



American Opto Plus LED Corp.
Case Mold Type LED Display
A5001LE B/W
C5001LE B/W

● **EDIT HISTORY**

Version A: Dec.14, 2012

Preliminary Spec.

Manufacture	Examination	Approving



American Opto Plus LED Corp.

Case Mold Type LED Display

A5001LE B/W

C5001LE B/W

● FEATURES

- 5.0 inch (126.4 mm) Digit Height.
- Low current operation.
- Case mold type.
- Black face, White segment.
- RoHS compliant, Pb Free.

● DESCRIPTION

The A5001LE-BW & C5001LE-BW is a 5.0 inch (126.4 mm) height single 7-segment display.

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

● DEVICE

PART NO Super Bright Red	DESCRIPTION
A5001LE-BW	Common Anode
C5001LE-BW	Common Cathode

RoHS Compliance



Pb free.





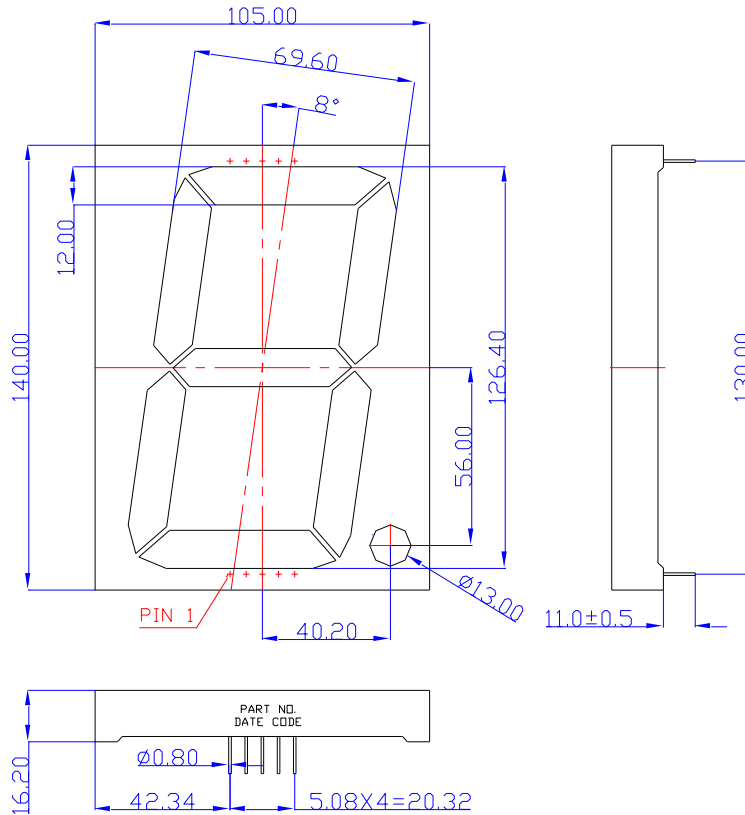
American Opto Plus LED Corp.

Case Mold Type LED Display

A5001LE B/W

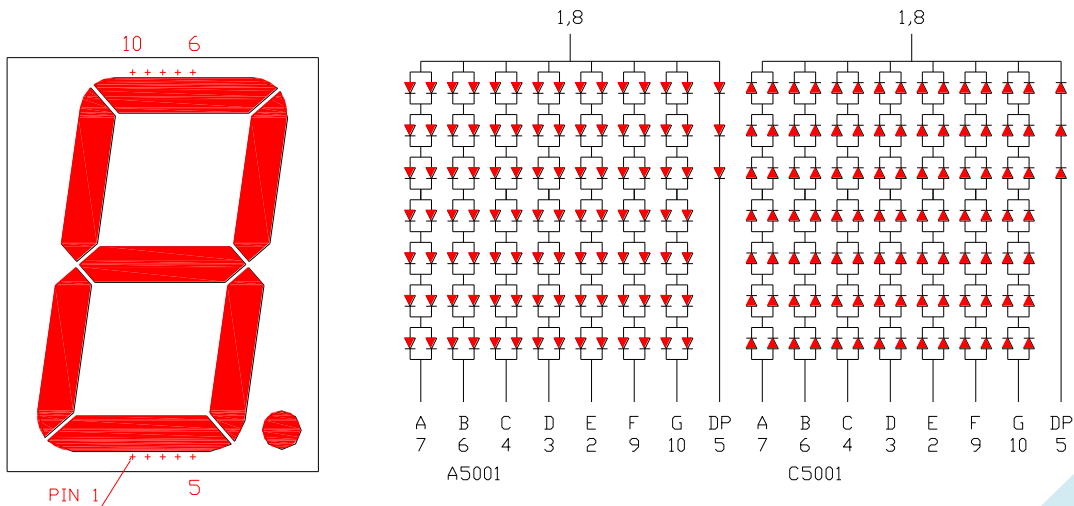
C5001LE B/W

● MECHANICAL DIMENSIONS



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

● TYPICAL INTERNAL EQUIVALENT CIRCUIT





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● **LE: SUPER BRIGHT RED (AlGaInP/GaAs)**

ABSOLUTE MAXIMUM RATING AT Ta=25°C

Parameter	Symbol	Super Bright Red	Unit
Power dissipation per dice	P _{AD}	70	mW
Derating liner from 25°C per dice	-	0.33	mA / °C
Continuous forward current per dice	I _{AF}	25	mA
Peak current per dice (duty cycle 1/10, 1kHz)	I _{PF}	90	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 =40mA (I _F =20mA)	-	14.0 (6.0)	18.2 (7.8)	V
Reverse current per Segment (DP)	I _R	V _R =35V (V _R =15V)	-	-	10	µA
Peak wavelength	λ _P	I _F =20mA	-	632	-	nm
Dominant wavelength	λ _D	I _F =20mA	-	625	-	nm
Luminous intensity	I _V	I _F =20mA	-	300	-	mcd
Spectral radiation bandwidth	Δλ	I _F =20mA	-	20	-	nm



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● LE: SUPER BRIGHT RED (AlGaInP/GaAs) CURVE

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

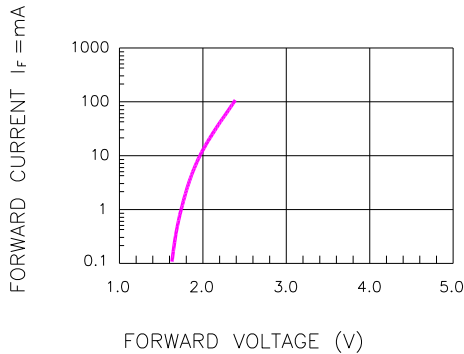


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

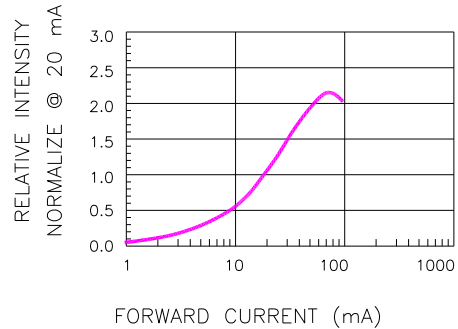


Fig.2 RELATIVE INTENSITY VS. FORWARD CURRENT

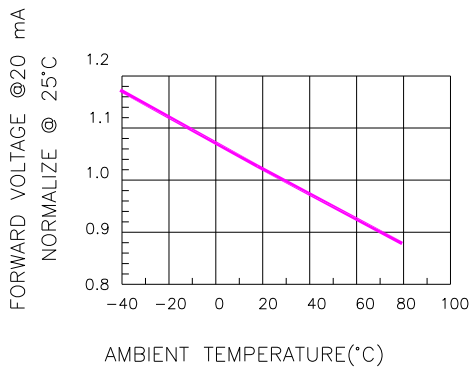


Fig.3 FORWARD VOLTAGE VS. TEMPERATURE

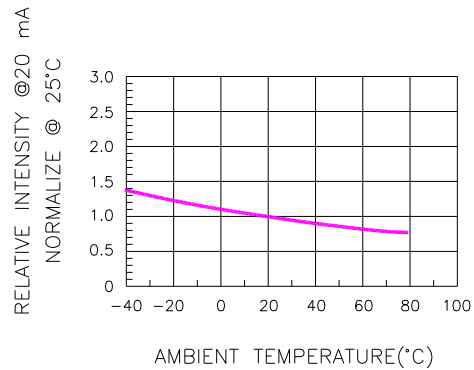


Fig.4 RELATIVE INTENSITY VS. TEMPERATURE

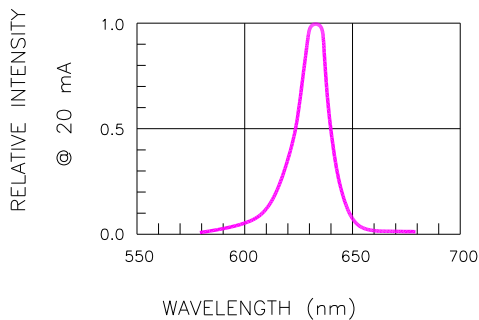


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

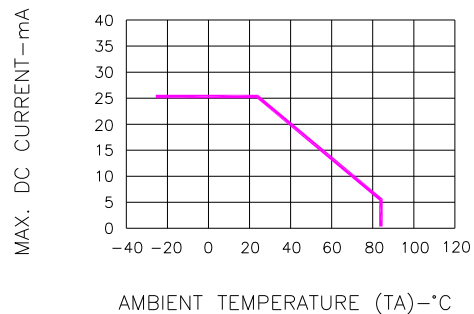


Fig.6 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE



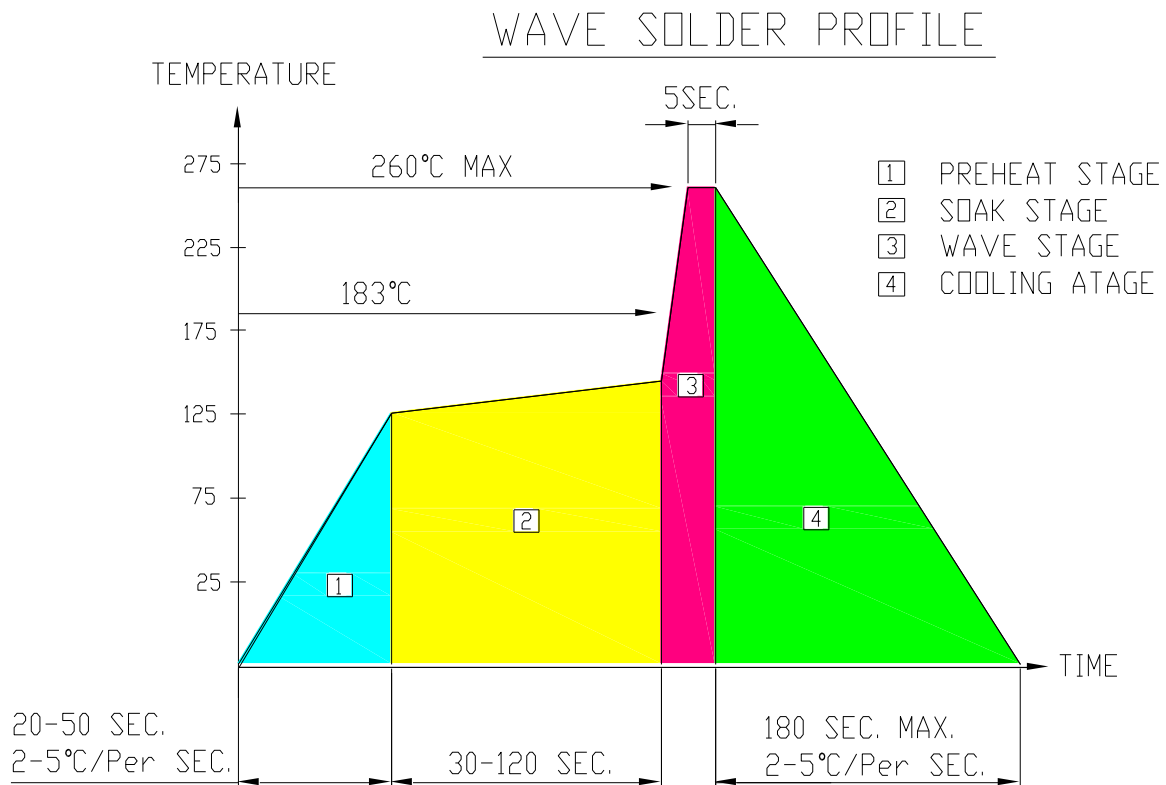
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● RECOMMEND SOLDERING PROFILE



● 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.