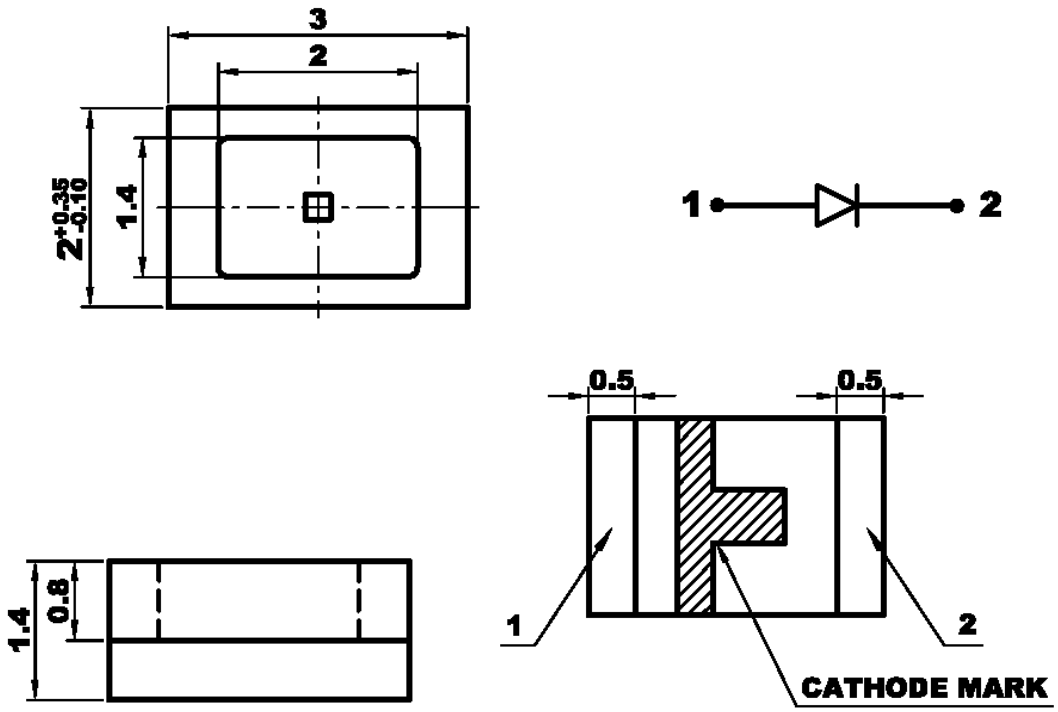
American Opto Plus
L-100LWC-TR

3.0 x 2.0 x 1.4mm White SMD, Right Angle

- ❖ 3.0 x 2.0 x 1.4mm WHITE SMD LED
- ❖ HIGH LUMINOUS INTENSITY
- ❖ WIDE VIEWING ANGLE
- ❖ LOW POWER CONSUMPTION

Package Dimensions



Notes: Unit = mm, Tolerance = ± 0.25mm

Part Number	Material	Emitting Color	Chromaticity Coordinates (Typ.)				Iv (IF = 20mA)		Viewing Angle 2 θ 1/2
			X		Y		MIN (mcd)	TYP (mcd)	
L-100LWC-TR	GaN	White	2	0.22 ± 0.02	B	0.24 ± 0.02	300	450	90°
			3	0.25 ± 0.02	C	0.27 ± 0.02			
			4	0.28 ± 0.02	D	0.30 ± 0.02			
			5	0.31 ± 0.02	E	0.33 ± 0.02			
			6	0.34 ± 0.02	F	0.36 ± 0.02			

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Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	5	V
Forward Current	I_F	30	mA
Peak Forward Current (1/10 duty cycle, 0.1ms pulse width)	I_{FP}	100	mA
Operating Temperature	Topr	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +85	°C
Power Dissipation	Pd	90	mW

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Viewing Angle	$2\theta_{1/2}$	---	90	---	deg	I_F = 20 mA
Forward Voltage	V_F	---	3.7	4.0	V	
Reverse Current	I_R	---	---	10	μA	V_R = 5V
Capacitance	C	---	100	---	pF	V_F = 0V f = 1MHz

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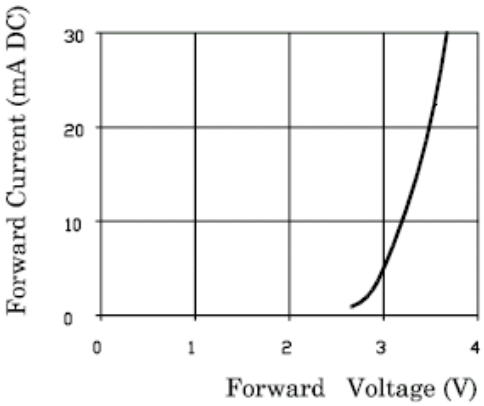
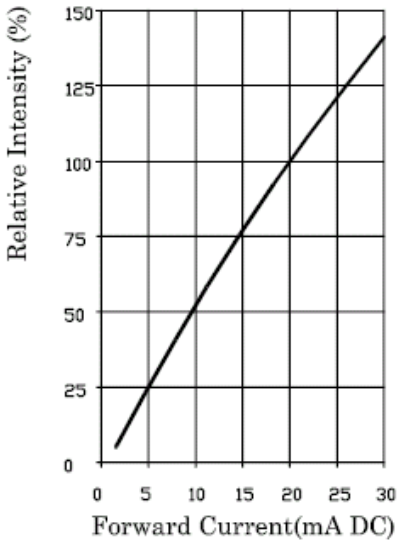
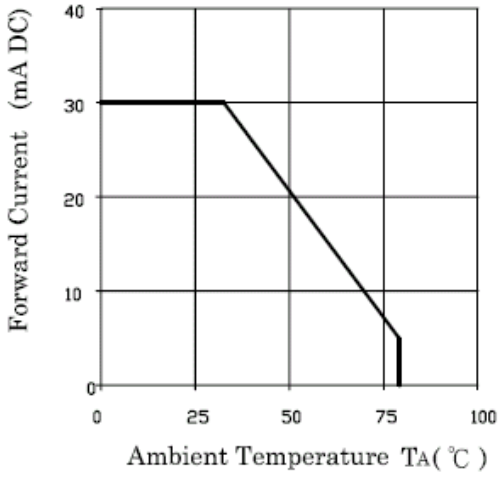


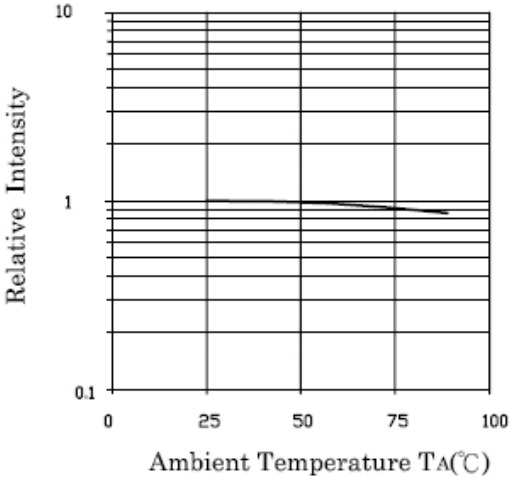
Forward Current Vs.
Forward Voltage



Relative Intensity Vs.
Forward Current



Forward Current
Derating Curve



Luminous Intensity Vs.
Ambient Temperature

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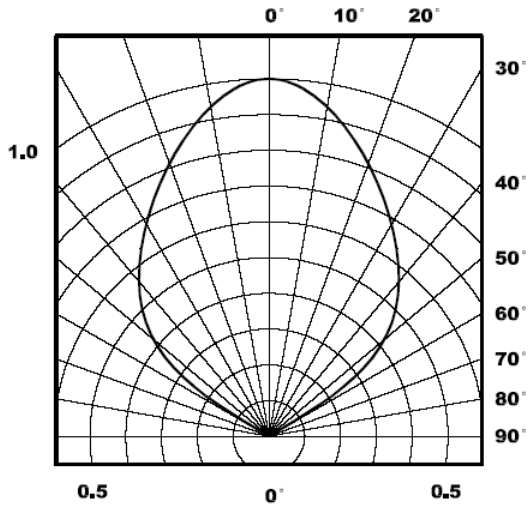
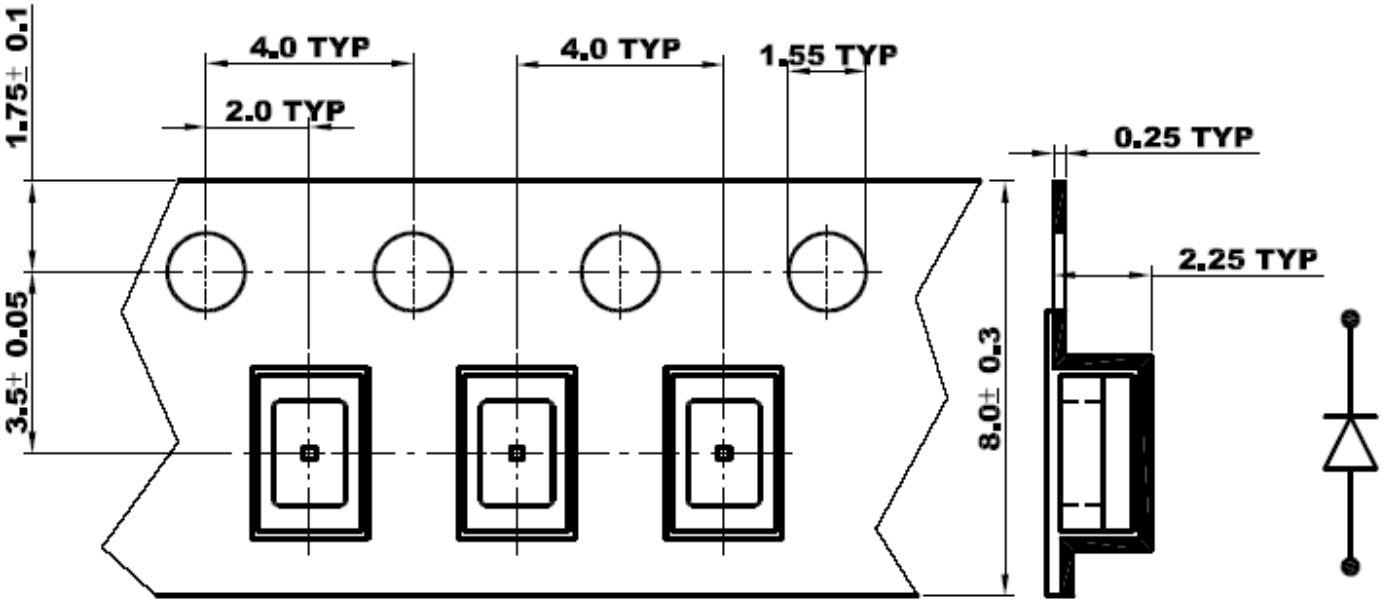


View Angle 2θ1/2=90°

TYPE ⟶ **PACKAGE:2000PCS/REEL**
REEL"T":14mmTYP



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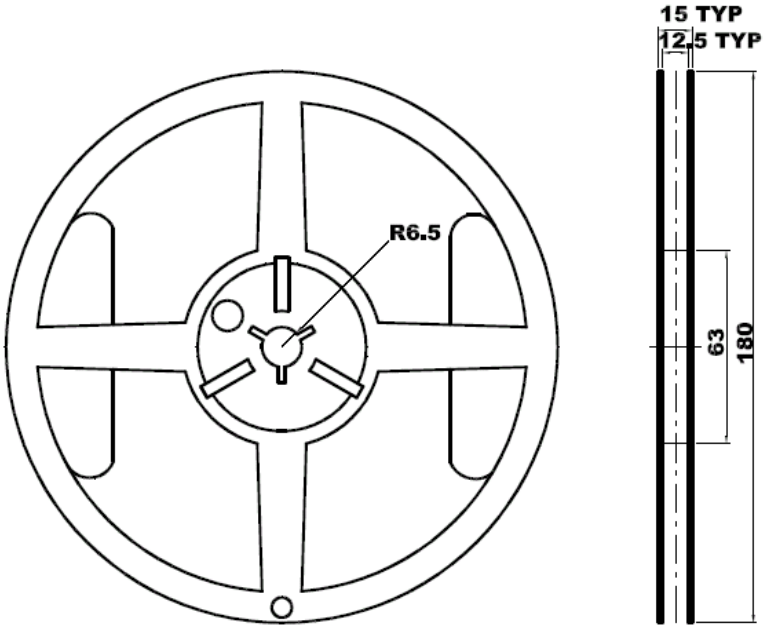
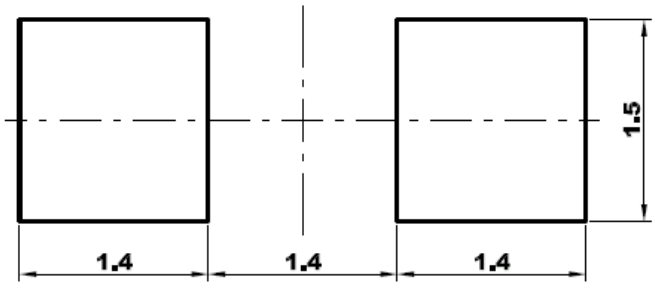


The following soldering patterns are recommended for reflow-soldering:

For reflow soldering



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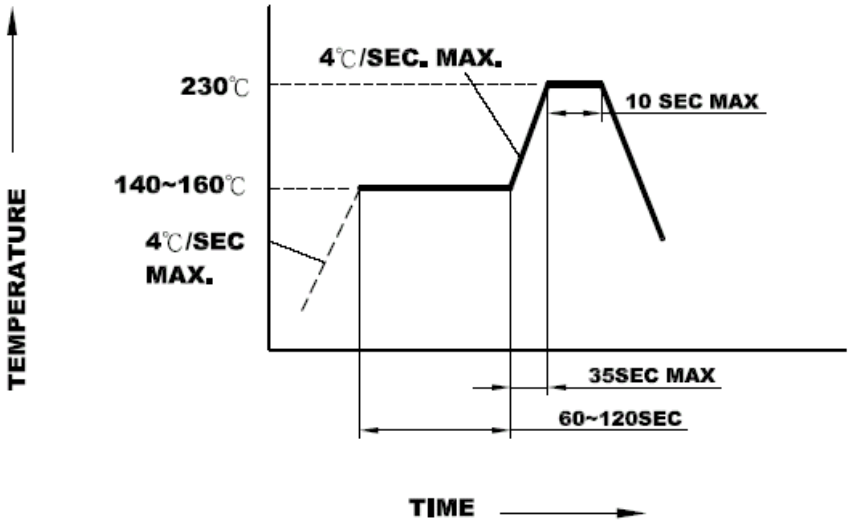
SOLDERING

SMT REFLOW SOLDERING INSTRUCTIONS



SOLDERING INSRTUCTIONS						
TYPES	DIP AND WAVE SOLDERING			IRON SOLDERING(WITH 1.5mm IRON TIP)		
	TEMPERATURE OF THE SOLDERING BATH	MAXLMUM SOLDERING TIME	DISTANCE FROM SOLDER JOINT TO CASE	TEMPERATURE OF SOLDERING IRON	MAXLMUM SOLDERING TIME	DISTANCE FROM SOLDER JOINT TO CASE
LEDS	≦260℃	3S	>2mm	≦260℃	3S	>2mm
	≦260℃	5S	>4mm	≦260℃	5S	>4mm
DISPLAYS	≦260℃	3S	>2mm	≦260℃	3S	>2mm

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SMD HANDLING AND APPLICATION PRECAUTIONS

STORAGE

(1.1) It is recommended to store the devices in accordance with the following conditions:

Humidity: 60%RH Max.

Temperature: 5℃ ~30℃ (41℉ ~86℉)

(1.2) Shelf life in sealed bag: 12 month at <5℃ ~30℃ and <30%RH.

After the package is opened, the products should be used within 72hrs.

Or they should be kept at ≦20%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 sotrage. It is recommended to bake before soldering when the pack is unsealed after 72 hrs, or any suspicious moisture being found. Bake devices in accordance with the following conditions:

(a) 60±3℃ x (12~24hrs) and <5%RH, taped reel type

(b) 100±3℃ x (45min~1hr), loose packing type, or

(c) 130±3℃ x (15~30min), loose packing type

ELECTRIC STATIC DISCHARGE(ESD) PROTECTION

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