



American Opto Plus LED Corp.
0.40" SMD Type LED Display
SMA404LB G/W
SMC404LB G/W

● **FEATURES**

- 0.40 inch (10.16 mm) Digit Height.
- SMD type.
- Low current operation.
- Gray face, White segment.
- RoHS compliant, Pb Free.

● **DESCRIPTION**

The SMA404LB G/W & SMC404LB G/W are 0.40 inch (10.16mm) height
Quadruple 7-segment displays.

This device utilizes Super Bright Blue LED chip which are made from InGaN
On a transparent GaN, substrate.

The display has Gray face, White segment.

● **DEVICE**

PART NO	DESCRIPTION
SMA404LB G/W	Common Anode
SMC404LB G/W	Common Cathode

RoHS Compliance



Pb free.





Technical drawing of a 16-pin DIP package showing top, side, and detail views with dimensions in millimeters and inches.

Top View Dimensions:

- Overall width: 15.00 (0.591)
- Overall length: 9.25X4=37.00 (0.364X4=1.456)
- Pin pitch: 2.54X5=12.70 (0.1X5=0.5)
- Pin 1 indicator: 12, 7, 6, 1
- Part number and date code area: 7, 12, 6, 1

Side View Dimensions:

- Package height: 3.75 (0.148)
- Pin height: 0.60 (0.024)
- Pin 1 indicator: 7, 12

Detail View Dimensions:

- Pin width: 5.60 (0.221)
- Pin thickness: 10°
- Pin height: 0.90 (0.035)
- Pin spacing: 4.63 (0.182)
- Pin 1 indicator: 16-RO.70
- Pin 1 indicator: 0.30
- Pin 1 indicator: 0.90
- Pin 1 indicator: 3.50 (0.138)

NOTE:

Dimension in millimeters (inches),
And tolerance are $\pm 0.25\text{mm}$ (± 0.01 ") specified

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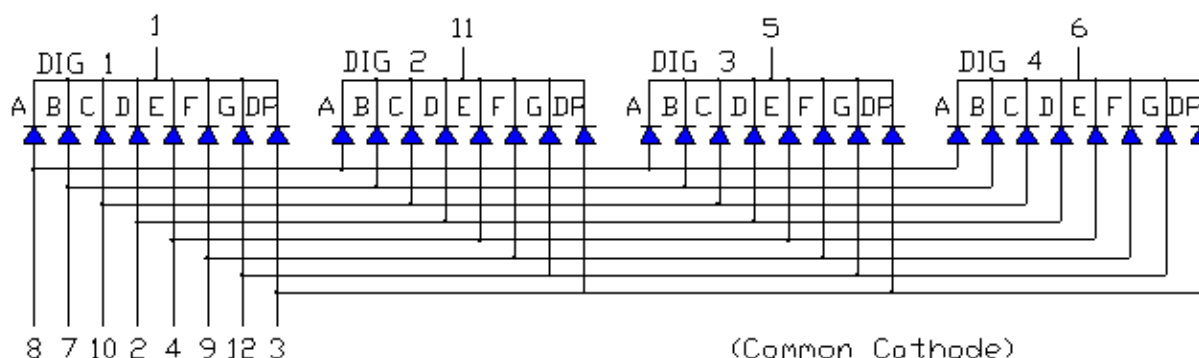
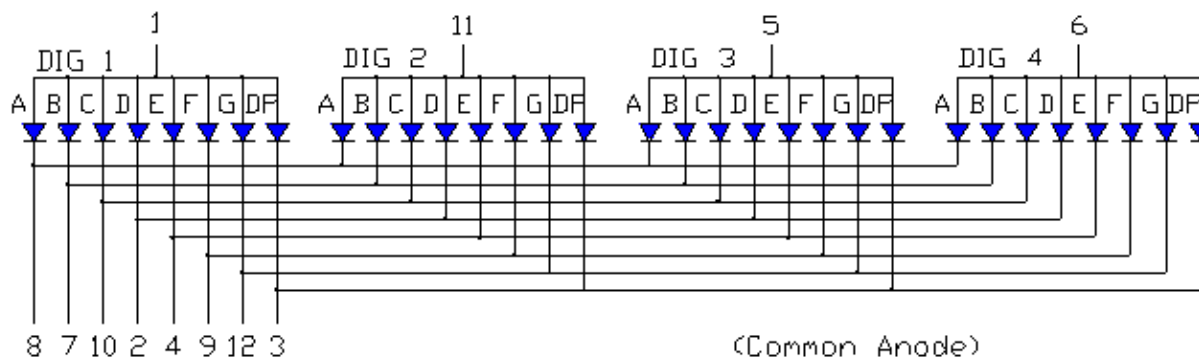
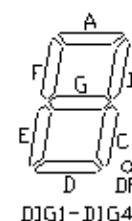
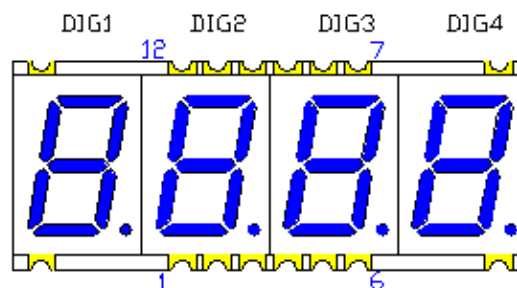
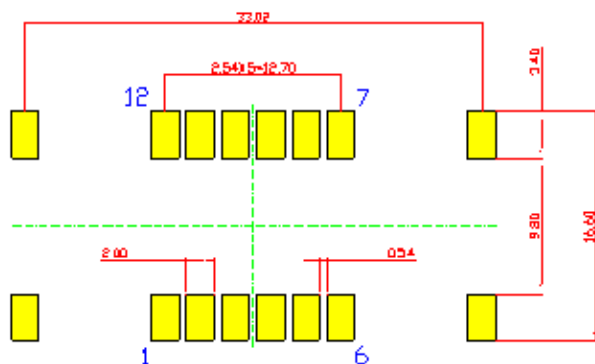
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● TYPICAL INTERNAL EQUIVALENT CIRCUIT

Recommended
Soldering Pattern





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● **SUPER BRIGHT BLUE (InGaN/GaN)**

ABSOLUTE MAXIMUM RATING AT Ta=25°C

Parameter	Symbol	Maximum Rating	Unit
Power dissipation	P _{AD}	120	mW
Derating liner from 25°C	-	0.3	mA / °C
Continuous forward current	I _{AF}	30	mA
Peak current (duty cycle 1/10, 1kHz)	I _{PF}	100	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	-	3.2	4.0	V
Reverse Current, (Per Dice)	I _R	V _R =8V	-	-	10	μA
Dominant Wavelength	λ _D	I _F =20mA	-	470	-	nm
Luminous Intensity	I _V	I _F =20mA	-	20	-	mcd
Spectral radiation bandwidth	Δλ	I _F =20mA	-	30	-	nm



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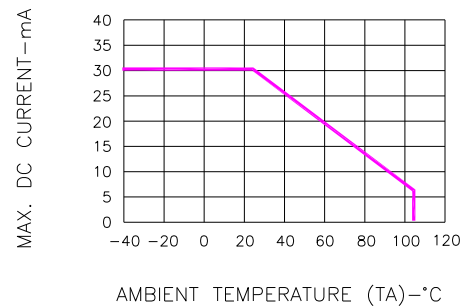
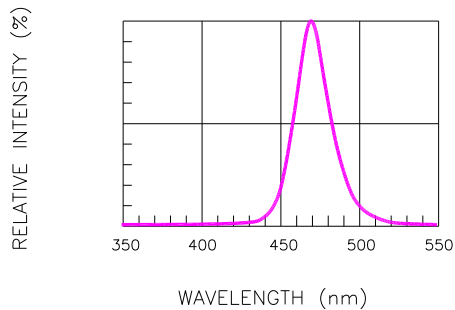
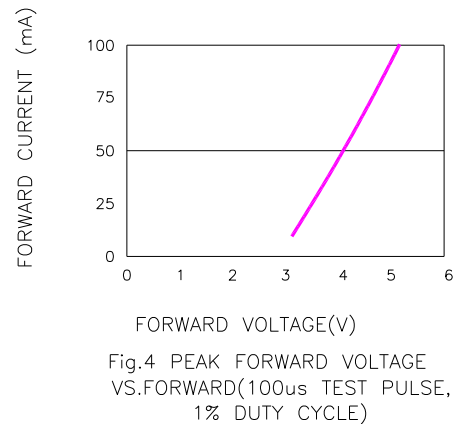
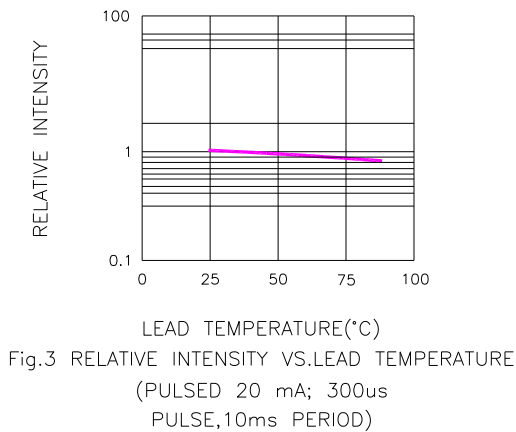
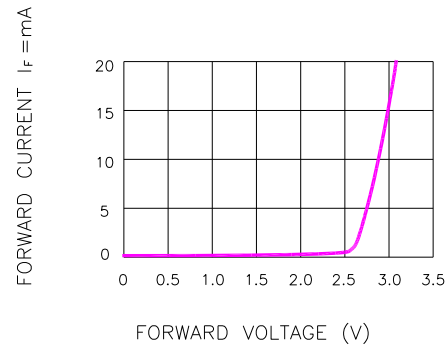
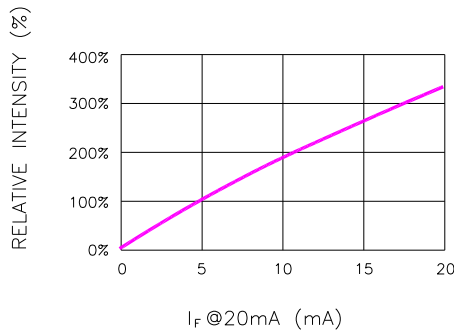
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● SUPER BRIGHT BLUE (InGaN/GaN) CURVE

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



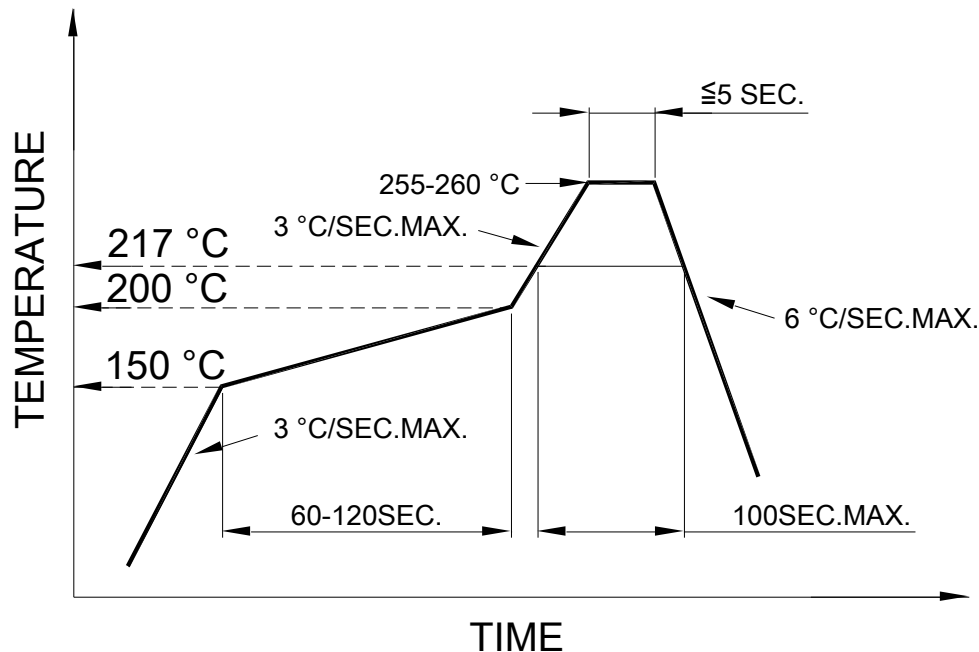


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● **RECOMMEND SOLDERING PROFILE**

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.