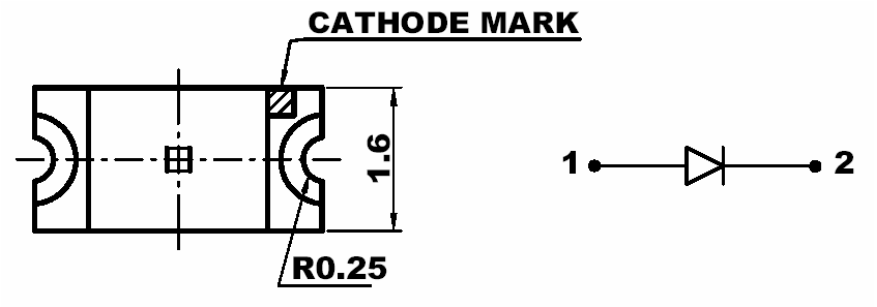
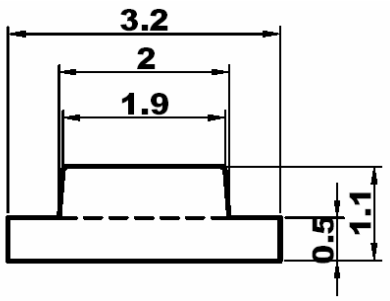
American Opto Plus LED
L150YC-TR

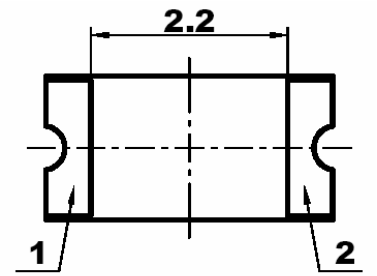
3.2 x 1.6 x 1.1mm SMD LED, Tape & Reel

- **3.2 x 1.6 x 1.1mm SMD LED**
- **120° VIEWING ANGLE**
- **LOW POWER CONSUMPTION**
- **LOW CURRENT REQUIREMENT**

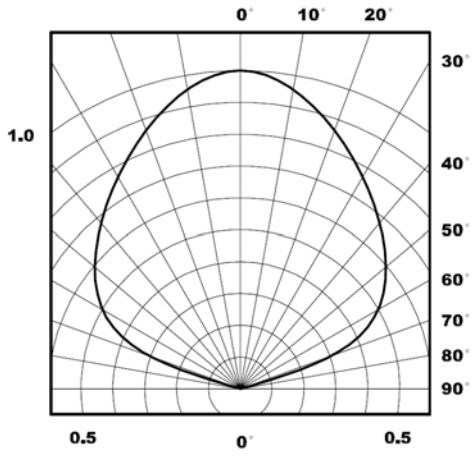
Package Dimension







Notes: Unit = mm, Tolerance = ± 0.25mm



Viewing Angle 2θ1/2 = 120°

Part Number	Chip		Lens Type	I_V (I_F = 20mA)	
	Material	Emitted Color		Min (mcd)	Typ (mcd)
L150YC-TR	GaAsP	Yellow	Water Clear	5	12

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Absolute maximum ratings (TA=25°C)		(GaAsP)	Unit
Reverse voltage	V_R	5	V
Forward current	I_F	30	mA
Forward current(Peak) 1/10 Duty Cycle,0.1ms Pulse Width	I_{FP}	100	mA
Power dissipation	P_d	75	mW
LED LAMPS:			
Operating temperature	T_{OP}	-40~+85	°C
Storage temperature	T_{ST}	-40~+85	°C
LED DISPLAYS:			
Operating temperature	T_A	-40~+85	°C
Storage temperature	T_{STG}	-40~+85	°C

Operating characteristics (TA=25°C)		(GaAsP)	Unit
Forward voltage(typ.) I_F =20mA	V_F	2.1	V
Forward voltage(max.) I_F =20mA	V_F	2.5	V
Reverse current(max.) V_R =5V	I_R	10	uA
Wavelength at dominant emission(typ.) I_F =20mA	λ_D	590	nm
Wavelength at peak emission(typ.) I_F =20mA	λ_P	589	nm
Spectral line half-width I_F =20mA	$\Delta\lambda$	35	nm
Capacitance V_F =0V ,f =1MHz	C	10	pF

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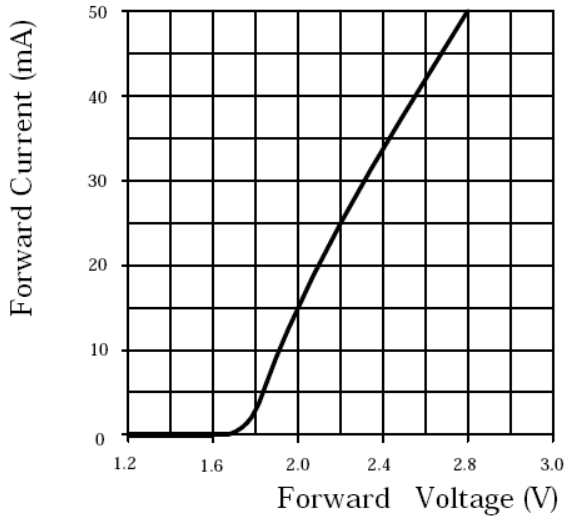
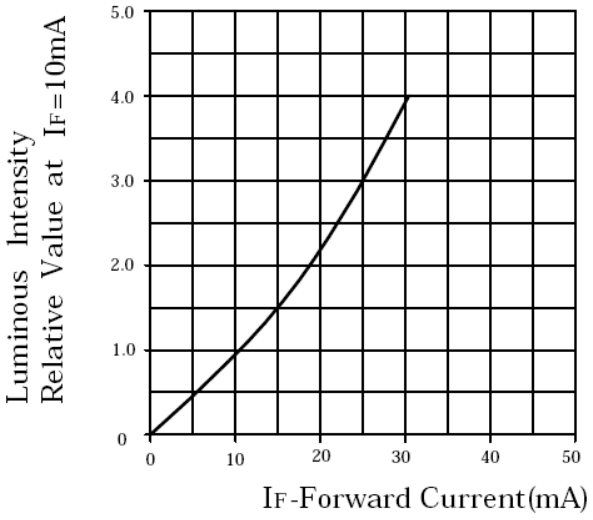
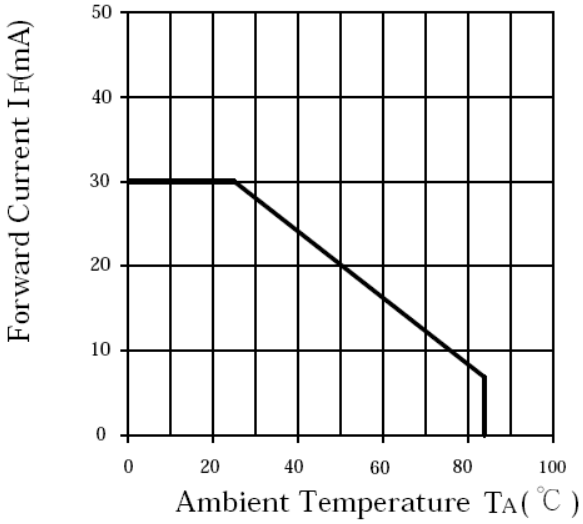


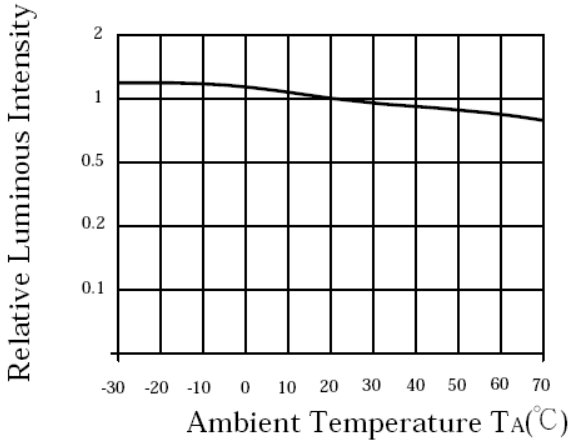
Forward Current Vs.
Forward Voltage



Luminous Intensity Vs.
Forward Current



Forward Current
Derating Curve



Luminous Intensity Vs.
Ambient Temperature

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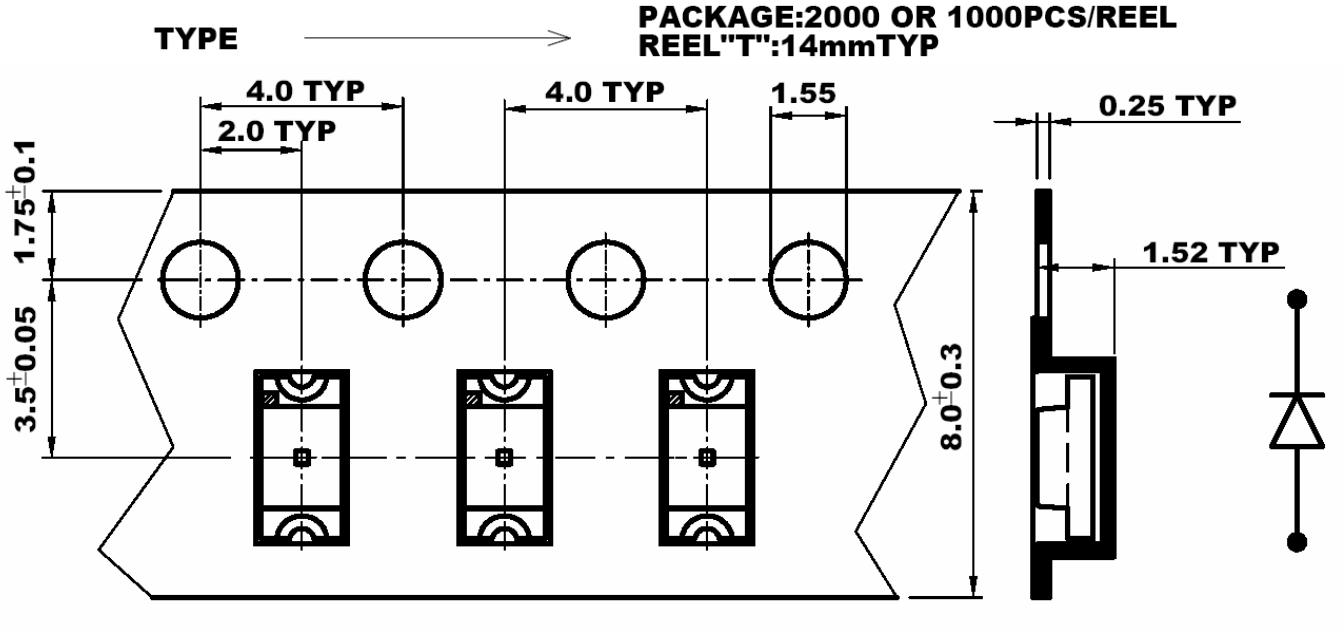
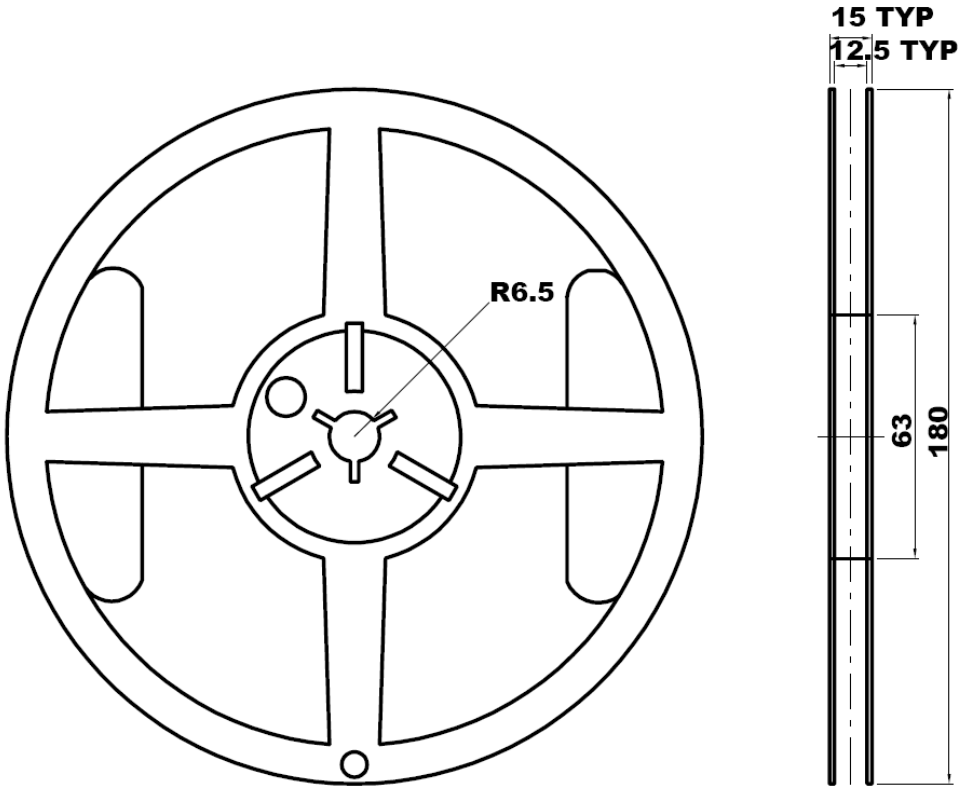
Tape Dimension



Reel Dimension



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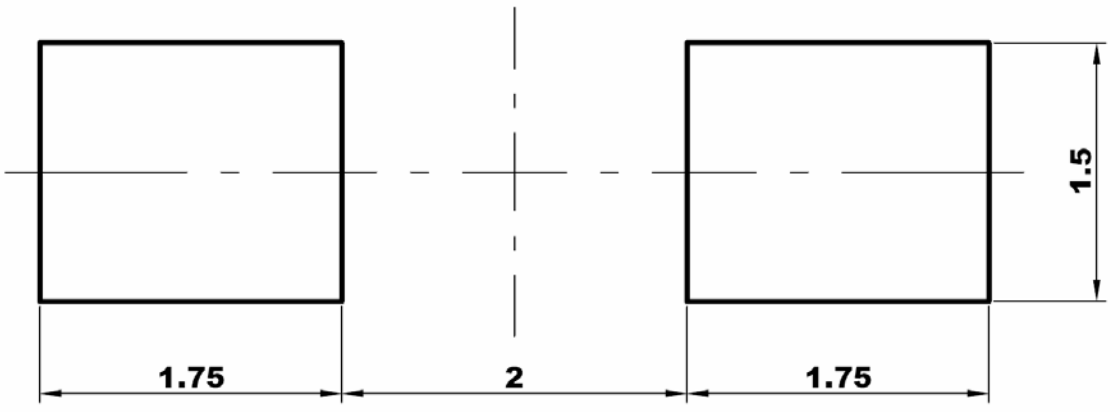
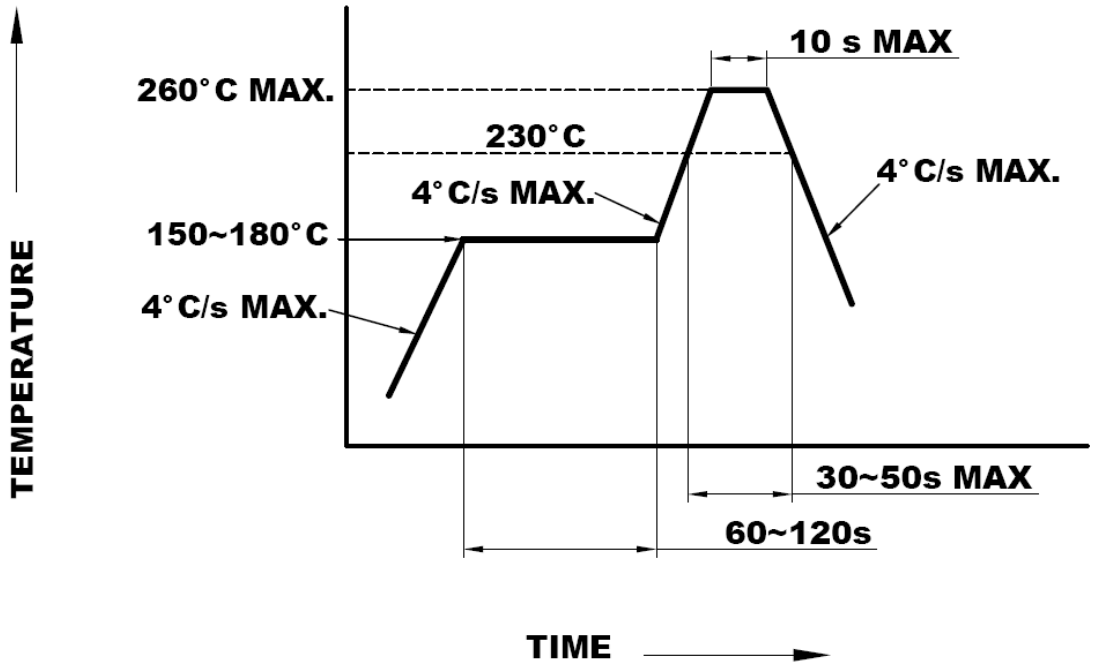
Reflow Soldering Pattern (Unit = mm)



SMD Reflow Soldering Instructions



SMT Reflow soldering 260°C one cycle

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SMD Handling and Application Precautions

STORAGE

1. It is recommended to store the devices in accordance with the following conditions:
    a. Humidity: 60% RH Max
    b. Temperature: 5°C ~ 30°C (41°F ~ 86°F)

2. Shelf life in sealed bag: 12 months at < 5°C ~ 30°C and < 60% RH. After the package is opened, products should be used within 72 hours, or they should be kept at ≤ 30% RH in zip-locked sealed bags.

DRY PACK AND BAKING

SMD LEDs are MOISTURE SENSITIVE devices. Avoid absorbing moisture at any time during transportation and/or storage. It is recommended to bake before soldering when the pack is unsealed after 72 hours, or any suspicious moisture being found. Bake devices in accordance with the following conditions:

- 50 ± 3°C x (12 ~ 24 hours) and < 5% RH, tape and reel type
- 100 ± 3°C x (45 min ~ 1 hour), loose packing type, OR
- 130 ± 3°C x (15 min ~ 30 min), loose packing type

ELECTROSTATIC DISCHARGE (ESD) PROTECTION

Materials with GaN, InGaN, AlInGaP are STATIC SENSITIVE devices. They will be packed in anti-static bags. ESD protection must be deliberately observed from the initial design stage. Electrostatic discharge may result in severe malfunction of devices. In the event of manual working in process, make sure the devices are well-protected from ESD at any time. Surge before and during handling of products.