



American Opto Plus LED Corp.
4.0" Case mold Type LED Display
A4011YG G/W

● **EDIT HISTORY**

Version A: Mar. 08, 2013

Preliminary Spec.

Version B: Mar. 11, 2013

Average Luminous Intensity modify

Manufacture	Examination	Approving



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4.0" Case mold Type LED Display

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● FEATURES

- 4.00 inch (101.60 mm) Digit Height.
- Low current operation..
- Case mold type.
- Gray face, White segment.
- RoHS compliant, Pb Free.

● DESCRIPTION

The A4011YG G/W is a 4.00 inch (101.60 mm) height single 7-segment display. This device utilizes Super Bright Yellow Green LED chip which are made from AlGaInP On a transparent GaAs substrate. The display has Gray face, White segment.

● DEVICE

PART NO	DESCRIPTION
Super Bright Yellow Green A4011YG G/W	Common Anode

RoHS Compliance



Pb free.



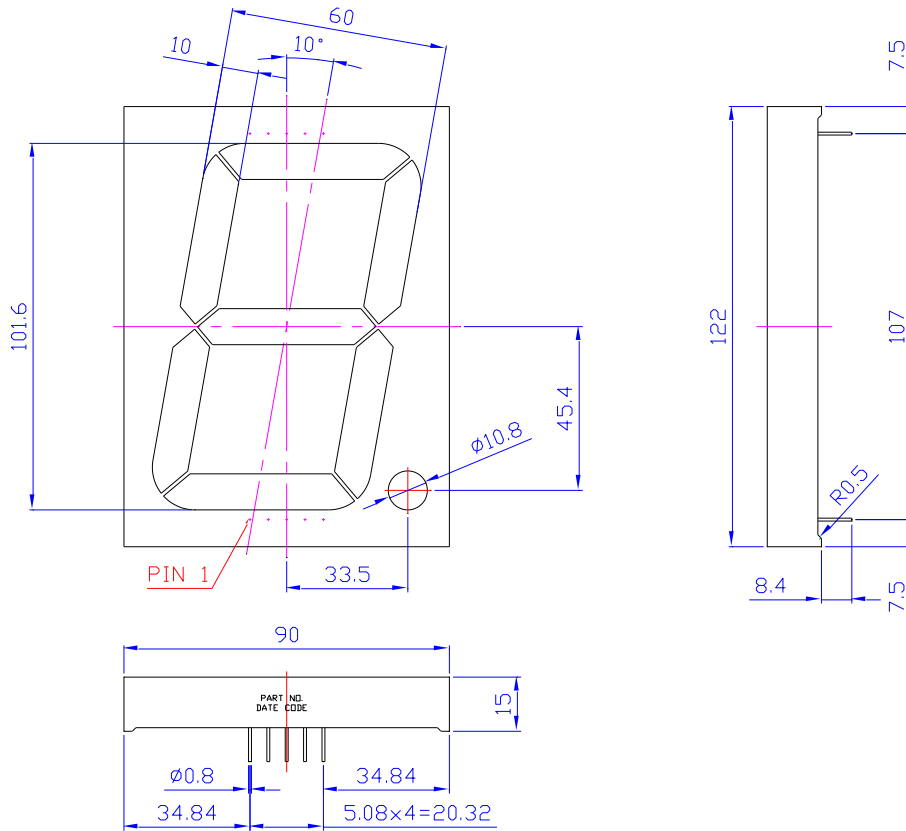


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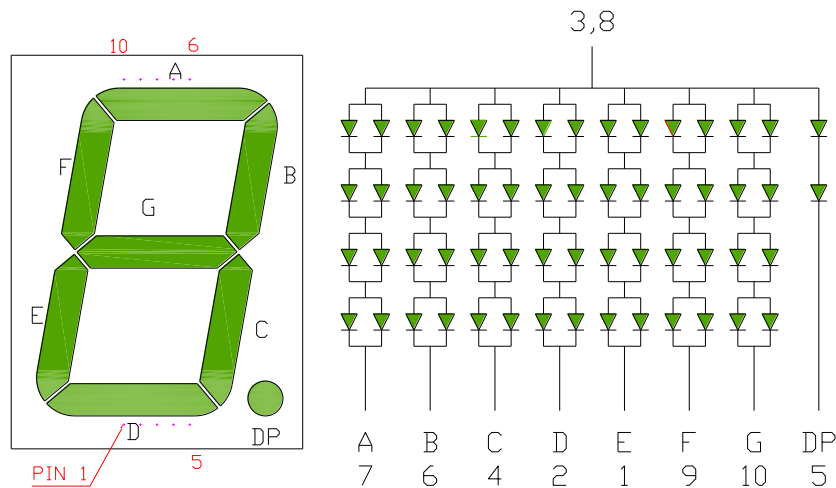
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● MECHANICAL DIMENSIONS



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

● TYPICAL INTERNAL EQUIVALENT CIRCUIT





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● YG: SUPER BRIGHT RED (AlGaInP/GaAs)

ABSOLUTE MAXIMUM RATING AT $T_a=25^{\circ}\text{C}$

Parameter	Symbol	Super Bright Yellow Green	Unit
Power dissipation per dice	P_{AD}	85	mW
Derating Liner from 25°C per dice	-	0.42	$\text{mA}/^{\circ}\text{C}$
Continuous forward current per dice	I_{AF}	30	mA
Peak current per dice (duty cycle 1/10, 1kHz)	I_{PF}	120	mA
Reverse voltage per dice	V_R	5	V
Operating temperature	T_{OPR}	-25 to +85	$^{\circ}\text{C}$
Storage temperature	T_{STG}	-25 to +85	$^{\circ}\text{C}$

ELECTRICAL - OPTICAL CHARACTERISTICS AT $T_a=25^{\circ}\text{C}$

Characteristic	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward voltage per Segment (DP)	V_F	($I_F=20\text{mA}$) $I_F=40\text{mA}$	-	(4.0) 8.0	(4.8) 9.6	V
Reverse current per Segment (DP)	I_R	($V_R=10\text{V}$) $V_R=20\text{V}$	-	-	10	μA
Peak Wavelength	λ_P	$I_F=20\text{mA}$	-	573	-	nm
Dominant Wavelength	λ_d	$I_F=20\text{mA}$	-	571	-	nm
Average Luminous Intensity per dice	I_V	$I_F=20\text{mA}$	-	250	-	mcd
Spectrum Radiation Bandwidth	$\Delta\lambda$	$I_F=20\text{mA}$	-	20	-	nm



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

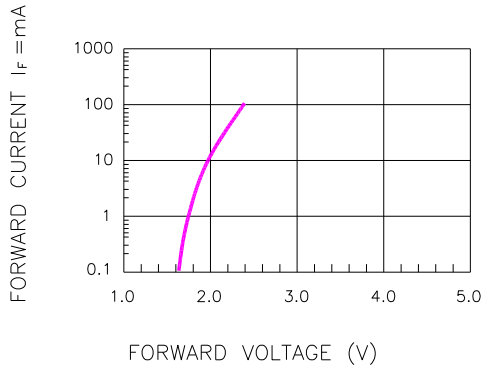


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

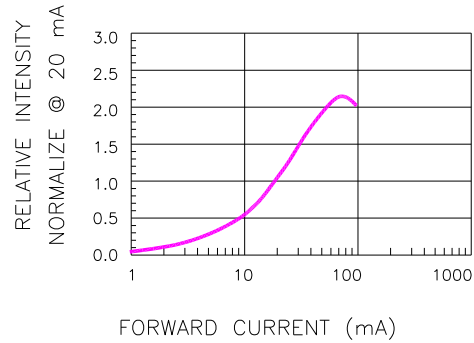


Fig.2 RELATIVE INTENSITY VS. FORWARD CURRENT

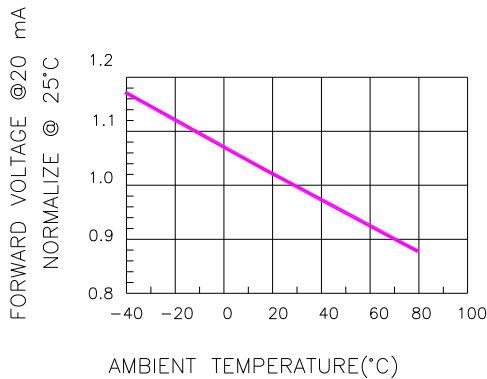


Fig.3 FORWARD VOLTAGE VS. TEMPERATURE

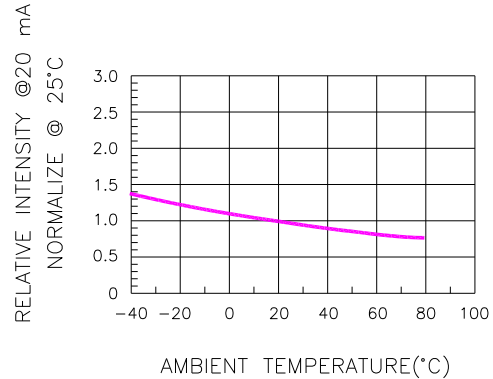


Fig.4 RELATIVE INTENSITY VS. TEMPERATURE

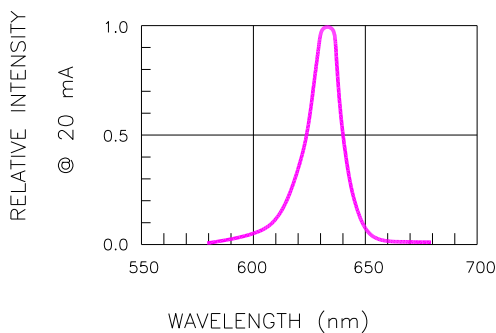


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

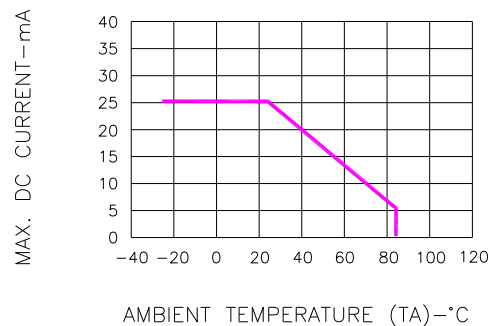


Fig.6 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE

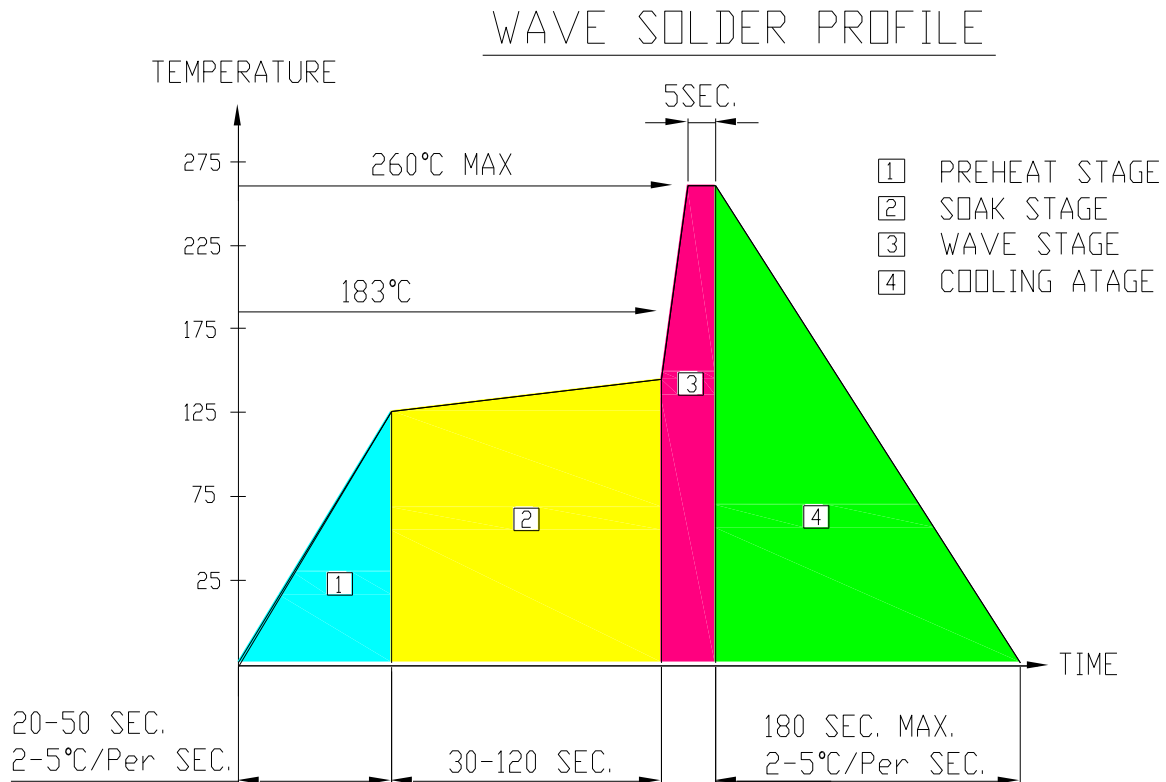


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● RECOMMEND SOLDERING PROFILE



● 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°C.