



# Opto Plus LED Corp.

## 0.3" Case Mold Type LED Display

### OPD-D3010LB-BW

#### ● EDIT HISTORY

Version 1(A) : Dec.03, 2015

New color data sheet.

Version 2(B) : May.18, 2023

Modify Electrical Character & Curve (P5,P6)

Modify package dimensions.

Prepared by	Checked by	Approved by



**Opto Plus LED Corp.**  
**0.3" Case Mold Type LED Display**  
**OPD-D3010LB-BW**

● **EDIT HISTORY**

Version A : Feb. 26, 2015

Preliminary Spec.



# Opto Plus LED Corp.

## 0.3" Case Mold Type LED Display

### OPD-D3010LB-BW

#### ● FEATURES

- 0.3 inch (7.62 mm) Digit Height.
- Low current operation.
- Case mold type.
- Black face, White segment.
- RoHS compliant, Pb Free.

#### ● DESCRIPTION

The OPD-D3010LB-BW is a 0.3 inch (7.62 mm) height dual digits display. This device utilizes Super Bright Blue LED chip which are made from InGaN on a transparent GaN . The display has Black face, White segment.

#### ● DEVICE

PART NO Super Bright Blue	DESCRIPTION
OPD-D3010LB-BW	Common Anode

**RoHS Compliance**



**Pb free.**







# Opto Plus LED Corp.

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#### ● B: SUPER BRIGHT BLUE (InGaN/GaN)

ABSOLUTE MAXIMUM RATING AT Ta=25°C

Parameter	Symbol	Maximum Rating	Unit
Power dissipation	P <sub>AD</sub>	68	mW
Continuous forward current	I <sub>AF</sub>	20	mA
Peak current (duty cycle 1/10, 1kHz)	I <sub>PF</sub>	60	mA
Reverse voltage	V <sub>R</sub>	5	V
Operating temperature	T <sub>OPR</sub>	-40 to +85	°C
Storage temperature	T <sub>STG</sub>	-40 to +85	°C

ELECTRICAL - OPTICAL CHARACTERISTICS AT Ta=25°C

Characteristic	Symbol	Condition	Min.	Type.	Max.	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =20mA	-	3.0	3.4	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =5V	-	-	10	μA
Dominant Wavelength	λ <sub>D</sub>	I <sub>F</sub> =20mA	-	465	-	nm
Luminous Intensity	I <sub>V</sub>	I <sub>F</sub> =20mA	-	40	-	mcd
Spectral Line Half-Bandwidth	Δλ	I <sub>F</sub> =20mA	-	20	-	nm



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#### ● B: SUPER BRIGHT BLUE (InGaN/GaN) CURVE

Typical Electro-optical Characteristic Curves  
(25 °C Free Air Temperature Unless Otherwise Specified)

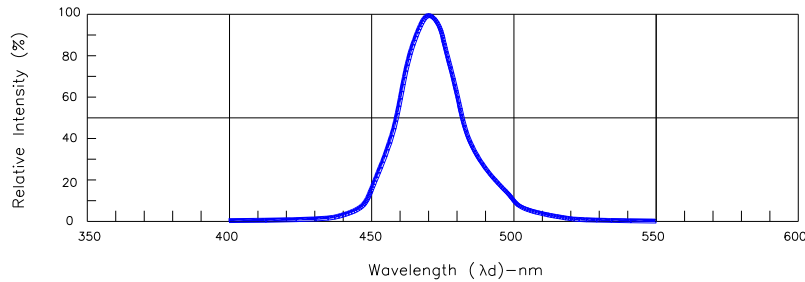


Fig.1-Relative Intensity VS. Wavelength

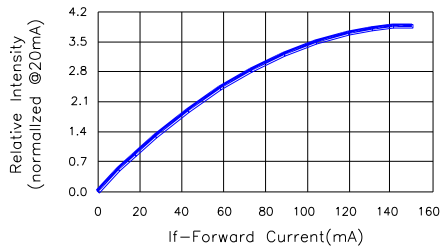


Fig.2-Relative Luminous Intensity vs. Forward Current

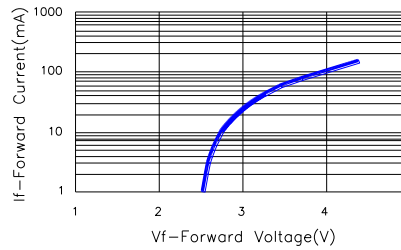


Fig.3-Forward Current vs. Forward Voltage

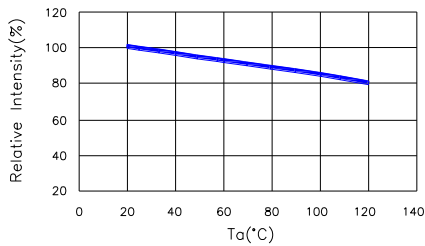


Fig.4-Relative Intensity(@20mA)VS. Ambient Temperature

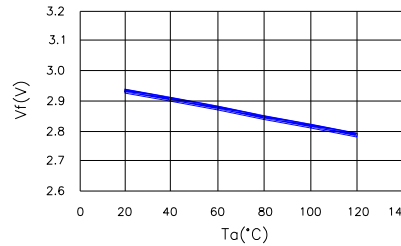


Fig.5-Forward Voltage(@20mA)VS. Ambient Temperature

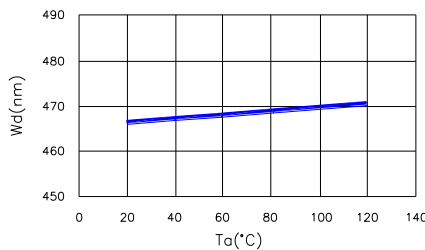


Fig.6-Dominant Wavelength(@20mA) VS. Ambient Temperature

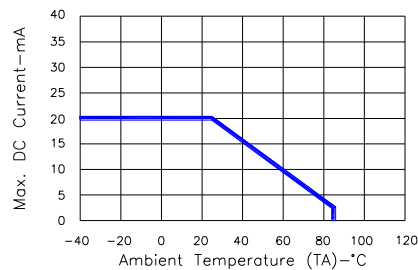
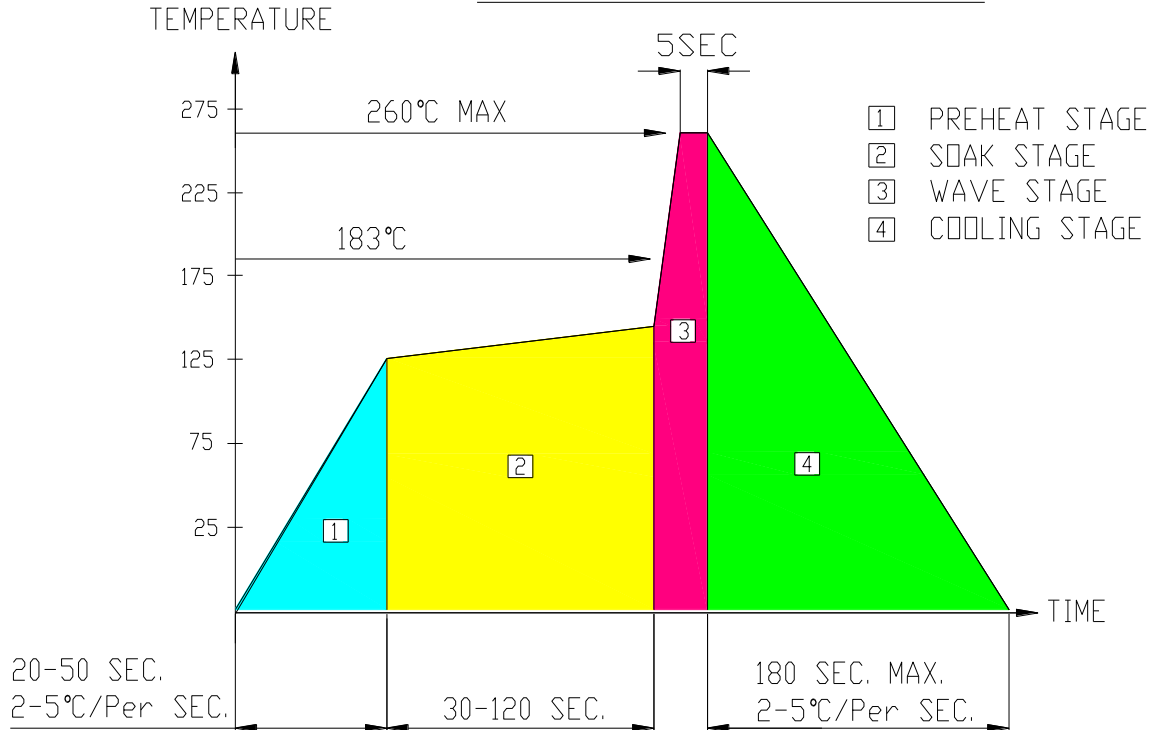


Fig.7-Max. Allowable DC Current VS. Ambient Temperature

## ● RECOMMEND SOLDERING PROFILE

### WAVE SOLDER PROFILE



## ● Note:

- Recommend pre-heat temperature of 105°C or less (as measured with a thermocouple attached to the LED pins) prior to immersion in the solder wave with a maximum solder bath temperature of 260°C
- Peak wave soldering temperature between 245°C ~ 225°C for 3 sec (5 sec max)
- No more than one wave soldering pass

## ● SOLDERING IRON

Basic spec is  $\leq 4$  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  $\leq 3$  sec under 350°C. The head of soldering iron cannot touch copper foil.



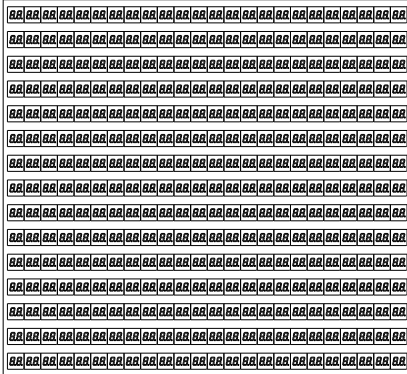
# Opto Plus LED Corp.

## 0.3" Case Mold Type LED Display

### OPD-D3010LB-BW

#### ● PACKAGE DIMENSIONS

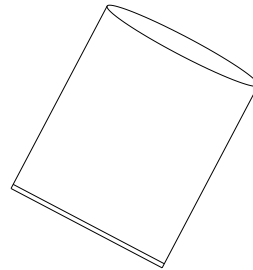
360 PCS / 1 Pink ESD Polyform (24 X 15)



6 PINK Polyform / 1 PINK ESD BAG  
7 PINK Polyform / 1 PINK ESD BAG

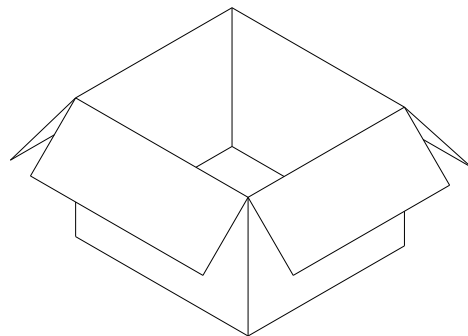


A reference for packing within ESD bag.



ESD BAG SIZE : 650 x 550 mm

4680 PCS / 2 PINK ESD BAG / 1 Inner Carton



OUTER BOX SIZE : 430 x 390 x 300 mm