American Opto Plus LED Corp.
4.0” Case mold Type LED Display
A4011LR-7 G/W

EDIT HISTORY

Version A: Sep. 19, 2012

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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FEATURES

- 4.0 inch (101.6 mm) Digit Height.
- Excellent character appearance.
- Case mold type.
- Low Power Consumption.
- Gray face, White segment.
- RoHS compliant, Pb Free.

DESCRIPTION

The A4011LR-7 G/W is a 4.0 inch (101.6 mm) height single 7-segment display..

This device utilizes Super Red LED chip which are made from AlGaInP on a transparent GaAs substrate. The display has Gray face, White segment.

DEVICE

PART NO Super Red	DESCRIPTION
A4011LR-7 G/W	Common Anode

RoHS Compliance

Pb free.

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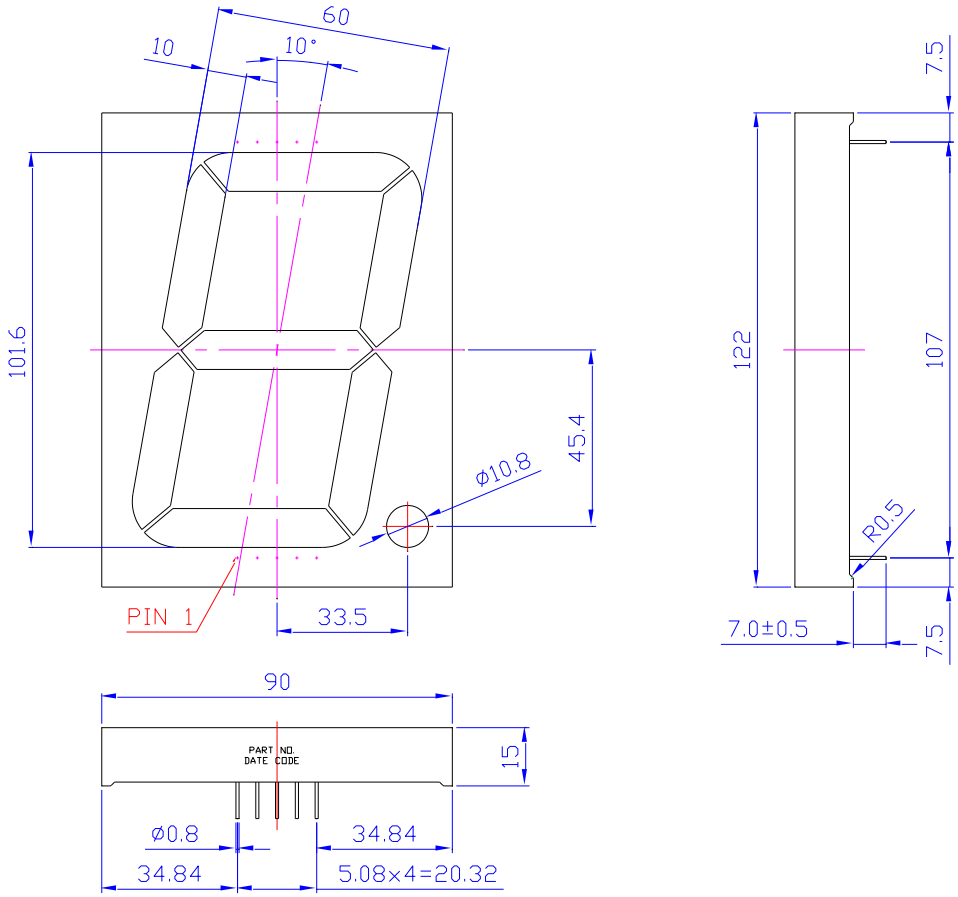
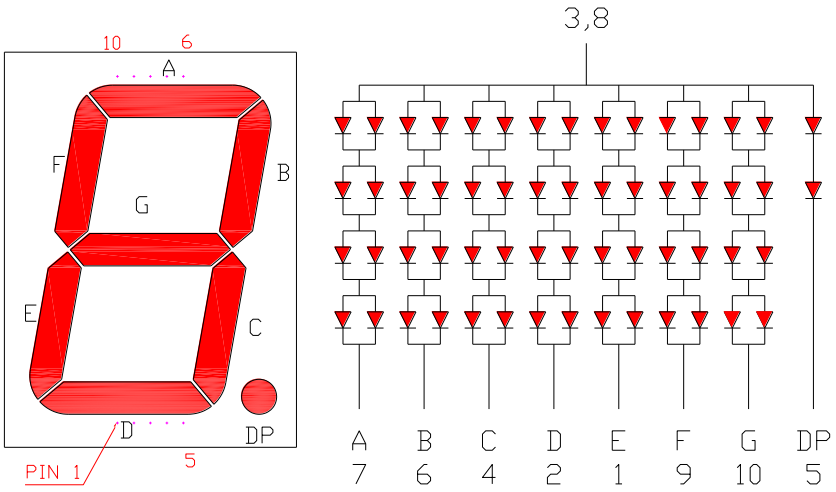
MECHANICAL DIMENSIONS



TYPICAL INTERNAL EQUIVALENT CIRCUIT



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SR: SUPER RED (AlGaInP/GaAs)

ABSOLUTE MAXIMUM RATING AT Ta=25ºC

Parameter	Symbol	Super Red	Unit
Power dissipation per dice	P_{AD}	75	mW
Derating liner from 25°C per dice	-	0.42	mA/°C
Continuous forward current Segment (DP)	I_{AF}	120(60)	mA
Peak current per dice (duty cycle 1/10, 1kHz)	I_{PF}	200	mA
Reverse voltage per Segment (DP)	V_R	20(10)	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.	Type	Max.	Unit
Forward voltage per Segment (DP)	V_F	I_F =20mA	-	8.4 (4.2)	9.2 (4.6)	V
Reverse current per Segment (DP)	I_R	V_R =20V (V_R =10V)	-	-	10	μA
Peak wavelength	λ_P	I_F =20mA	-	650	-	nm
Dominant wavelength	λ_d	I_F =20mA	-	639	-	nm
Luminous intensity	I_V	I_F =10mA	52	110	-	mcd
Spectral radiation bandwidth	$\Delta\lambda$	I_F =20mA	-	20	-	nm

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- **SR: SUPER RED (AlGaInP/GaAs)**

Typical Electro-optical Characteristic Curves

(25 ℃ Free Air Temperature Unless Otherwise Specified)

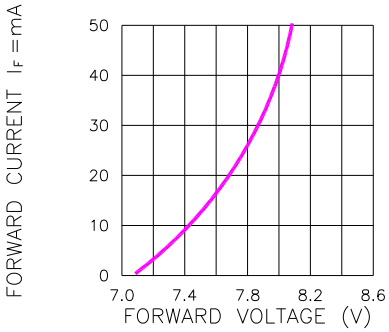


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

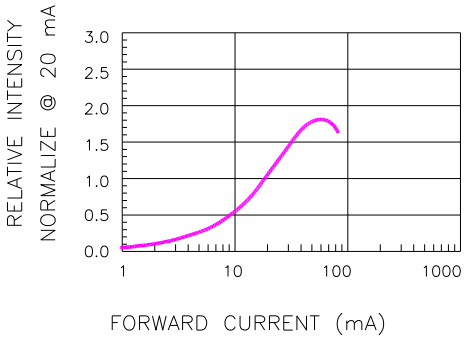


Fig.2 RELATIVE INTENSITY VS. FORWARD CURRENT

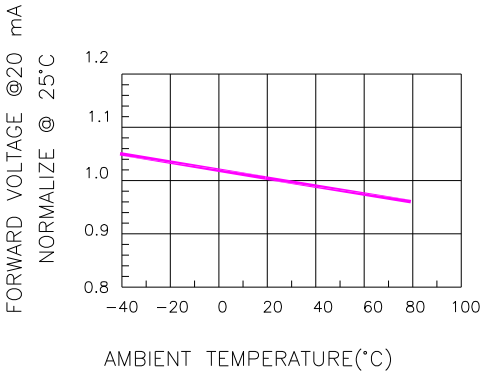


Fig.3 FORWARD VOLTAGE VS. TEMPERATURE

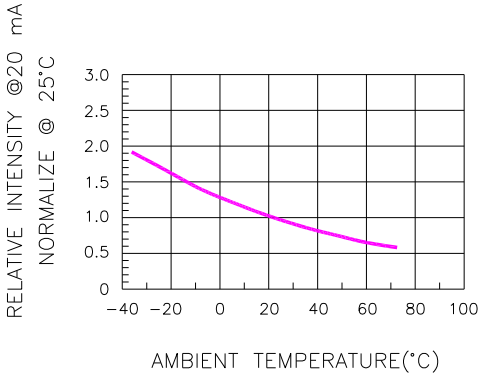


Fig.4 RELATIVE INTENSITY VS. TEMPERATURE

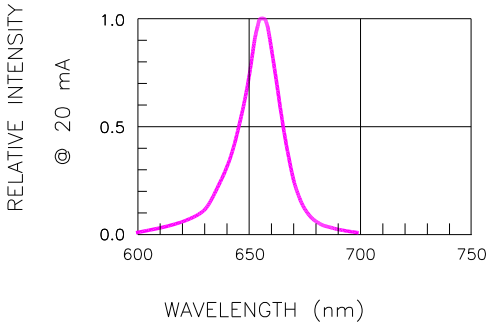


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

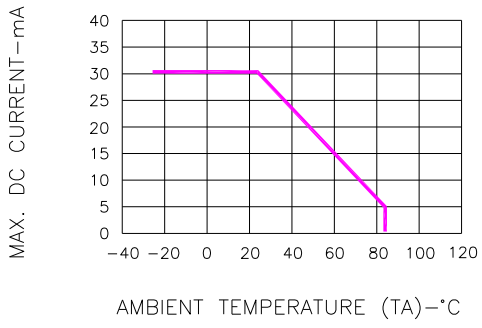
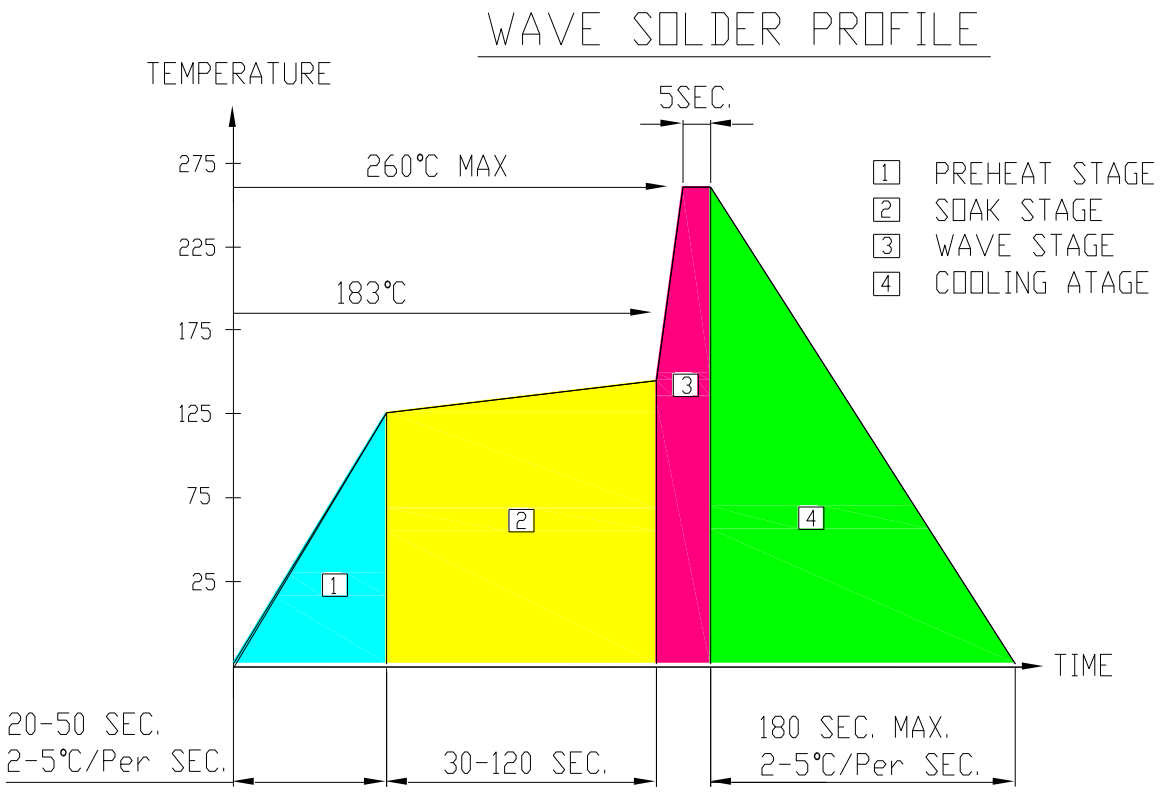


Fig.6 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE

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℃.