

Opto Plus LED Corp.
0.30" SMD Type LED Display
OPS-D3010LY-GW
OPS-D3011LY-GW

● **EDIT HISTORY**

Version A: Apr. 24, 2015

Preliminary spec.

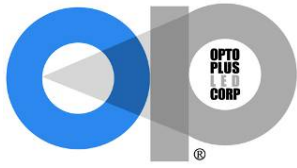
Version B: Oct. 01, 2015

Modify storage condition.

Version C: Oct. 28, 2015

Modify mechanical dimensions.

Manufacture	Examination	Approving



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● **FEATURES**

- 0.30 inch (7.62 mm) Digit Height.
- Low current operation.
- SMD type.
- Gray face, White segment.
- RoHS compliant, Pb Free.

● **DESCRIPTION**

The OPS-D3010LY-GW & OPS-D3011LY-GW are 0.30 inch (7.62mm) height Dual digits 7-segment displays.

This device utilizes Super Bright Yellow LED chip which are made from AlGaInP On a transparent GaAs, substrate.

The display has Gray face, White segment.

● **DEVICE**

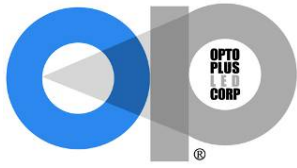
PART NO	DESCRIPTION
OPS-D3010LY-GW	Common Anode
OPS-D3011LY-GW	Common Cathode

RoHS Compliance



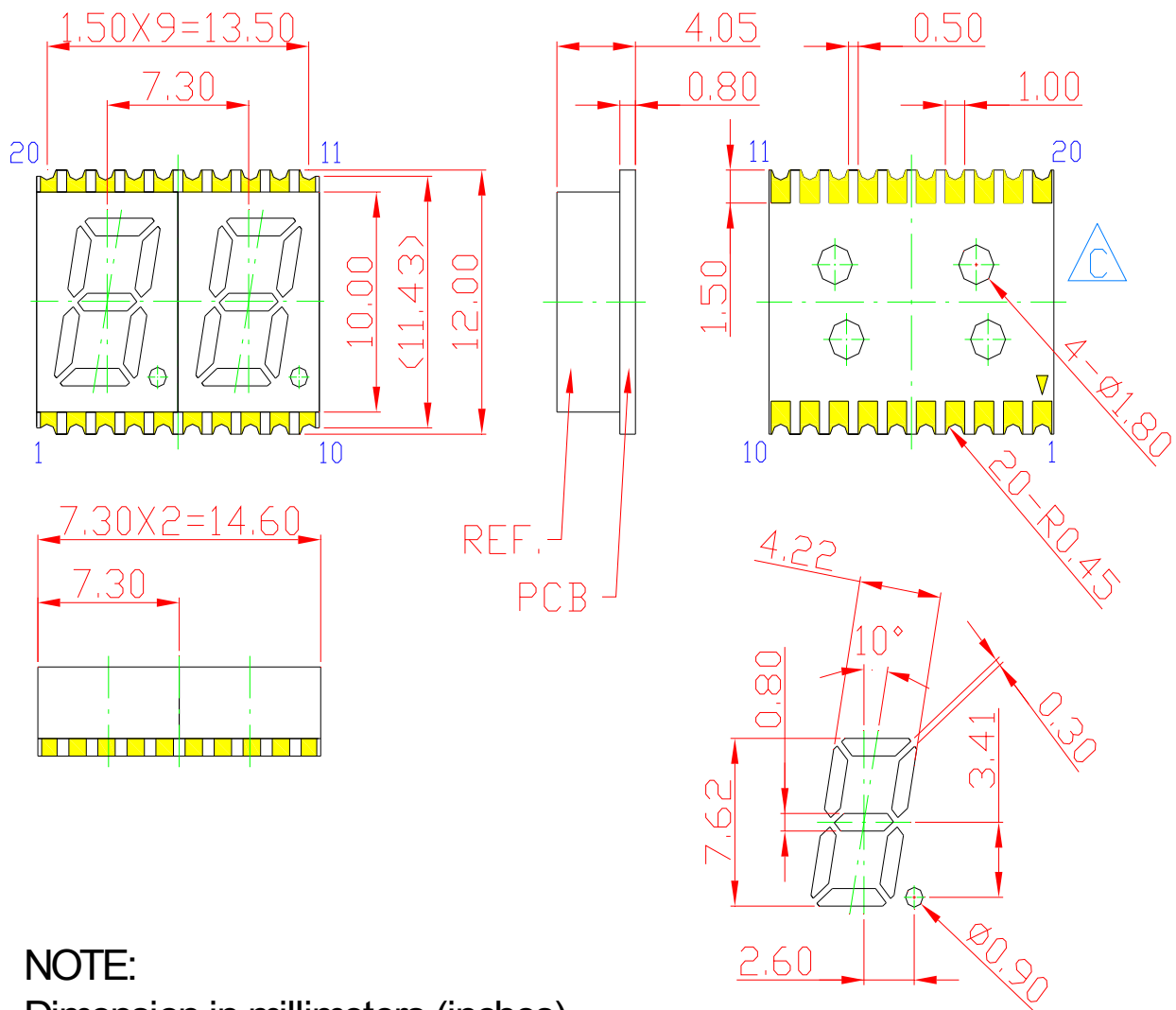
Pb free.



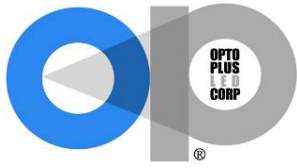


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● **MECHANICAL DIMENSIONS**

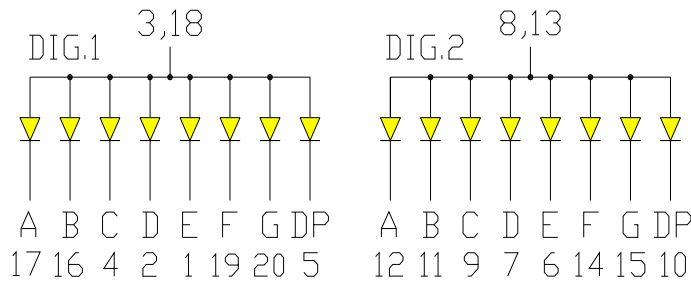
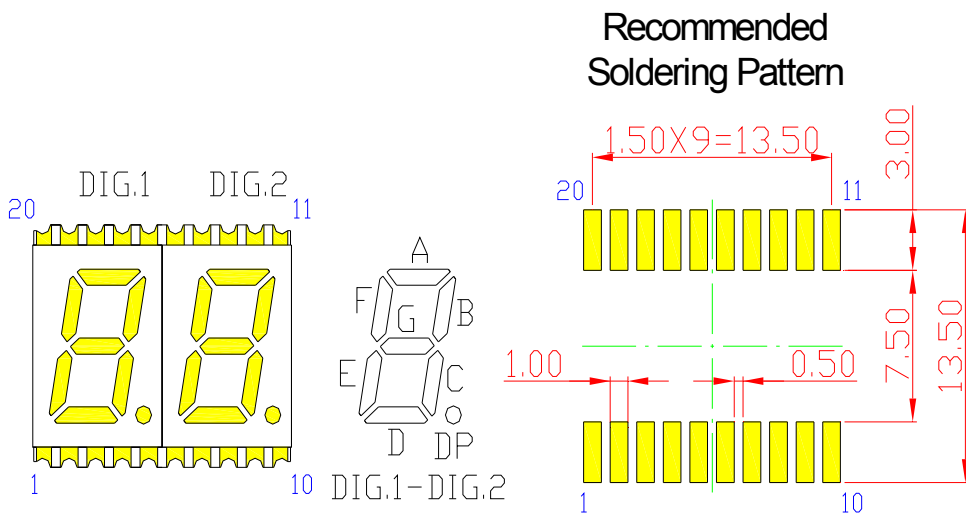


NOTE:
 Dimension in millimeters (inches),
 And tolerances are $\pm 0.25\text{mm}$ (.01") specified.

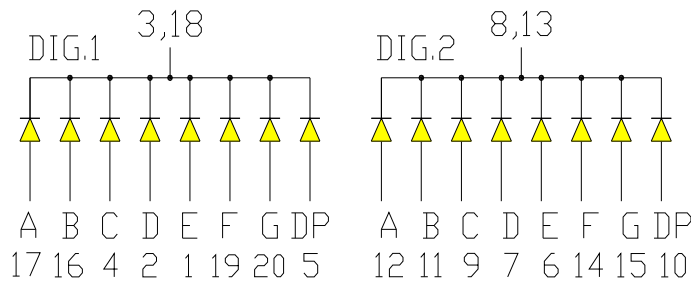


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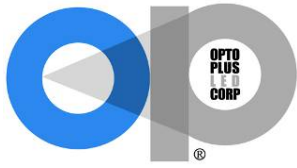
● **TYPICAL INTERNAL EQUIVALENT CIRCUIT**



OPS-D3010LY-GW (Common Anode)



OPS-D3011LY-GW (Common Cathode)



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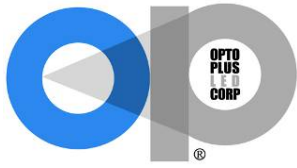
● **LY: SUPER BRIGHT YELLOW (AlGaInP/GaAs)**

ABSOLUTE MAXIMUM RATING AT Ta=25°C

Parameter	Symbol	Maximum Rating	Unit
Power dissipation	P_{AD}	70	mW
Derating liner from 25°C	-	0.28	mA / °C
Continuous forward current	I_{AF}	25	mA
Peak current (duty cycle 1/10, 1kHz)	I_{PF}	90	mA
Reverse voltage	V_R	5	V
Operating temperature	T_{OPR}	-40 to +105	°C
Storage temperature	T_{STG}	-40 to +105	°C

ELECTRICAL - OPTICAL CHARACTERISTICS AT Ta=25°C

Characteristic	Symbol	Condition	Min.	Type.	Max.	Unit
Forward Voltage, (Per Dice)	V_F	$I_F = 20mA$	-	2.0	2.6	V
Reverse Current, (Per Dice)	I_R	$V_R = 5V$	-	-	10	μA
Peak Wavelength	λ_P	$I_F = 20mA$	-	593	-	nm
Dominant Wavelength	λ_D	$I_F = 20mA$	585	-	595	nm
Luminous Intensity	I_V	$I_F = 20mA$	5	-	35	mcd
Spectral radiation bandwidth	$\Delta\lambda$	$I_F = 20mA$	-	20	-	nm



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● **LY: BIN GRADE (Unit : mcd) 20mA**

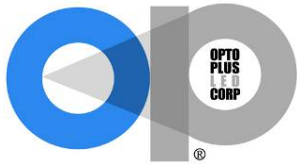
Super Bright Yellow	G	H	I
	5.0 – 15.0	15.1 – 25.0	25.1 -35

● **LY: HUE GRADE (λ_D : nm)**

1	2	3
585.0 – 588.0	588.1 – 592.0	592.1 – 595.0

● **AVAILABLE BIN / HUE TABLE**

G1	G2	G3
H1	H2	H3
I1	I2	I3

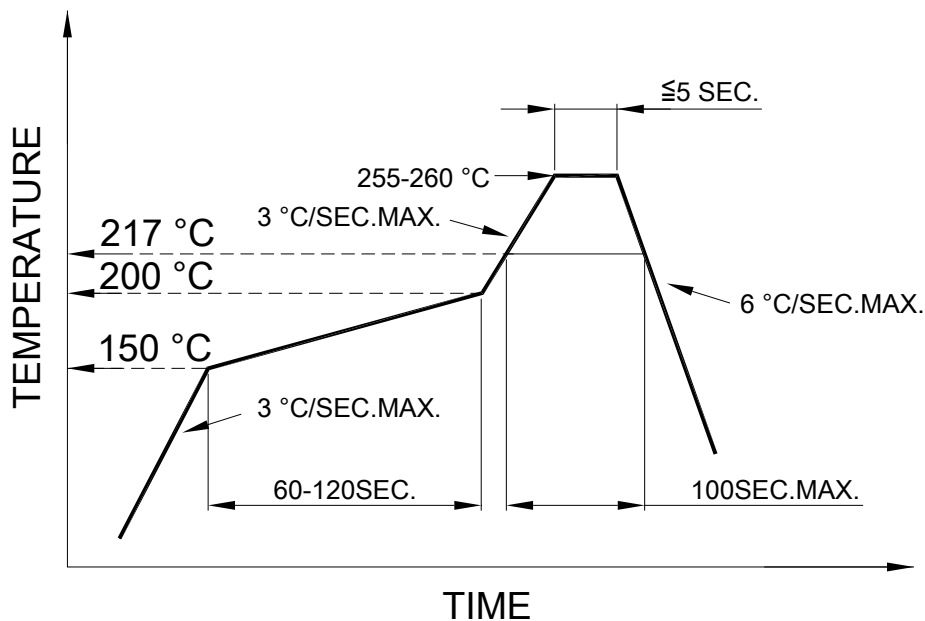


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● **RECOMMEND SOLDERING PROFILE**

SMT Soldering Profile

Pb free reflow soldering Profile



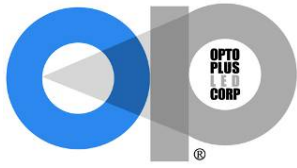
- We recommend the reflow temperature 245°C (+/- 5°C).
The maximum soldering temperature should be limited to 260°C.
- Number of reflow process shall be 2 times or less.

● **SOLDERING IRON**

Basic spec is ≤ 4 sec when 260°C. If temperature is higher, time should be shorter (+10°C → 1 sec). Power dissipation of Iron should be smaller than 15W, and temperature should be controllable. Surface temperature of the device should be under 230°C.

● **REWORK**

- Customer must finish rework within 3 sec. under 350°C.
- The head of soldering iron cannot touch copper foil.



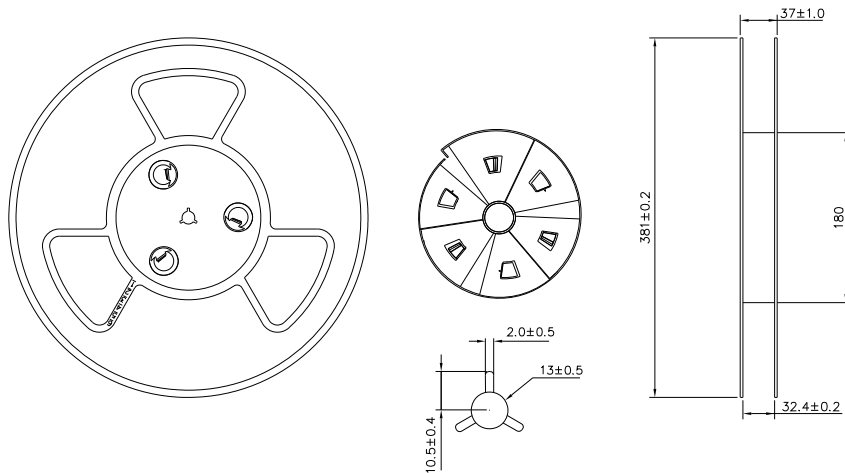
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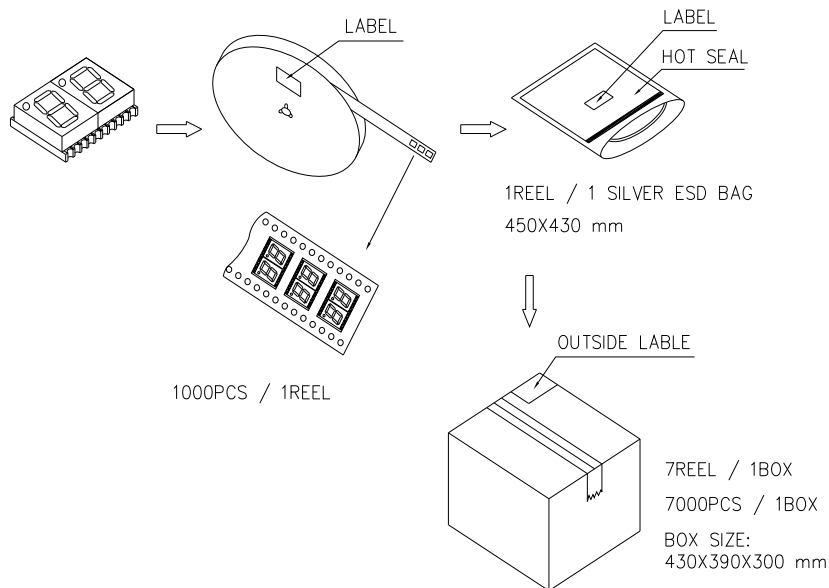
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● REEL DIMENSIONS



● PACKING & LABEL SPECIFICATIONS



● STORAGE CONDITION

In factory original sealed bag package

TEMPERATURE CONDITION	HUMIDITY CONDITION
5°C ~ 30°C	Below 60%RH

After opened and not in factory original sealed bag package

TEMPERATURE CONDITION	HUMIDITY CONDITION	STORAGE TIME
5°C ~ 30°C	Below 60%RH	Within 4 weeks (MSL as level 2a)