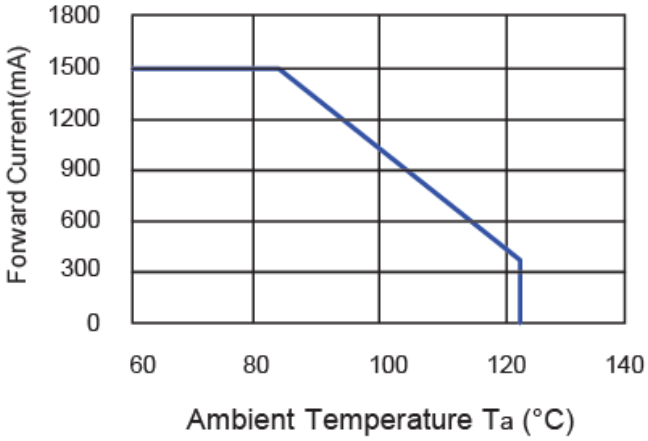

Fig.3 Relative Radiant Power VS. Wavelength

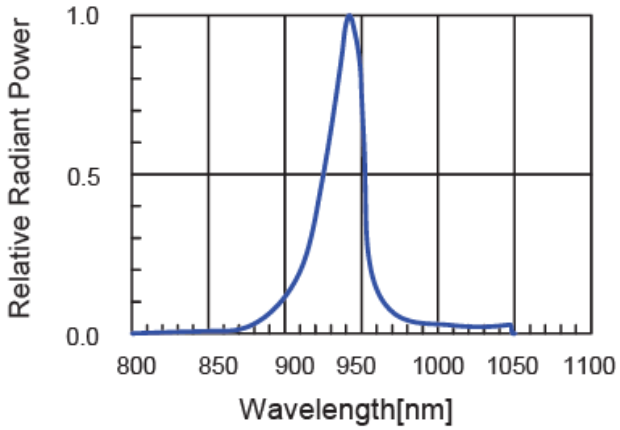

Fig.4 Forward Voltage VS. Forward Current

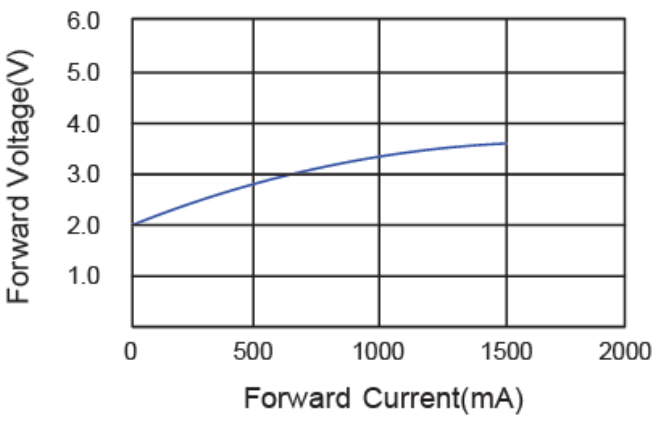

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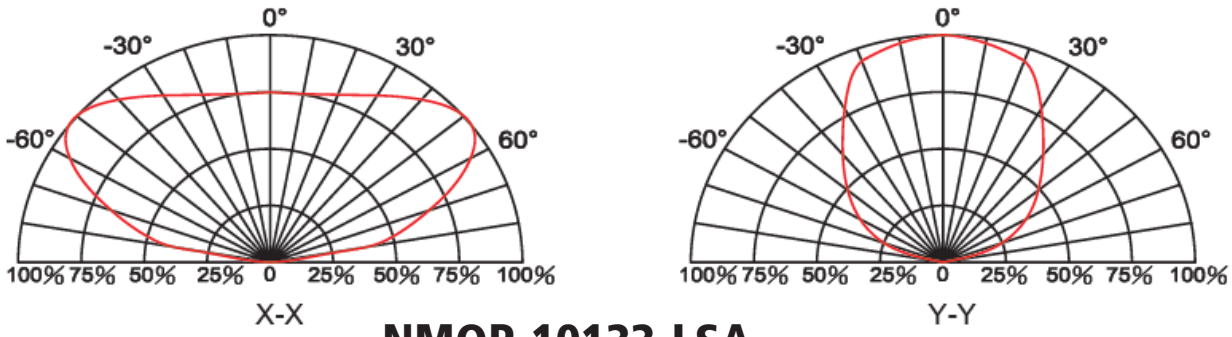
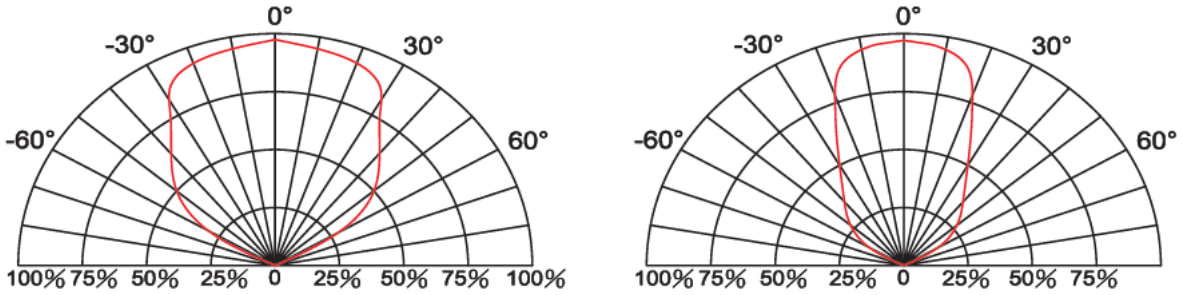
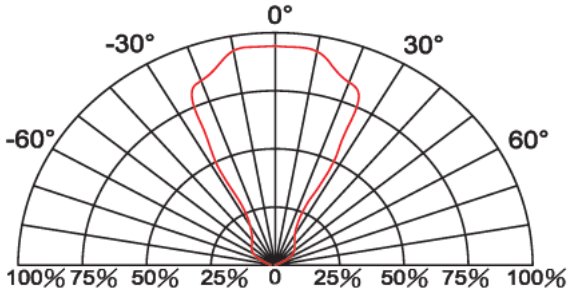
Fig.5 Directive Radiation



NMOP-10133-LSA



NMOP-10133-LSD



NMOP-10133-LSE

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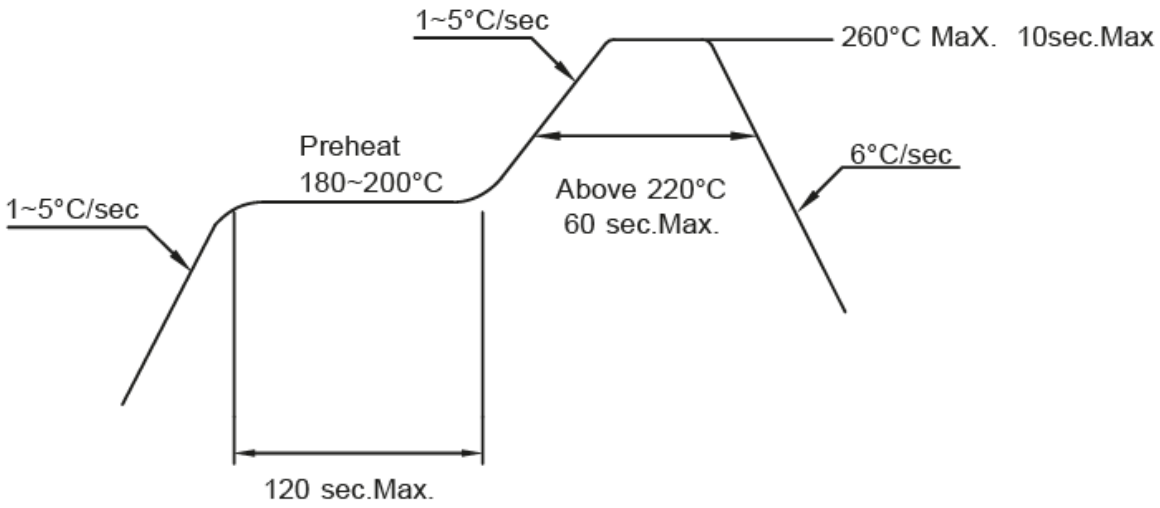
Recommended Soldering Conditions

PB-Free Reflow Solder



Note: 1.Reflow soldering should not be done more than two times.
2.When soldering,do not put stress on the LEDs during heating.
3.After soldering,do not warp the circuit board.

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Reliability Test:

Classification	Test Item	Test Condition	Sample Size
Endurance Test	Operating Life Test	1.Ta=25°C 2.If=1A 3.t=1000 hrs (-24hrs,+72hrs)	22
	High Temperature Storage Test	1.Ta=100°C±5°C 2.t=1000 hrs (-24hrs,+72hrs)	22
	Low Temperature Storage Test	1.Ta=-40°C±5°C 2.t=1000 hrs (-24hrs,+72hrs)	22
	High Temperature High Humidity Storage Test	1.Ta=85°C 2.RH=85% 3.t=1000hrs(-24hrs,+72hrs)	22
Environmental Test	Thermal Shock Test	1.Ta=100°C±5°C ~ -40°C±5°C 20min/ 10sec / 20min 2.total 100 cycles	22
	Temperature Cycling	1.100°C±5°C ~ -40°C±5°C 30mins / 5mins / 30mins 2.100 Cyeles	22
	IR Reflow	1.T=260°C Max. 10sec.Max. 2. 6 Min	22

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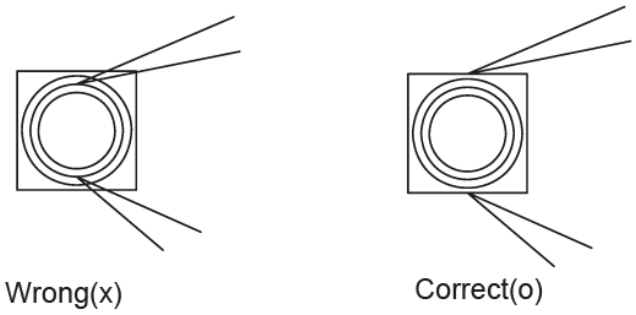
Pleasse follow the guideline to grab LEDs

- don't touch lens with the fingers
- use tweezers to grab LED
- don't apply more than 4N of lens(400G) directly onto the lens
- don't touch lens with the tweezers



Lens cleaning

in the case where a minimal level of dirt and dust particles can not be guaranteed, a suitable cleaning solution can be applied to the lens surface

- try a gentle swabbing using a lint-free swab
- if needed, the use of lint-free swab and isopropyl alcohol used gently removes dirt from the lens
- don't use other solvents as they may directly react with the led assembly.
- don't use ultrasonic cleaning that the led will be damaged

Disclaimer

The information in this data sheet subject to change without notice.
Always make sure to use the most recent release, or consult with us before your final selection.

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