

SPECIFICATIONS FOR TOP LED

MODEL: [GNL-1210UEC/3](#)



NINGBO G-NOR ELECTRONICS CO.,LTD.

Part No.	GNL-1210UEC/3		
Emitted Color	Super Red	Len's Color	Water Clear
Chip Material	AlGaInp		

Features:

Compatible with automatic placement equipment

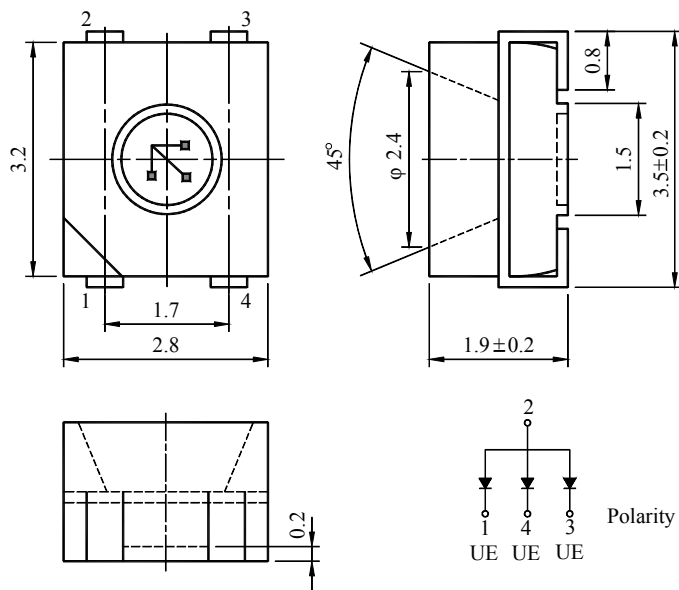
Compatible with reflow solder process

This product doesn't contain restriction Substance, comply ROHS standard.

Applications:

Automotive and Telecommunication

General use for indicators



Unit mm

Toleranc 0.2mm unless otherwise noted

Electrodes: Ag Plating Copper Alloy

Encapsulating Resin: Epoxy Resin

Package: Heat-Resistant Polymer

Abusolute Maximum Rating(Ta=25°C)

Parameter	Symbol	Max.	Unit
Power Dissipation	P _M	60	Mw
Pulse Forward Current (1/10 duty and 1mec width)	I _{FP}	70	mA
DC Forward Current	I _F	25	mA
Reverse Voltage	V _R	5	V
Operating Temperature Range	T _{opr}	-30°C~85°C	°C
Storage Temperature Range	T _{stg}	-40°C~100°C	°C

Electrical Optical Characteristics(Ta=25°C)

Parameter	Symbol	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I _V	600	--	mcd	I _F =20mA
Forward Voltage	V _F	2.1	2.5	V	I _F =20mA
Reverse Current	I _R	--	10	uA	V _R =5V
Dominant Wavelength	λ _d	625	--	nm	I _F =20mA
Spectral Line half width	Δ λ	30	--	nm	I _F =20mA
Viewing Angle	2 θ _{1/2}	120	--	Deg.	I _F =20mA

Parameter Classification

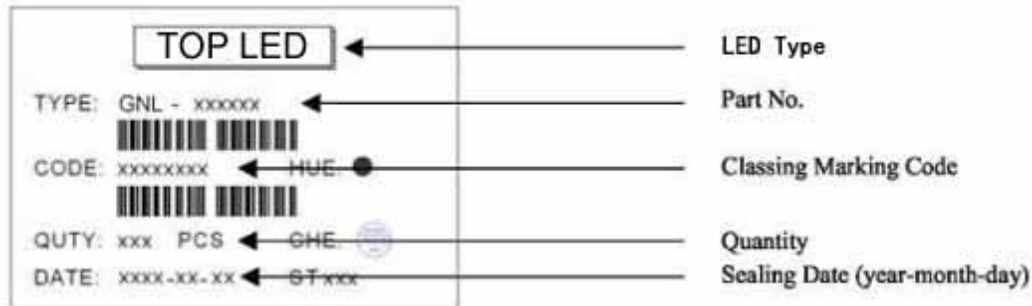
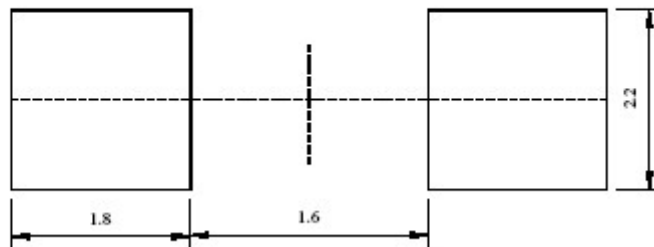
Forward Voltage I _F =20mA		Chromaticity Coordinates I _F =20mA		Luminous Intensity I _F =20mA	
Code	Min~Max	Code	Min~Max	Code	Min~Max
G	1.9-2.0	N	625-628	O	450-550
H	2.0-2.1	P	628-631	P	550-650

◆ Classing Marking:

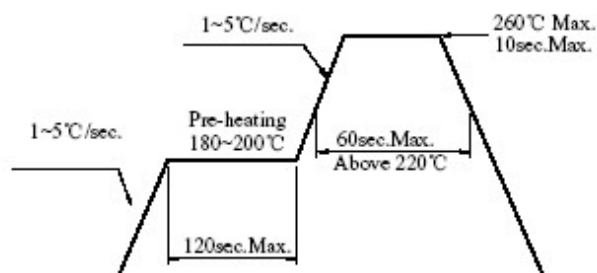
For example:

003GPOON

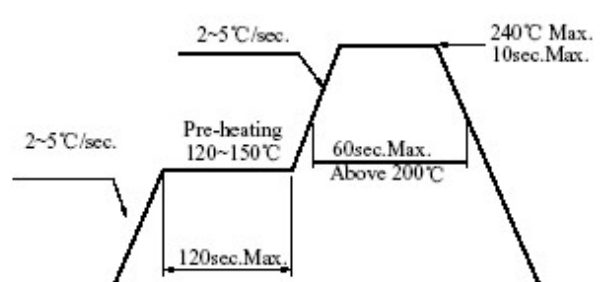
Code Order: Chip code—Voltage—Dominant Wavelength—OO—Luminous Intensity

Package Label:**Soldering Pad Dimensions:****Soldering Conditions (Maximum allowable soldering conditions)****1、Reflow soldering profile**

<Lead-free solder>



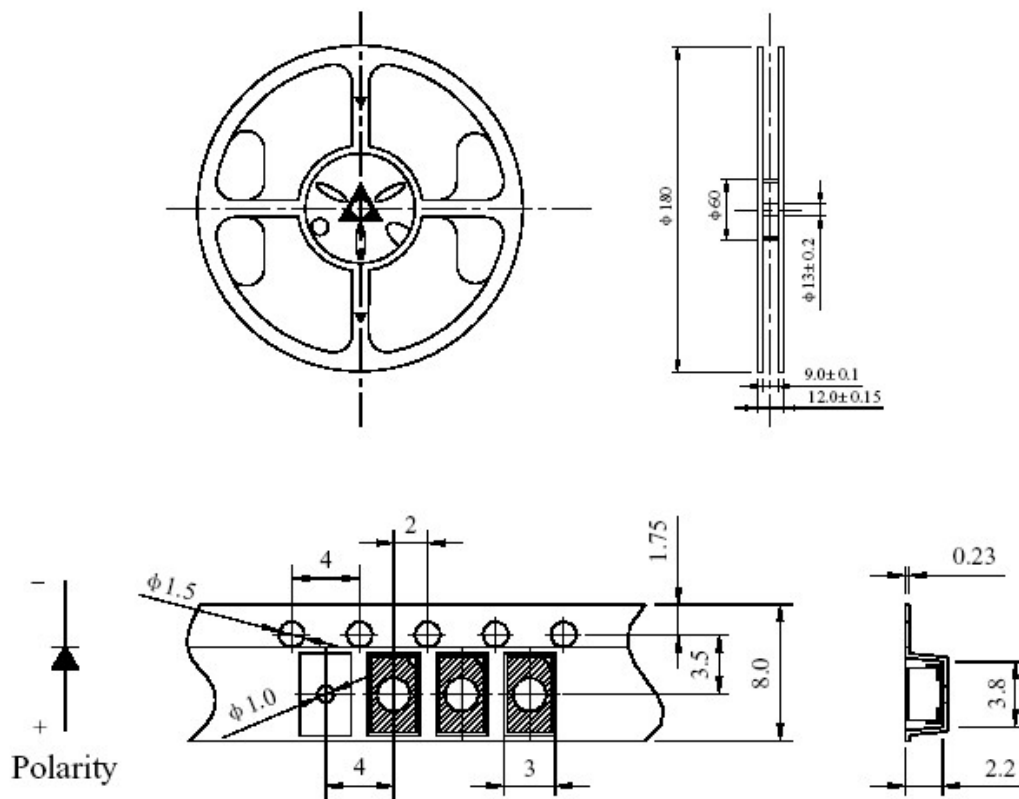
<Lead solder>

**2 Soldering Iron**

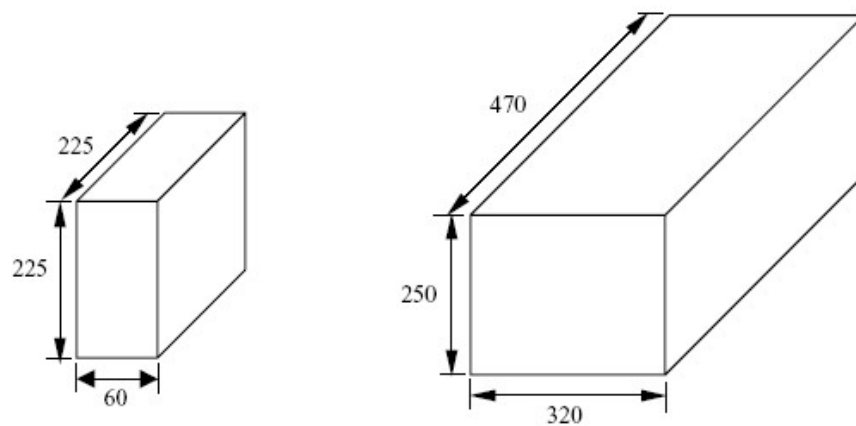
Power dissipation of Iron should be smaller than 25W, and temperature should be controllable. The work must be finished within 3sec under 300 , only once.

- Do not stress its resin while soldering.
- After soldering, do not warp the circuit board.
- Pay attention to electrostatic ESD .

Package Tape Specifications: (Max 2000pcs/Reel)



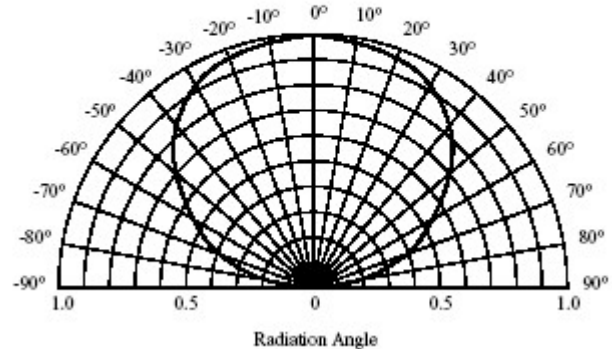
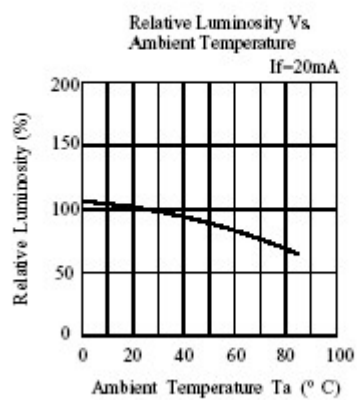
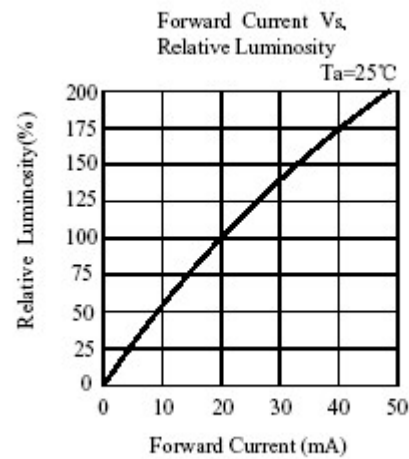
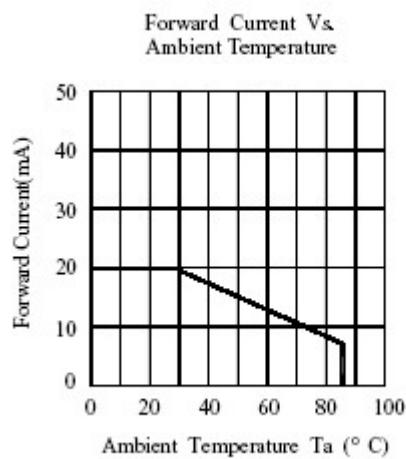
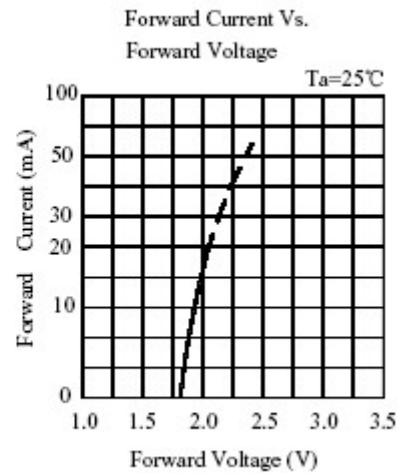
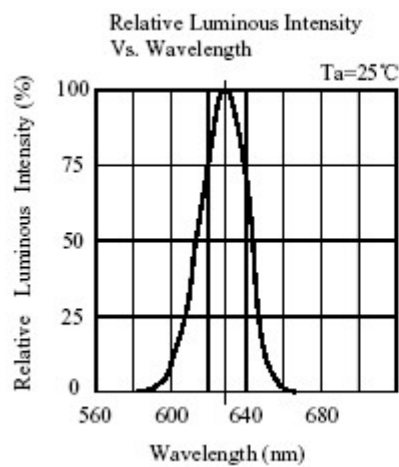
Reel Lead Min.60mm No LEDs



5 Reel in one Box

10 Box in one Carton

Typical Electro-Optical Characteristics Curves



Reliability Test Items and Conditions

NO	Test Item	Test Conditions	Duration	Sample	Ac/Re
1	Temperature Cycle	-40°C~25°C~100°C~25°C 30min 5min 30min 5min	50cycles	100	0/1
2	High Temp. Storage	Ta=100°C	1000hours	100	0/1
3	Temp.& Humidity Test	Ta=85 °C ,RH=85%	1000hours	100	0/1
4	Low Temp. Storage	Ta= -40°C	1000hours	100	0/1
5	Operating Life Test	Ta=25±5 °C DC IF=15mA	1000hours	100	0/1
6	Solder Heat	Tsol=260±5°C,10s	1times	20	0/1

Cautions**1 Package**

When moisture is absorbed into the package it may vaporize and expand during soldering. There is a possibility that this can cause exfoliation of the contacts and damage to the optical characteristics of the LEDs. So the moisture proof package is used to keep moisture to a minimum in the package.

2 Storage

Before opening the package: The LEDs should be kept at 5~30°C and 60%RH or less. The LEDs should be used within a year.

After opening the package: The LED must be used within 24 hours, else should be kept at 5~30°C and 30% RH or less. The LEDs should be used within 7days after opening the package. If unused LEDs remain, they should be stored in moisture proof packages, recommended to return the LEDs to the original moisture proof bag and to reseal the moisture proof bag again.

If the LEDs have exceeded the storage time, baking treatment should be performed more than 12 hours at 60 ± 5°C.

3 The LED electrode sections are comprised of a gold plated. The gold surface may be affected by environments which contain corrosive gases and so on. Please avoid conditions which may cause the LED to corrode or discolor. This corrosion or discoloration may cause difficulty during soldering operations. It is recommended that the User use the LEDs as soon as possible.

4 Please avoid rapid transitions in ambient temperature, especially in high humidity environments where condensation can occur.

■ **Notes:**

1 Above specification may be changed without notice. We will reserve authority on material change for above specification.

2 When using this product, please observe the absolute maximum ratings and the instructions for the specification sheets. We assume no responsibility for any damage resulting from use of the product which does not comply with the instructions included in the specification sheets.