EDIT HISTORY

Version A : Feb. 24, 2015

Preliminary Spec.

Version B : Apr. 20, 2022

Modify Electrical Character & Curve (P4,P5)

Add package dimensions.

Prepared by	Checked by	Approved by

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sales@prom-elec.com / ООО ПРОМЭЛЕКТРОНИКА

FEATURES

- 0.56 inch (14.20 mm) Digit Height.
- Low current operation.
- Case mold type.
- Black face, White segment.
- RoHS compliant, Pb Free.

DESCRIPTION

The OPD-T5620LB-BW & OPD-T5621LB-BW is a 0.56 inch (14.20 mm) Height triple digits display.

This device utilizes Super Bright Blue LED chip which are made from InGaN on a transparent GaN substrate. The display has Black face, White segment.

DEVICE

PART NO Super Bright Blue	DESCRIPTION
OPD-T5620LB-BW	Common Anode
OPD-T5621LB-BW	Common Cathode

RoHS Compliance **Pb free.**

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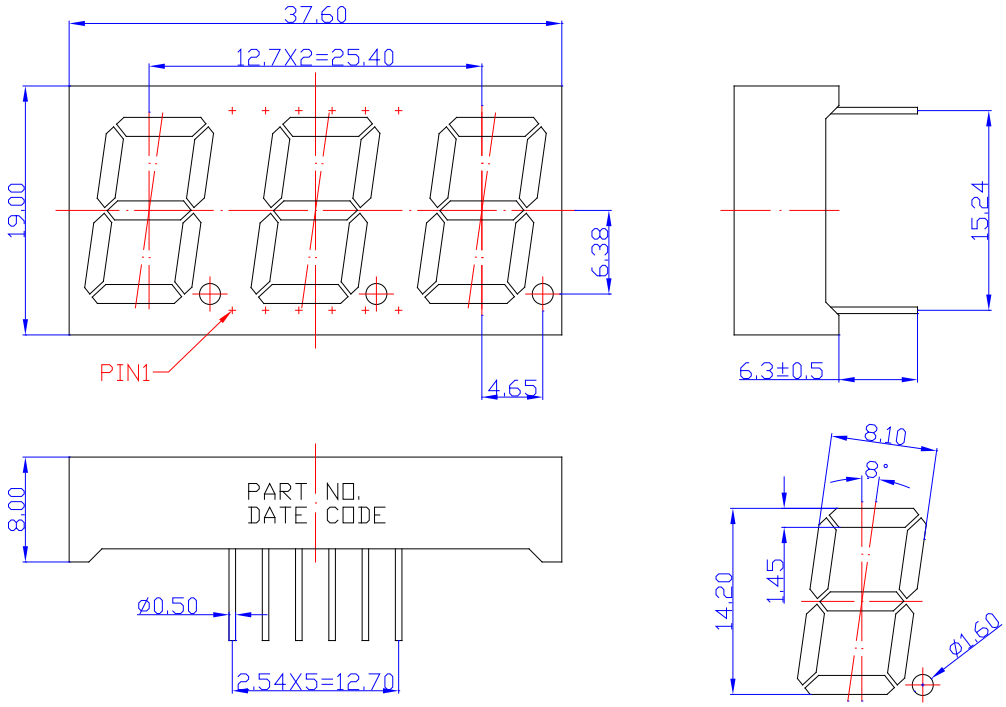
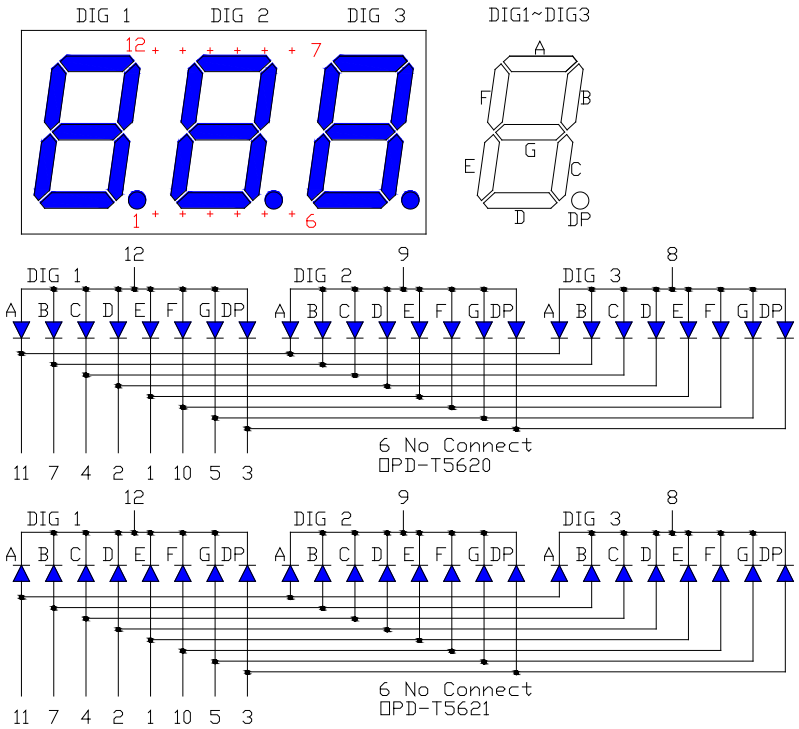
MECHANICAL DIMENSIONS



NOTES: All dimensions are in millimeters. Tolerances are± 0.25 mm unless otherwise noted.

TYPICAL INTERNAL EQUIVALENT CIRCUIT



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LB: SUPER BRIGHT BLUE (InGaN/GaN)

ABSOLUTE MAXIMUM RATING AT Ta=25°C

Parameter	Symbol	Maximum Rating	Unit
Power dissipation	P_{AD}	68	mW
Continuous forward current	I_{AF}	20	mA
Peak current (duty cycle 1/10, 1kHz)	I_{PF}	60	mA
Reverse voltage	V_R	5	V
Operating temperature	T_{OPR}	-40 to +85	°C
Storage temperature	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	-	3.0	3.4	V
Reverse Current	I_R	V_R =5V	-	-	10	μA
Dominant Wavelength	λ_D	I_F =20mA	460	465	475	nm
Luminous Intensity	I_V	I_F =20mA	-	60	-	mcd
Spectral Line Half-Bandwidth	$\Delta\lambda$	I_F =20mA	-	20	-	nm

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● LB: SUPER BRIGHT BLUE (InGaN/GaN) CURVE

Typical Electro-optical Characteristic Curves

(25 ℃ Free Air Temperature Unless Otherwise Specified)

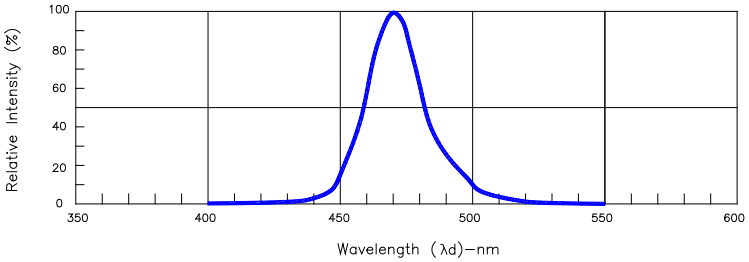

Fig.1−Relative Intensity VS. Wavelength

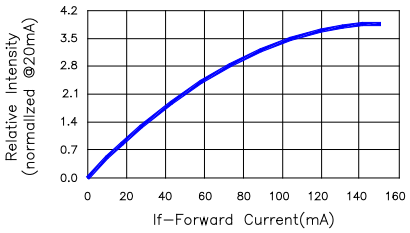

Fig.2−Relative Luminous Intensity vs. Forward Current

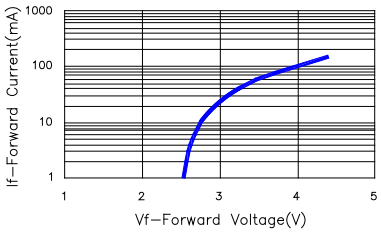

Fig.3−Forward Current vs. Forward Voltage

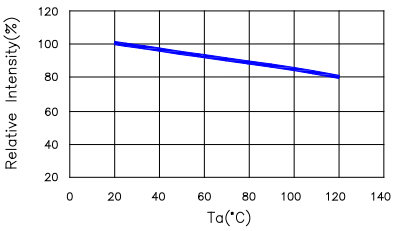

Fig.4−Relative Intensity(@20mA)VS. Ambient Temperature

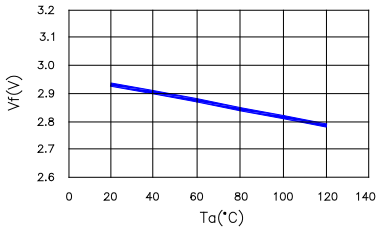

Fig.5−Forward Voltage(@20mA)VS. Ambient Temperature

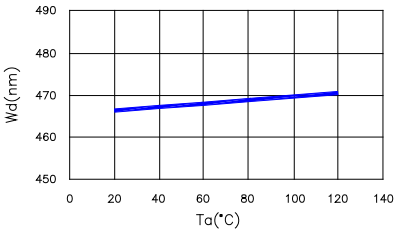

Fig.6−Dominant Wavelength(@20mA)
VS. Ambient Temperature

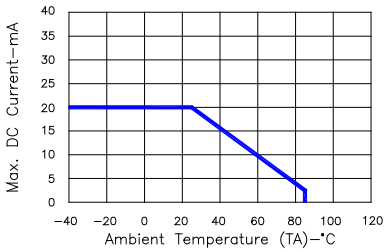

Fig.7−Max. Allowable DC Current
VS. Ambient Temperature

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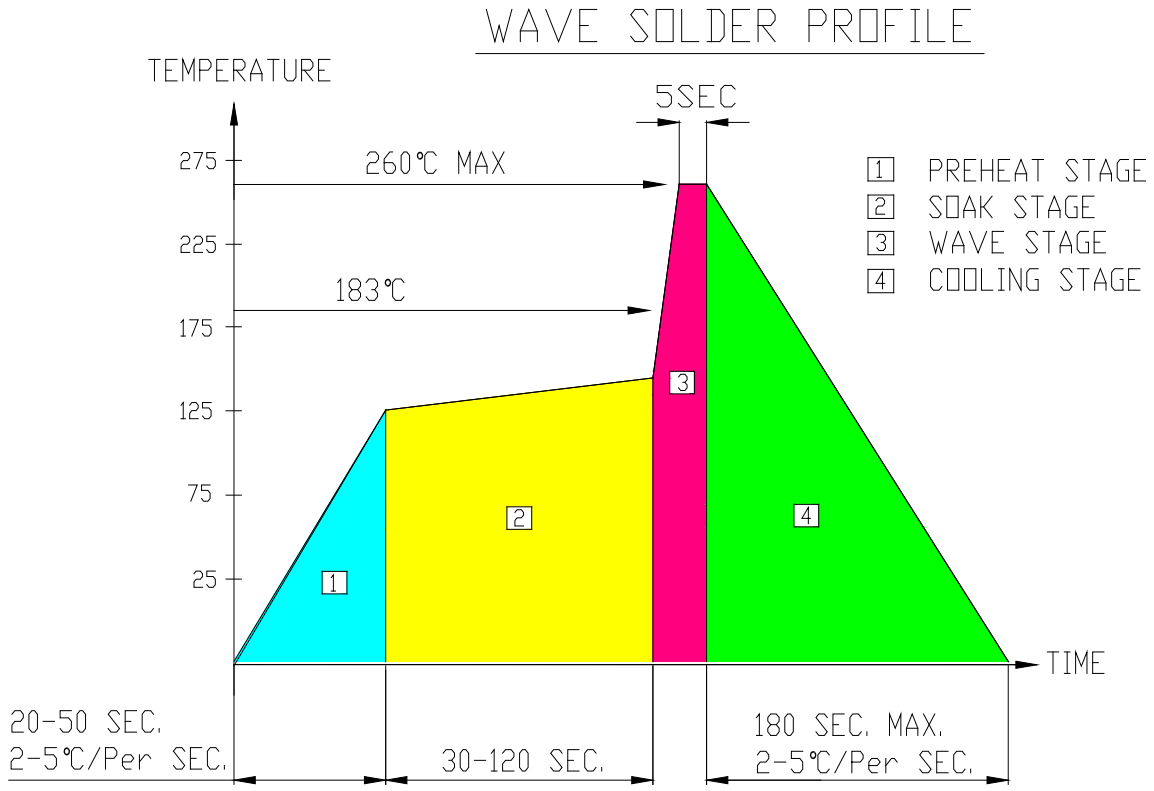
RECOMMEND SOLDERING PROFILE



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 ≦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℃.
The head of soldering iron cannot touch copper foil.

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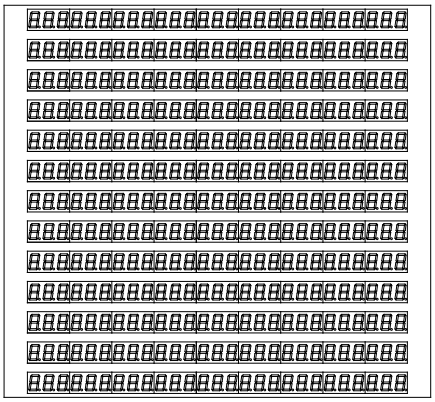
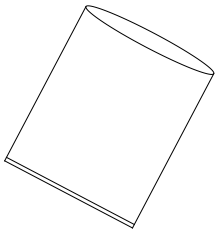
PACKAGE DIMENSIONS

(1) 117 PCS / (9X13) Pink ESD Polyform .

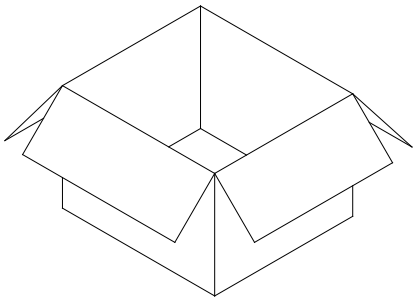


(2) 702 PCS / 6 Pink ESD Polyform / Pink 1 BAG



ESD BAG SIZE : 650 x 550 mm

(3) 1404 PCS / 2 Pink BAG / 1 OUTER CARTON



OUTER BOX SIZE : 430 x 390 x 300 mm

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