



Opto Plus LED Corp

OPS-L193USD-C0240

1.6 x 0.8 x 0.4mm SMD LAMP

● **EDIT HISTORY**

Version A: Apr.16, 2012

New color data sheet.

Manufacture	Examination	Approving



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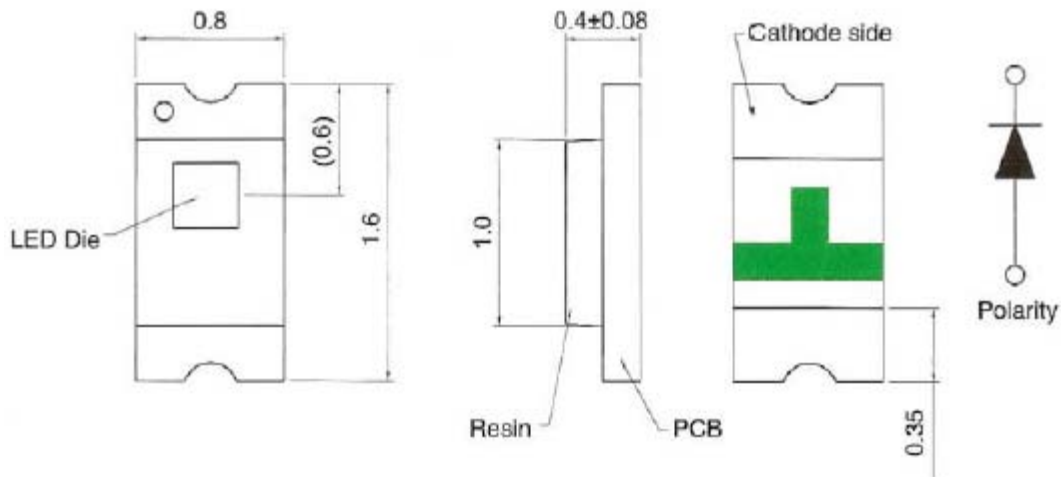
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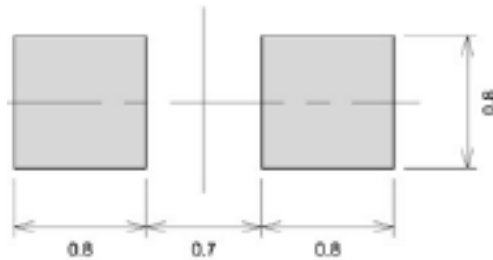
● **FEATURES**

- ◆ 1.6 x 0.8 x 0.4 mm SMD Lamp.
- ◆ Wide viewing angle.
- ◆ Low power consumption.
- ◆ RoHS compliant.

● **PACKAGE DIMENSIONS**



● **RECOMMENDED SOLDERING PAD DIMENSIONS**



LENS COLOR	DICE MATERIAL	LIGHT COLOR
Color Diffused	AlInGaP	Ultra Bright Orange

RoHS Compliance



Pb free.





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● **ABSOLUTE MAXIMUM RATINGS AT TA=25°C**

Parameter	Symbol	Yellow	Unit
Power Dissipation	P_{AD}	72	mW
Continuous Forward Current	I_{FMAX}	30	mA
Peak Forward Current (duty cycle 1/10, 0.1ms Pulse Width)	I_{FP}	100	mA
Reverse Voltage	V_R	5	V
Operating Temperature Range	T_{OPR}	-30 to +80	°C
Storage Temperature Range	T_{STG}	-40 to +85	°C

● **ELECTRICAL OPTICAL CHARACTERISTICS AT TA=25°C**

Characteristic	Symbol	Condition	Min.	Type	Max.	Unit
Forward Voltage	V_F	$I_F = 20mA$		1.9	2.4	V
Reverse Current	I_R	$V_R = 5V$	-	-	10	μA
Peak Wavelength	λ_P	$I_F = 20mA$	-	636	-	nm
Dominant Wavelength	λ_d	$I_F = 20mA$	-	622	-	-
Luminous Intensity	I_V	$I_F = 20mA$	-	112.5	-	mcd



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● **LUMINOUS INTENSITY BIN LIMITS**

Color	Bin Code	Spec. Range
Ultra Bright Orange	Q2	90.0-112.5 mcd
	R	112.5-180.0 mcd
	S	180.0-285.0 mcd

■ **Dominant Wavelength (λ_D) Bin:**

Color	Bin Code	Spec. Range
Ultra Bright Orange	--	615-630 nm

■ **Forward Voltage (Vf) Bin:**

Color	Bin Code	Spec. Range
Ultra Bright Orange	--	1.6-2.4 V

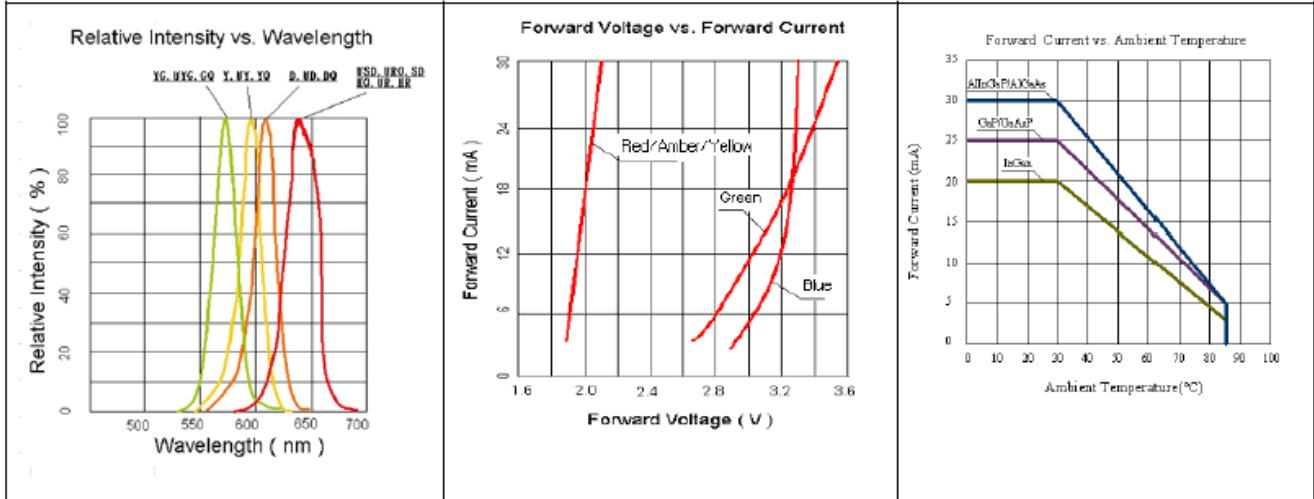


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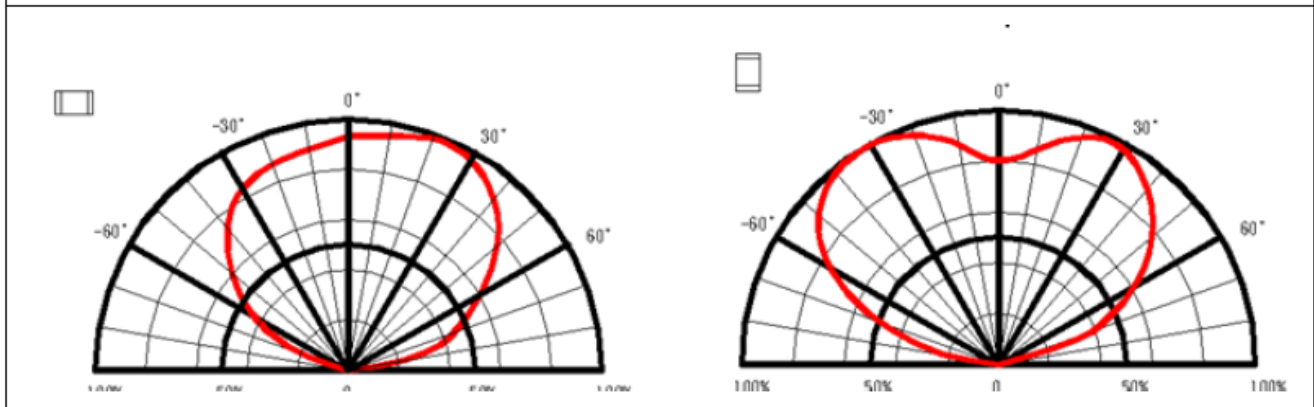
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● **TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES**



Directive Characteristics





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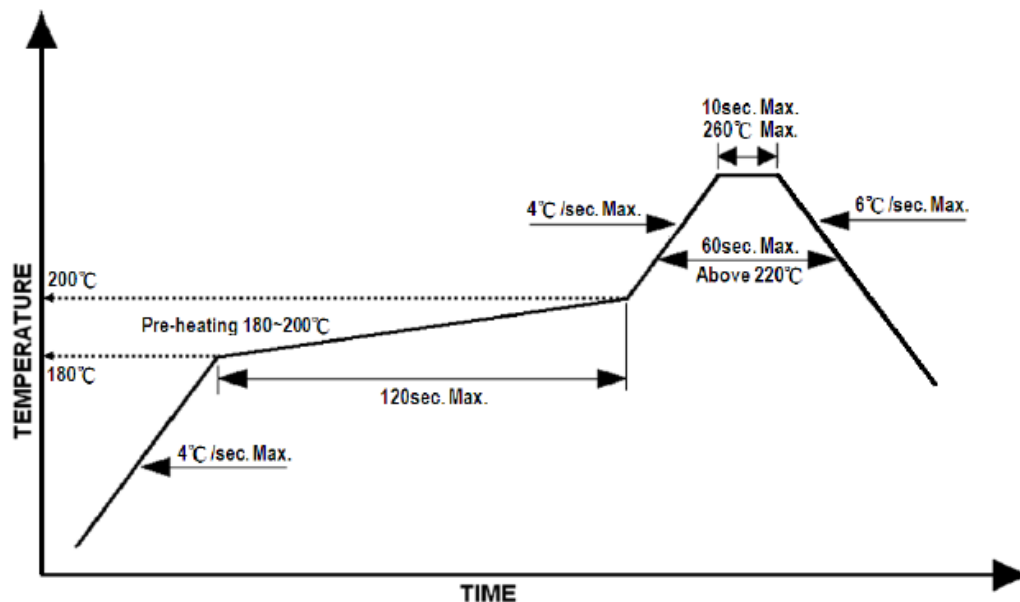
● REFLOW SOLDERING

Reflow Soldering

Recommend soldering paste specifications:

1. Operating temp.: Above 220 °C ,60 sec.
2. Peak temp.:260 °CMax.,10sec Max.
3. Never attempt next process until the component is cooled down to room temperature after reflow.
4. The recommended reflow soldering profile (measured on the surface of the LED terminal) is as following:

Lead-free Solder Profile



Reworking

- Rework should be completed within 5 seconds under 260 °C.
- The iron tip must not come in contact with the copper foil.
- Twin-head type is preferred.

Cleaning

Following are cleaning procedures after soldering:

- An alcohol-based solvent such as isopropyl alcohol (IPA) is recommended.
- Temperature x Time should be 50°C x 30sec. or <30°C x 3min
- Ultrasonic cleaning: < 15W/ bath; bath volume ≤ 1liter
- Curing: 100 °C max, <3min

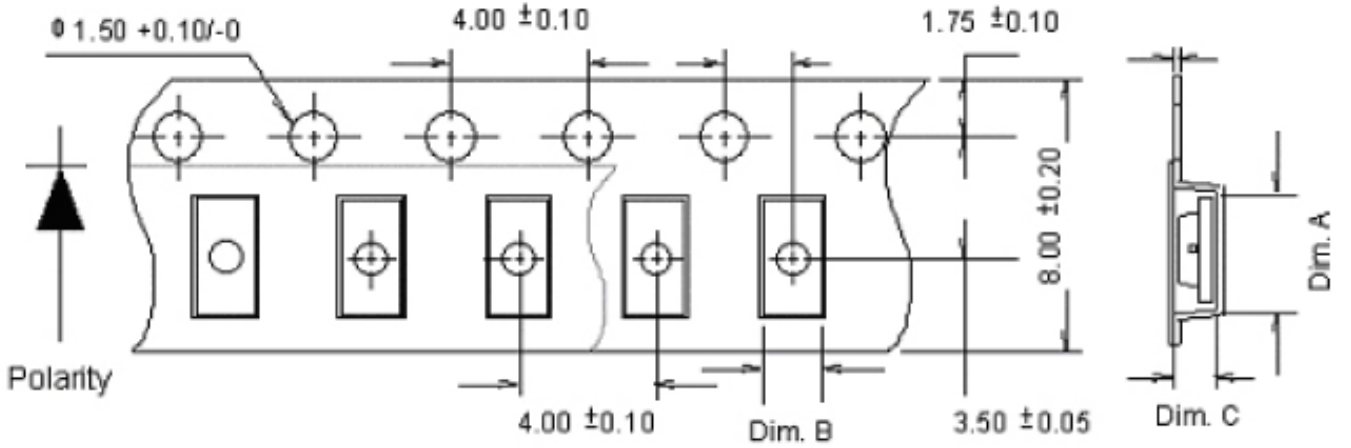


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● **TAPE SPECIFICATION : 4000 PCS PER REEL**

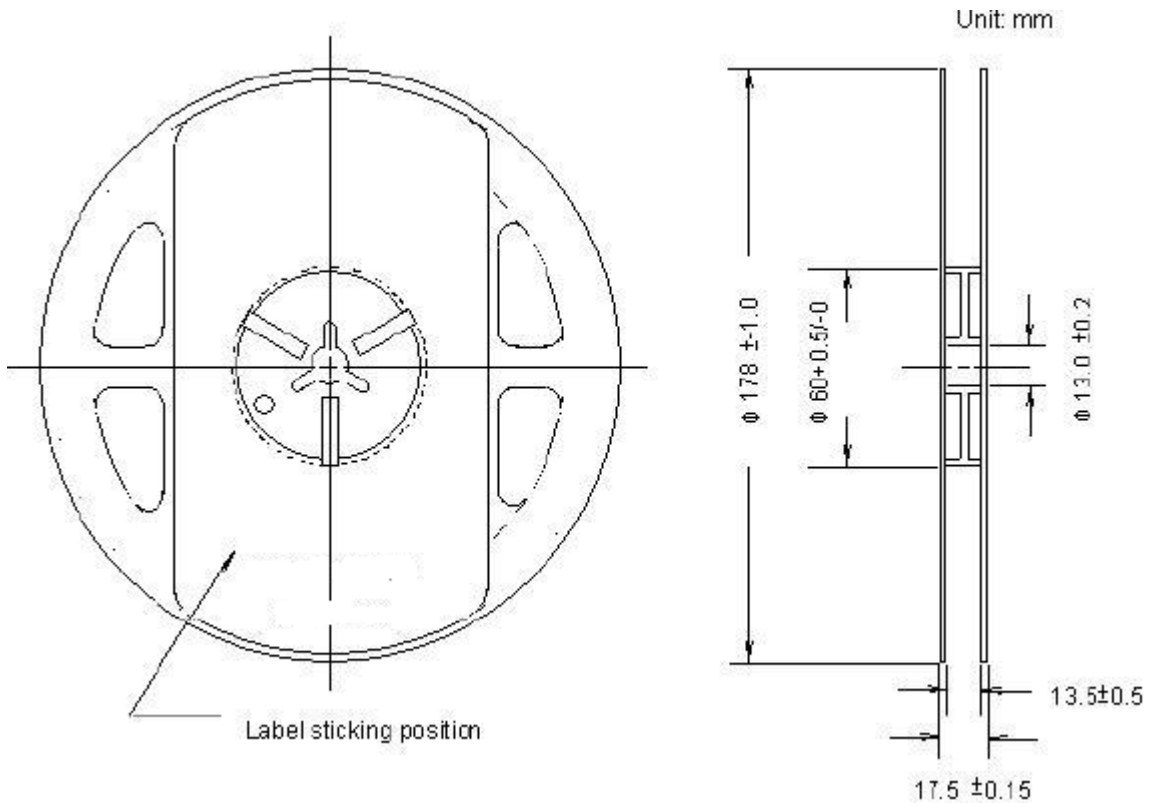


Unit: mm

Part No.	Dim. A	Dim. B	Dim. C	Qty/Reel
HT-193	1.80 ± 0.50	0.94 ± 0.50	0.80 ± 0.50	4K

Unit: mm

● **PACKAGE DIMENSIONS OF REEL**





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● PACKING AND SHIPPING INSTRUCTION

