American Opto Plus LED Corp.
Case Mold Type LED Display
A2301W G/W
C2301W G/W

EDIT HISTORY

Version A: Nov. 28, 2012

Preliminary Spec.

Manufacture	Examination	Approving

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FEATURES

- 2.30 inch (56.80 mm) Digit Height.
- Low current operation..
- Case mold type.
- Gray face, White segment.
- RoHS compliant, Pb Free.

DESCRIPTION

The A2301W G/W C2301W G/W is a 2.30 inch (56.80 mm) height single 7-segment display. This device utilizes Super Bright White SMD LED chip which are made from InGaN on a transparent GaN substrate. The display has Gray face, White segment.

DEVICE

PART NO Super Bright White	**DESCRIPTION**
A2301W G/W	Common Anode
C2301W G/W	Common Cathode

RoHS Compliance

Pb free.

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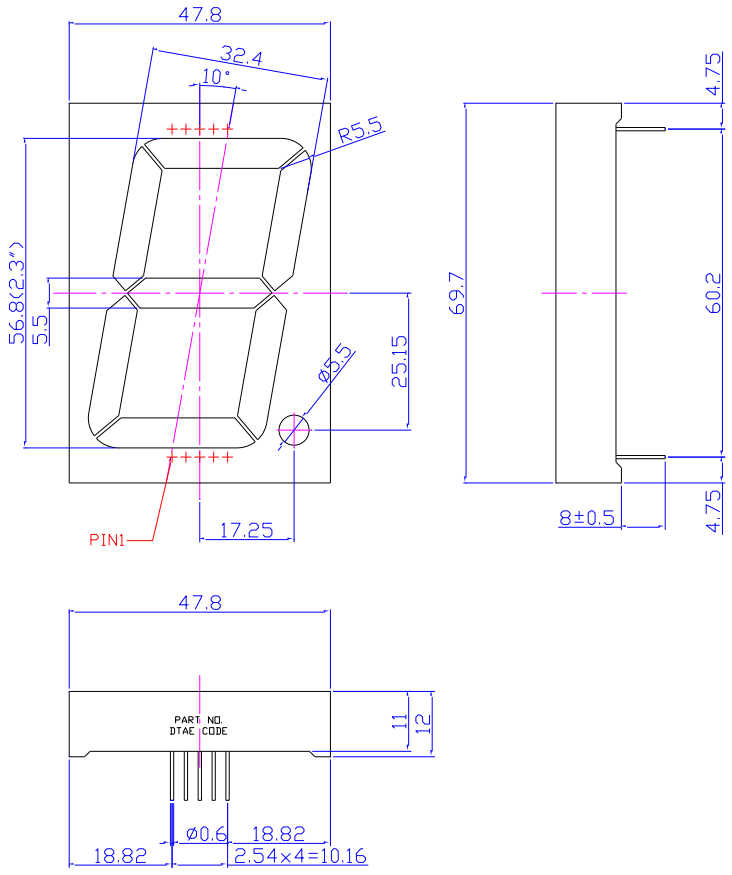
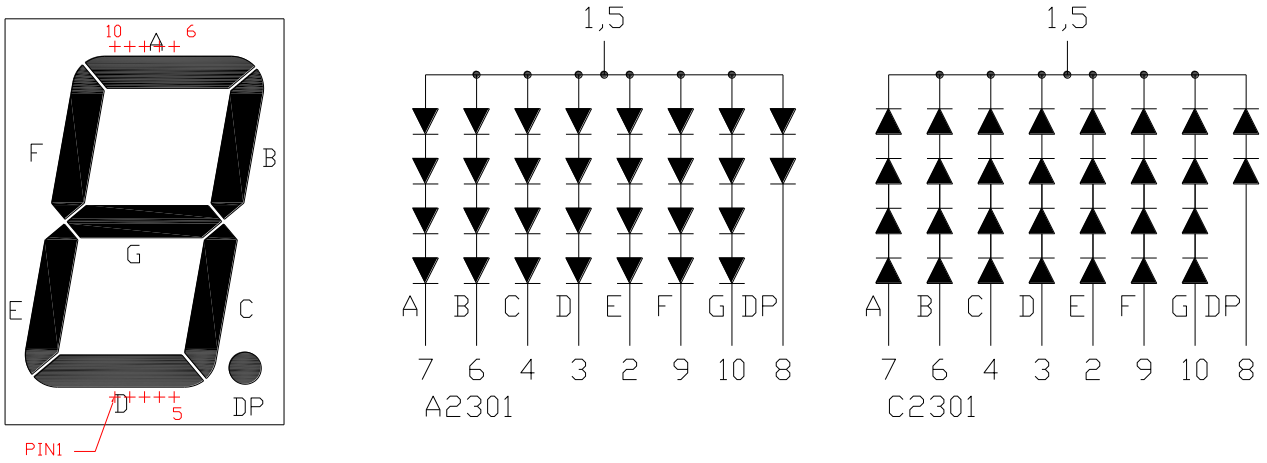
MECHANICAL DIMENSIONS



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

TYPICAL INTERNAL EQUIVALENT CIRCUIT



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● W: SUPER BRIGHT WHITE (InGaN/GaN)

ABSOLUTE MAXIMUM RATING AT Ta=25°C

Parameter	Symbol	Super Bright White	Unit
Power dissipation per dice	P_{AD}	120	mW
Derating Liner from 25°C per dice	-	0.3	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=25°C

Characteristic	Symbol	Condition		Min.	Typ.	Max.	Unit
Forward voltage per Segment (DP)	V_F	I_F =20mA		-	12.0 (6.0)	14.4 (7.2)	V
Reverse Current	I_R	V_R =8V		-	-	10	μA
Peak Wavelength	λ_P	I_F =20mA	X	-	0.29	-	nm
			Y	-	0.29	-	
Average Luminous Intensity	I_V	I_F =10mA		76	160	-	mcd
Spectrum Radiation Bandwidth	$\Delta\lambda$	I_F =20mA		-	30	-	nm

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● W: SUPER BRIGHT WHITE (InGaN/GaN) CURVE

Typical Electro-optical Characteristic Curves

(25 ℃ Free Air Temperature Unless Otherwise Specified)

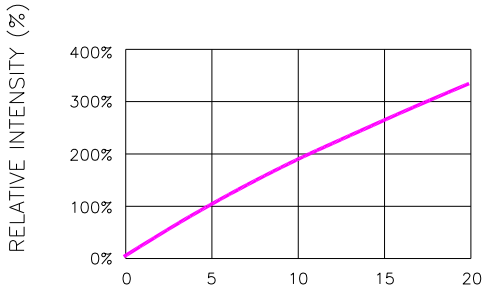

Fig.1 RELATIVE INTENSITY VS. FORWARD CURRENT

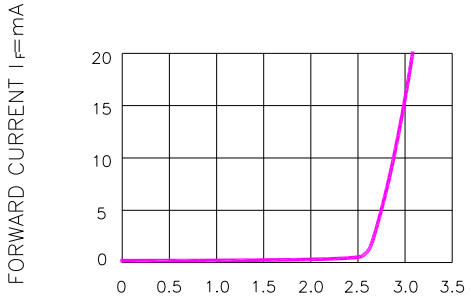

Fig.2 FORWARD CURRENT VS. FORWARD VOLTAGE

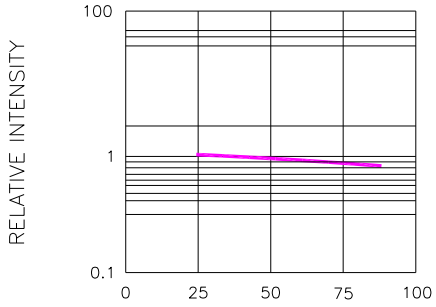

Fig.3 RELATIVE INTENSITY VS.LEAD TEMPERATURE
(PULSED 20 mA; 300us PULSE,10ms PERIOD)

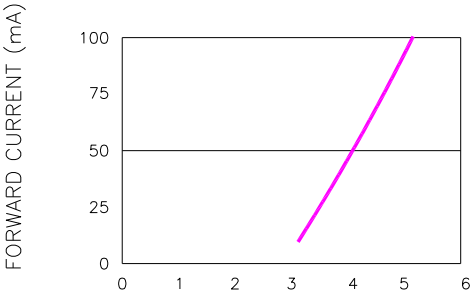

Fig.4 PEAK FORWARD VOLTAGE VS.FORWARD(100us TEST PULSE, 1% DUTY CYCLE)

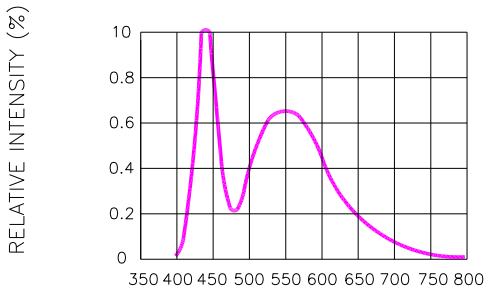

Fig.4 RELATIVE INTENSITY VS. WAVELENGTH

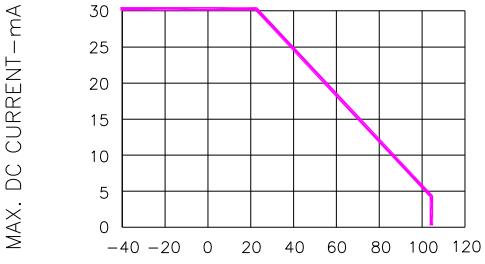

Fig.7 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE

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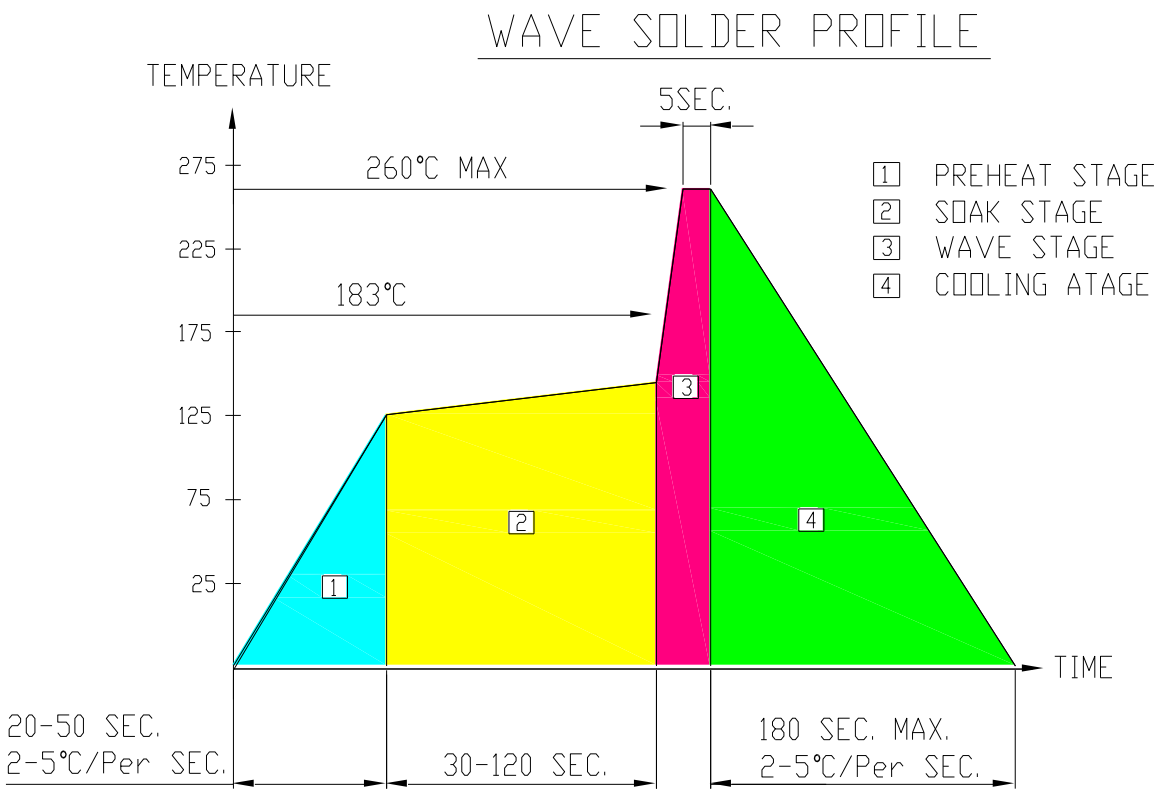
RECOMMEND SOLDERING PROFILE



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 ≦4 sec under 245℃.