



American Opto Plus LED Corp.
0.28" SMD Type LED Display
SMA282LE GW
SMC282LE GW

● **FEATURES**

- 0.28 inch (7.0 mm) Digit Height.
- SMD type.
- Low current operation.
- Gray face, White segment.
- RoHS compliant, Pb Free.

● **DESCRIPTION**

The SMA282LE GW & SMC282LE GW are 0.28 inch (7.0mm) height
Dual 7-segment displays.

This device utilizes Super Bright Red LED chip which are made from AlInGaP
On a transparent GaAs, substrate.

The display has Gray face, White segment.

● **DEVICE**

PART NO	DESCRIPTION
SMA282LE GW	Common Anode
SMC282LE GW	Common Cathode

RoHS Compliance



Pb free.





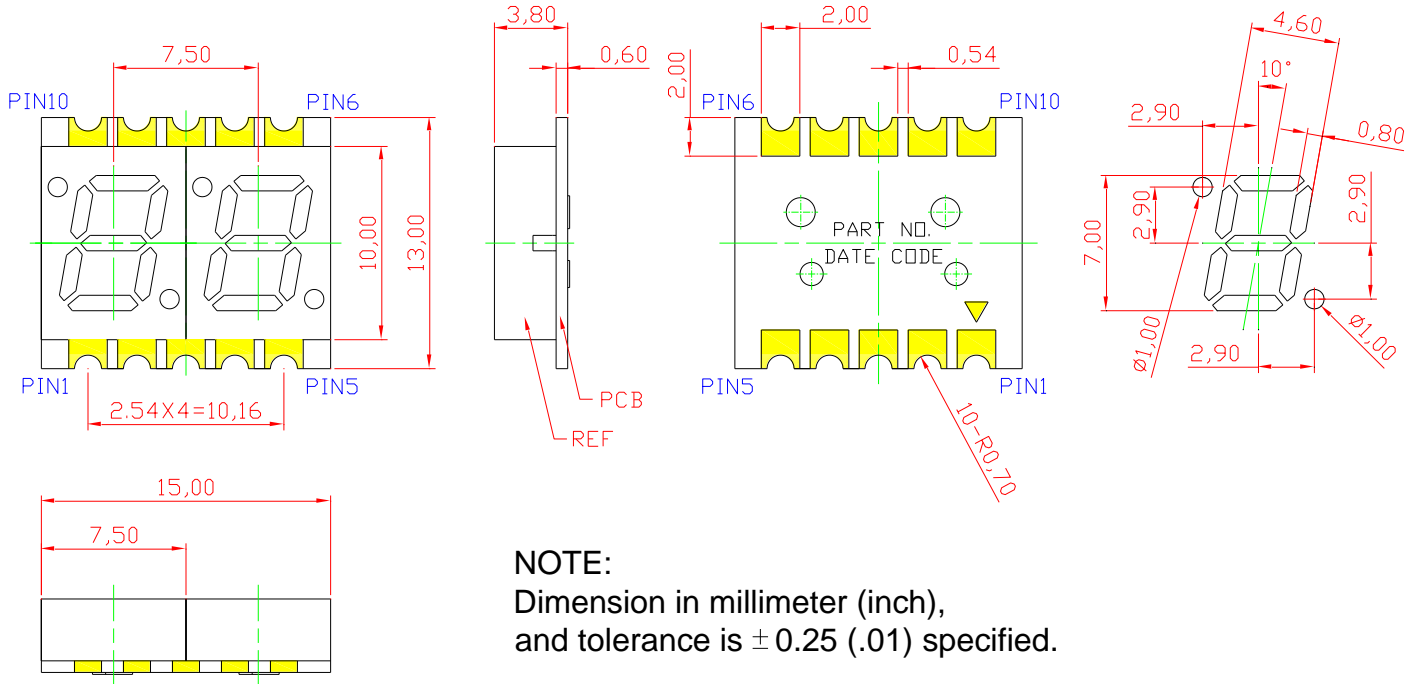
American Opto Plus LED Corp.

0.28" SMD Type LED Display

SMA282LE GW

SMC282LE GW

● MECHANICAL DIMENSIONS





American Opto Plus LED Corp.

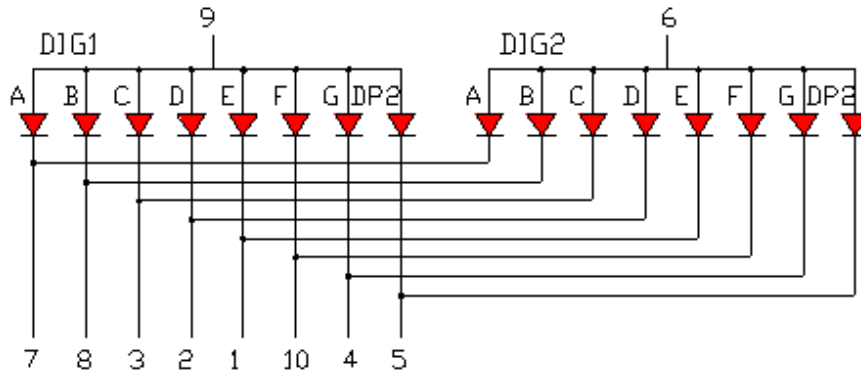
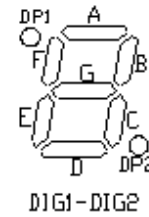
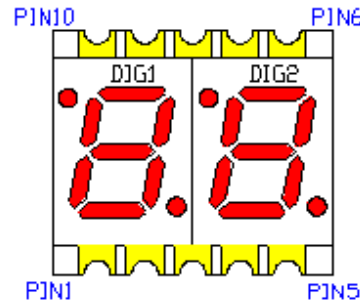
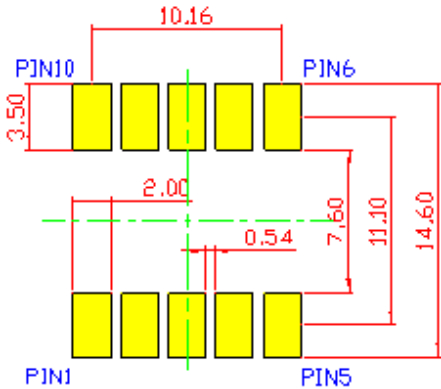
0.28" SMD Type LED Display

SMA282LE GW

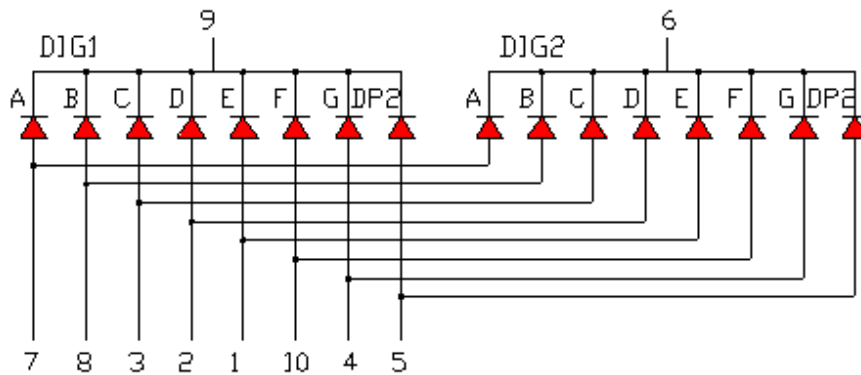
SMC282LE GW

● TYPICAL INTERNAL EQUIVALENT CIRCUIT

Recommended
Soldering Pattern



(Common Anode)



(Common Cathode)



American Opto Plus LED Corp.
0.28" SMD Type LED Display
SMA282LE GW
SMC282LE GW

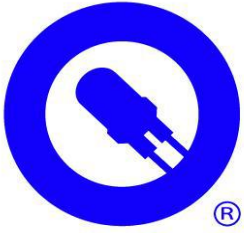
● **SUPER BRIGHT RED (AlGaInP/GaAs)**

ABSOLUTE MAXIMUM RATING AT Ta=25°C

Parameter	Symbol	Maximum Rating	Unit
Power dissipation	P _{AD}	70	mW
Derating liner from 25°C	-	0.28	mA / °C
Continuous forward current	I _{AF}	25	mA
Peak current (duty cycle 1/10, 1kHz)	I _{PF}	90	mA
Reverse voltage	V _R	5	V
Operating temperature	T _{OPR}	-40 to +105	°C
Storage temperature	T _{STG}	-40 to +105	°C

ELECTRICAL - OPTICAL CHARACTERISTICS AT Ta=25°C

Characteristic	Symbol	Condition	Min.	Type.	Max.	Unit
Forward Voltage, (Per Dice)	V _F	I _F =20mA	-	2.0	2.6	V
Reverse Current, (Per Dice)	I _R	V _R =5V	-	-	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	-	10	-	mcd
Spectral radiation bandwidth	Δλ	I _F =20mA	-	20	-	nm



American Opto Plus LED Corp.

0.28" SMD Type LED Display

SMA282LE GW

SMC282LE GW

● SUPER BRIGHT RED (AlGaInP/GaAs) CURVE

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

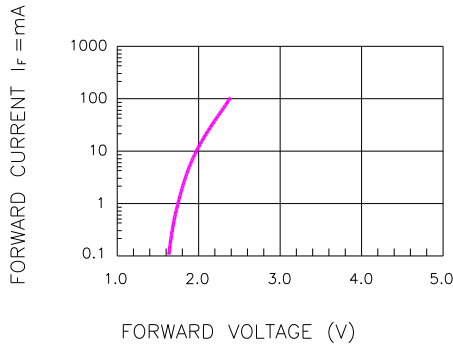


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

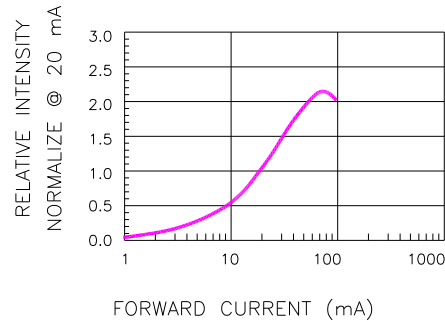


Fig.2 RELATIVE INTENSITY VS. FORWARD CURRENT

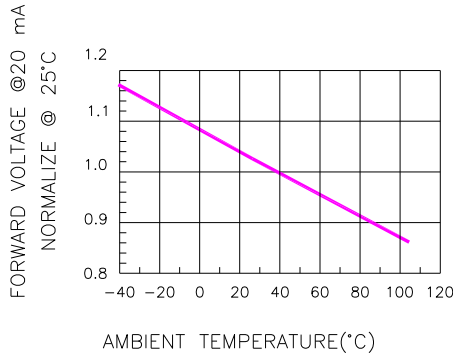


Fig.3 FORWARD VOLTAGE VS. TEMPERATURE

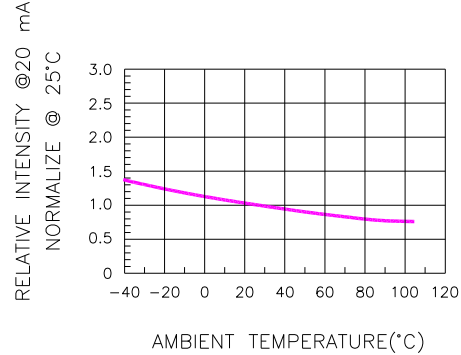


Fig.4 RELATIVE INTENSITY VS. TEMPERATURE

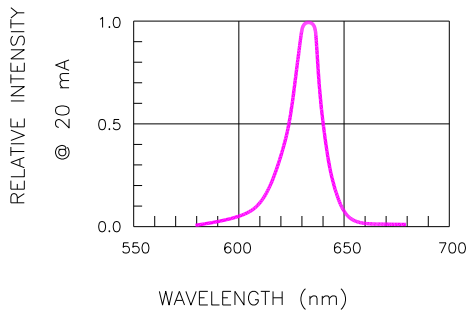


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

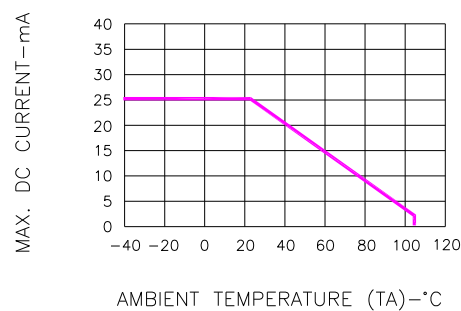


Fig.6 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE

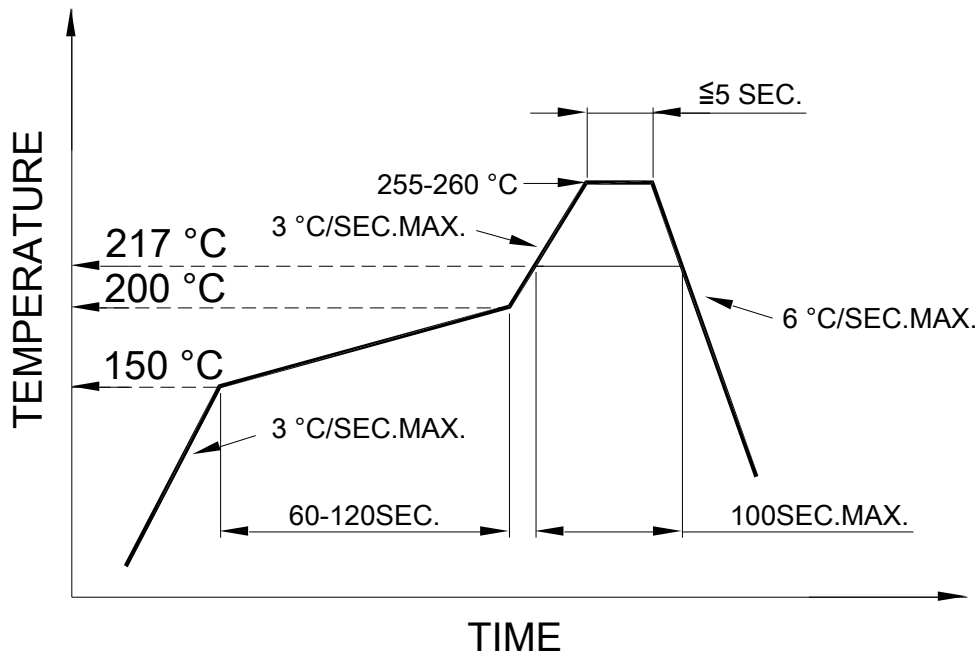


American Opto Plus LED Corp.
0.28" SMD Type LED Display
SMA282LE GW
SMC282LE GW

● **RECOMMEND SOLDERING PROFILE**

SMT Soldering Profile

Pb free reflow soldering Profile



● **SOLDERING IRON**

Basic specification : ≤ 4 seconds 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°C.