American Opto Plus LED Corp.
0.30” Case mold Type LED Display
AOP A302LB G/W
AOP C302LB G/W

EDIT HISTORY

Version A: Jun. 21, 2017

Preliminary Spec.

Manufacture	Examination	Approving

American Opto Plus LED Corp. 1206 E. Lexington Ave. , Pomona CA 91766 Tel: 909-465-0080 Fax: 909-465-0130 www.aopled.com

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0.30" Case mold Type LED Display
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FEATURES

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

DESCRIPTION

The A302LB G/W & C302LB G/W 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 substrate.The display has Gray face, White segment.

DEVICE

PART NO Super Bright Blue	DESCRIPTION
A302LB G/W	Common Anode
C302LB G/W	Common Cathode

RoHS Compliance **Pb free.**

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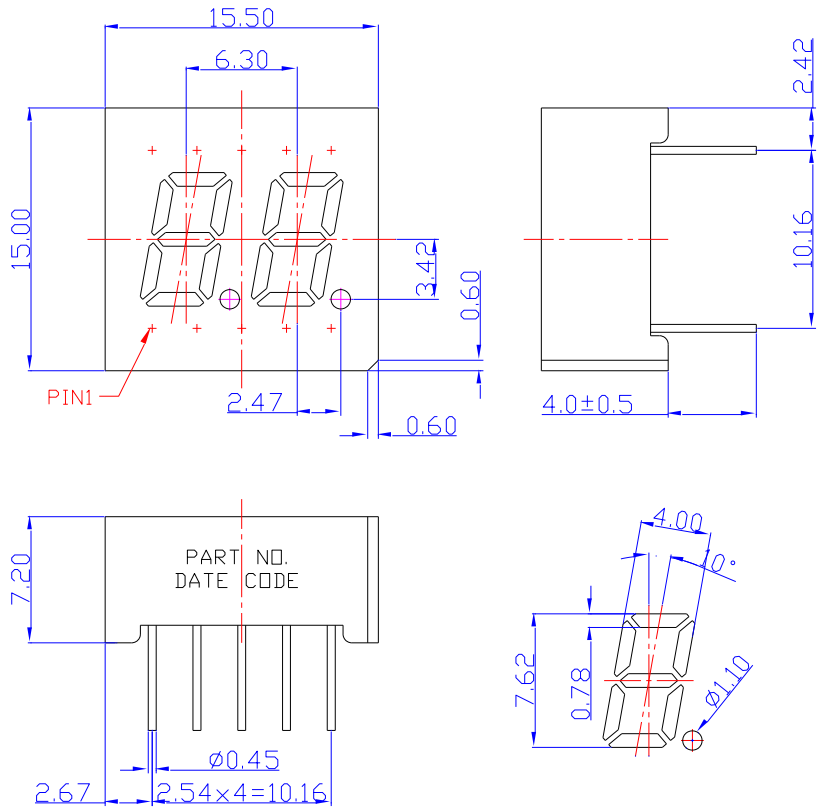
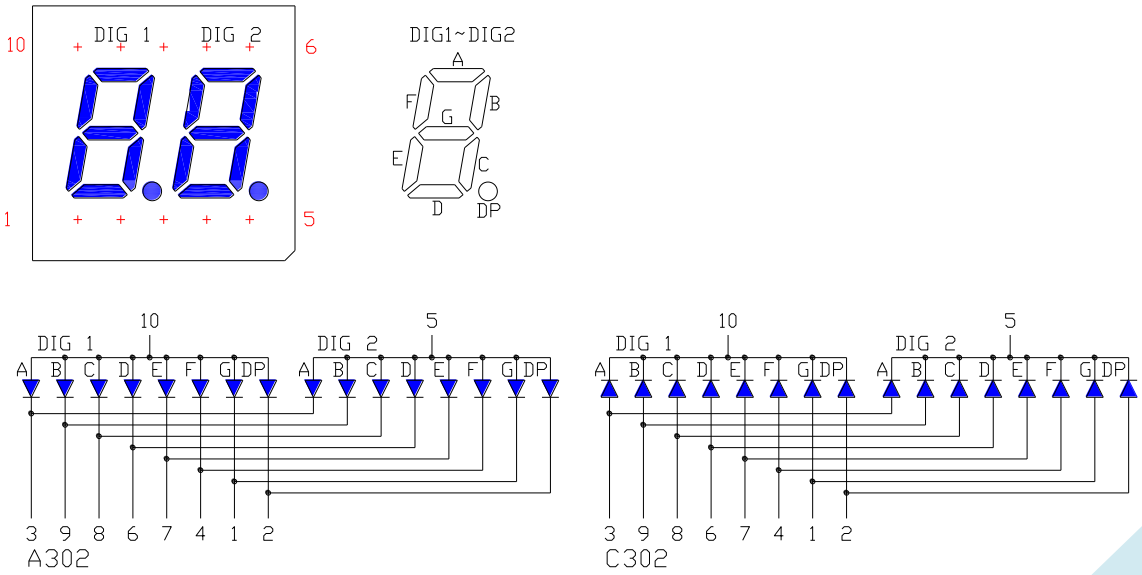
MECHANICAL DIMENSIONS



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

TYPICAL INTERNAL EQUIVALENT CIRCUIT



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B: SUPER BRIGHT BLUE (InGaN/GaN)

ABSOLUTE MAXIMUM RATING AT Ta=25ºC

Parameter	Symbol	Super Bright Blue	Unit
Power dissipation per dice	P_{AD}	120	mW
Derating liner from 25°C per dice	-	0.4	mA / °C
Continuous forward current per dice	I_{AF}	30	mA
Peak current per dice (duty cycle 1/10, 1kHz)	I_{PF}	100	mA
Reverse voltage per dice	V_R	5	V
Operating temperature	T_{OPR}	-25 to +85	°C
Storage temperature	T_{STG}	-25 to +85	°C

ELECTRICAL - OPTICAL CHARACTERISTICS AT Ta=25ºC

Characteristic	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward voltage	V_F	I_F =20mA	-	3.0	4.0	V
Reverse current	I_R	V_R =8V	-	-	10	μA
Dominant wavelength	λ_D	I_F =20mA	460	465	470	nm
Luminous intensity	I_V	I_F =20mA	-	40	-	mcd
Spectral radiation bandwidth	$\Delta\lambda$	I_F =20mA	-	30	-	nm

B: SUPER BRIGHT BLUE (InGaN/GaN) CURVE

Typical Electro-optical Characteristic Curves

(25℃ Free Air Temperature Unless Otherwise Specified)

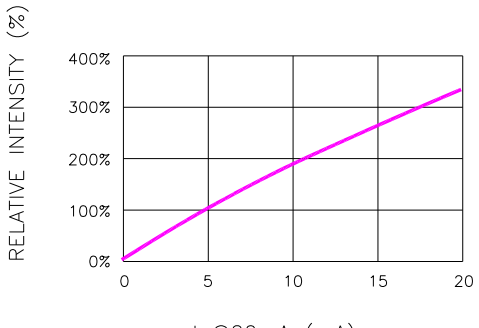


Fig.1 RELATIVE INTENSITY VS. FORWARD CURRENT

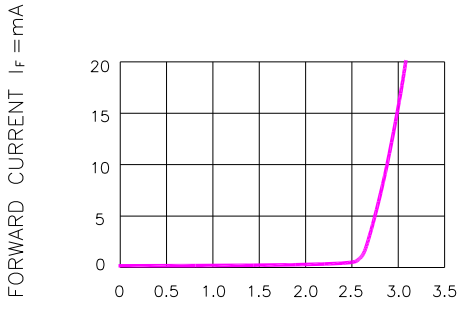


Fig.2 FORWARD CURRENT VS. FORWARD VOLTAGE

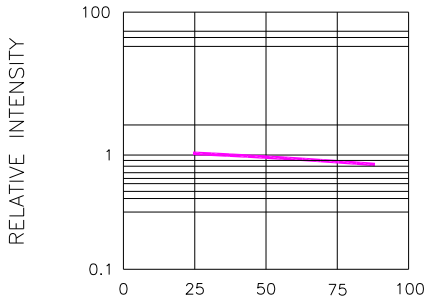


Fig.3 RELATIVE INTENSITY VS.LEAD TEMPERATURE (PULSED 20 mA; 300us PULSE,10ms PERIOD)

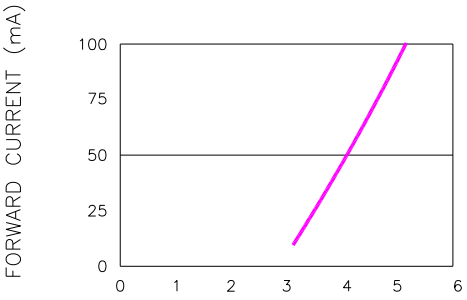


Fig.4 PEAK FORWARD VOLTAGE VS.FORWARD(100us TEST PULSE, 1% DUTY CYCLE)

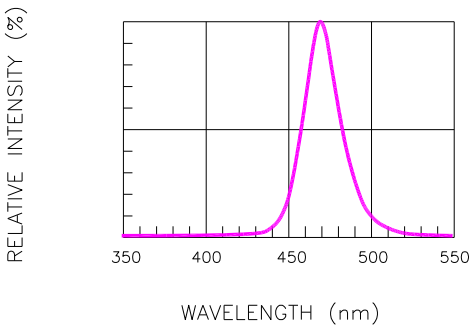


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

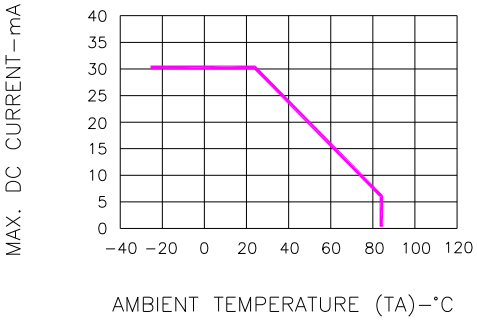
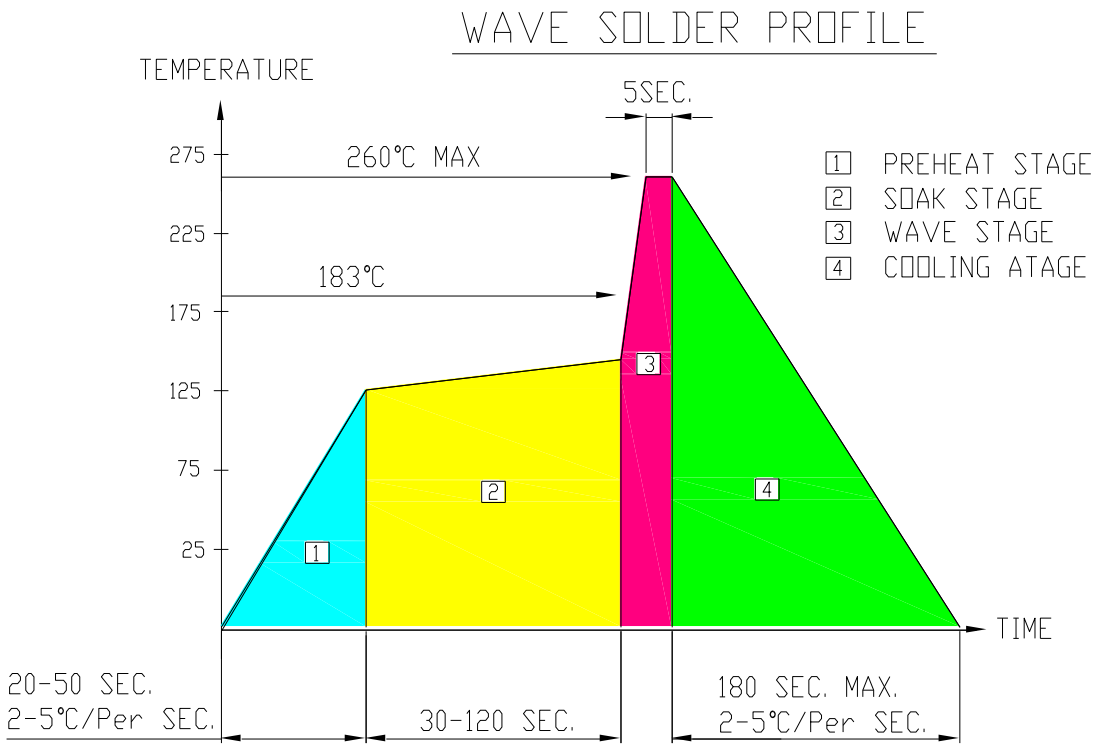


Fig.6 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE

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.