



Opto Plus LED Corp.

OPL- GDS110TS-DPE

SMD Chip LED Lamps

● **EDIT HISTORY**

Version : Oct. 3, 2012

New color data sheet.

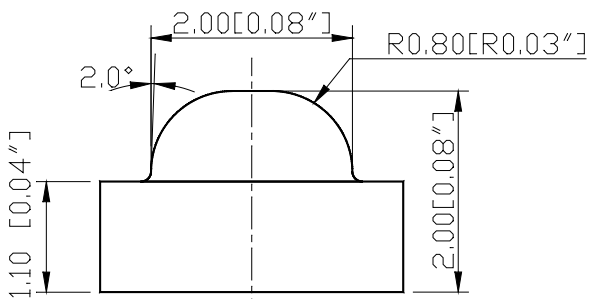
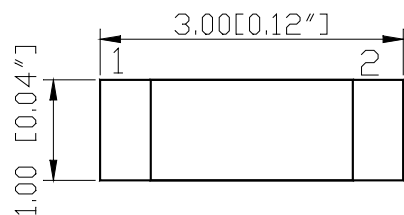


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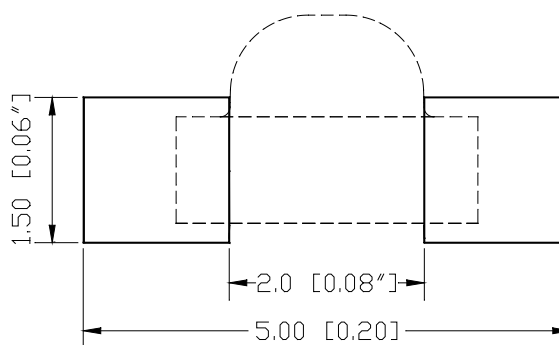
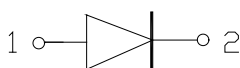
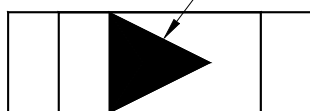
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● **PACKAGE DIMENSIONS**



Cathode Mark



ITEM	MATERIALS
Resin (mold)	Epoxy
Bonding wire	□ 25 μm Au
Lens color	Water transparent
Printed circuit board	BT (White)
Dice	AlGaInP
Emitted color	Green

NOTES:

1. All dimensions are in millimeters (inches);
2. Tolerances are ±0.1mm (0.004inch) unless otherwise noted.

RoHS Compliance



Pb free.



ESD





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● ABSOLUTE MAXIMUM RATINGS AT TA=25°C

Parameter	Symbol	Green	Unit
Power Dissipation	P_{AD}	75	mW
Forward Current	I_F	30	mA
Peak Pulsing Current (duty cycle 1/8, f=1KHz)	I_{FP}	125	mA
Reverse Voltage	V_R	5	V
Operating Temperature Range	T_{OPR}	-40 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	$I_F = 20\text{mA}$	-	2.0	2.5	V
Reverse Current	I_R	$V_R = 5\text{V}$	-	-	10	μA
Peak Wavelength	λ_P	$I_F = 20\text{mA}$	-	572	-	nm
Dominant Wavelength	λ_d	$I_F = 20\text{mA}$	565	570	575	nm
Luminous Intensity	I_v	$I_F = 20\text{mA}$	20	-	-	mcd
Viewin angle at 50% I_v	$2\theta_{1/2}$	$I_F = 20\text{mA}$	--	150	--	Deg

* Remark: Luminous intensity tolerance is $\pm 10\%$.

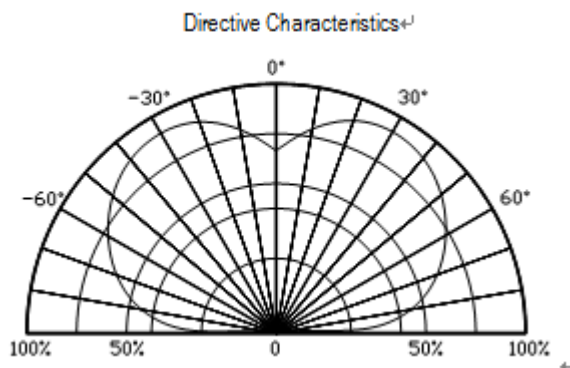
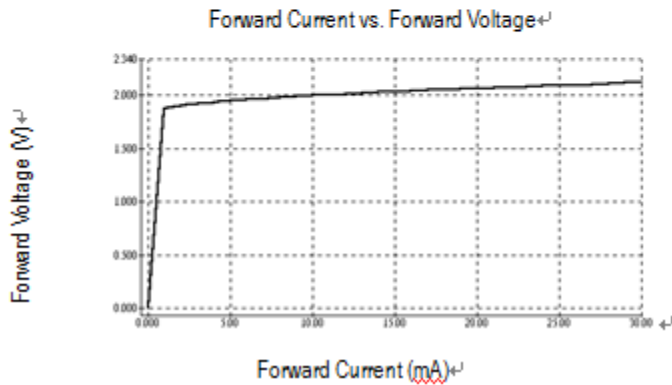
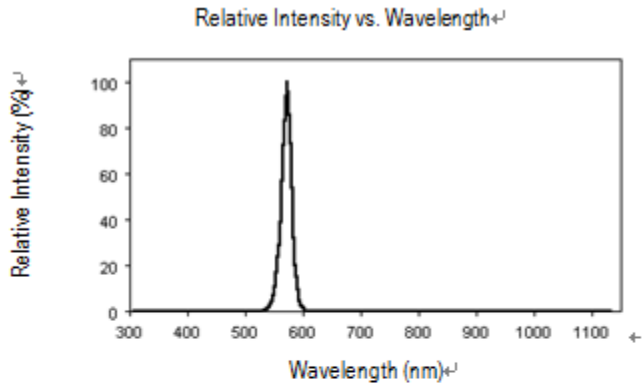


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● OPTICAL CHARACTERISTIC CURVES





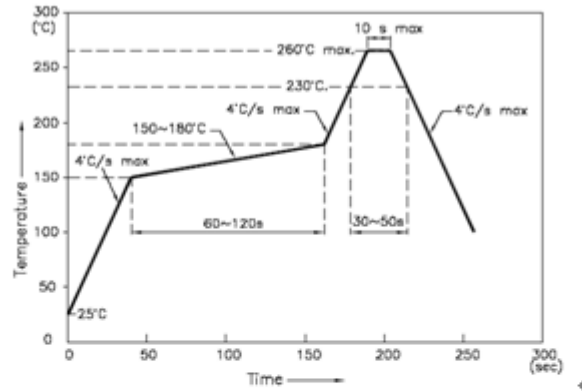
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● Reflow Profile

■ Reflow Temp/Time



NOTES:

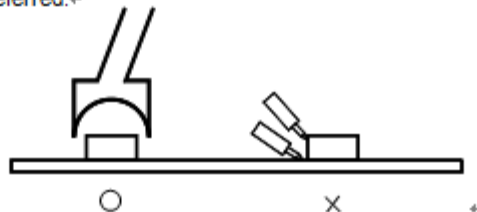
1. We recommend the reflow temperature $245^{\circ}\text{C}(\pm 5^{\circ}\text{C})$. the maximum soldering temperature should be limited to 260°C .
2. ~~don't~~ cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

■ Soldering iron

Basic spec is $\leq 5\text{sec}$ when 260°C . If temperature is higher, time should be shorter (+ $10^{\circ}\text{C} \rightarrow -1\text{sec}$). Power dissipation of iron should be smaller than 20W, and temperatures should be controllable. Surface temperature of the device should be under 230°C .

■ Rework

1. Customer must finish rework within 5 sec under 260°C .
2. The head of iron can not touch copper foil.
3. Twin-head type is preferred.



- #### ■ Avoid rubbing or scraping the resin by any object, during high temperature, for example reflow, solder etc.



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● Test circuit and handling precautions

↵

■ Test circuit ↵

↵

↵

↵

↵

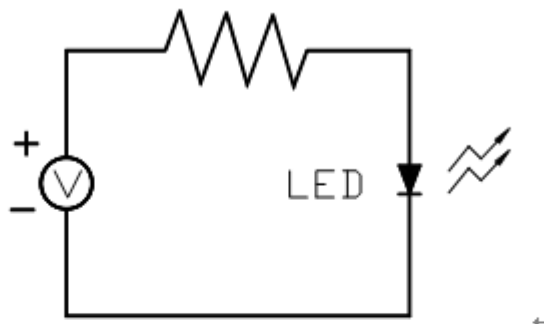
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■ Handling precautions ↵

1. Over-current-proof ↵

Customer must apply resistors for protection; otherwise slight voltage shift will cause ↵
big current change (Burn out will happen). ↵

2. Storage ↵

2.1 It is recommended to store the products in the following conditions: ↵

Humidity: 60% R.H. Max. ↵

Temperature : $5^{\circ}\text{C} \sim 30^{\circ}\text{C}$ ($41^{\circ}\text{F} \sim 86^{\circ}\text{F}$) ↵

2.2 Shelf life in sealed bag: 12 month at $< 5^{\circ}\text{C} \sim 30^{\circ}\text{C}$ and $< 30\%$ R.H. after the package is ↵

Opened, the products should be used within a week or they should be keeping to stored at ↵
 ≤ 20 R.H. with zip-lock sealed. ↵

3. Baking ↵

It is recommended to baking before soldering when the pack is unsealed after 72hrs. The ↵

Conditions are as followings: ↵

3.1 $60 \pm 3^{\circ}\text{C}$ x(12~24hrs) and $< 5\%$ RH, taped reel type ↵

3.2 $100 \pm 3^{\circ}\text{C}$ x(45min~1hr), bulk type ↵

3.3 $130 \pm 3^{\circ}\text{C}$ x(15~30min), bulk type ↵



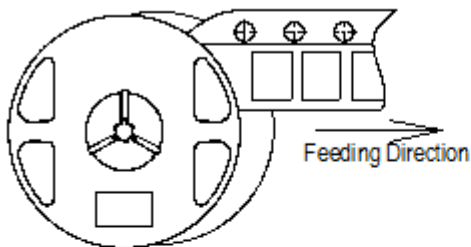
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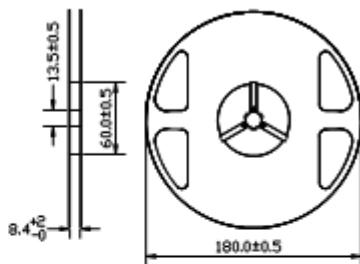
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● SMD Chip LED Lamps Packaging Specifications

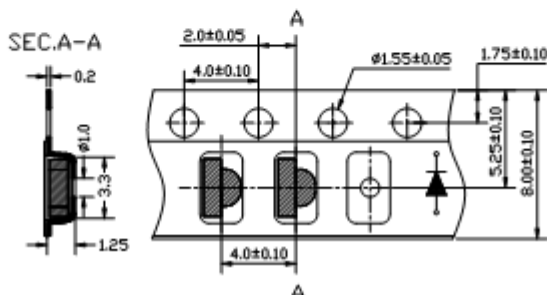
● ● Feeding Direction ↙



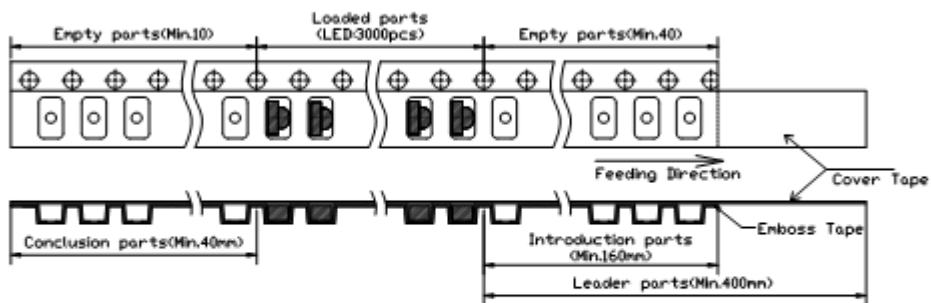
● ● Dimensions of Reel (Unit: mm) ↙



● ● Dimensions of Tape (Unit: mm) ↙



● ● Arrangement of Tape ↙



● ● NOTES ↙

1. Empty component pockets are sealed with top cover tape;..
2. The maximum number of missing lamps is two;..
3. The cathode is oriented towards the tape sprocket hole in accordance with ANSI/EIA RS-481 specifications...
4. 3,000 pcs/Reel.