



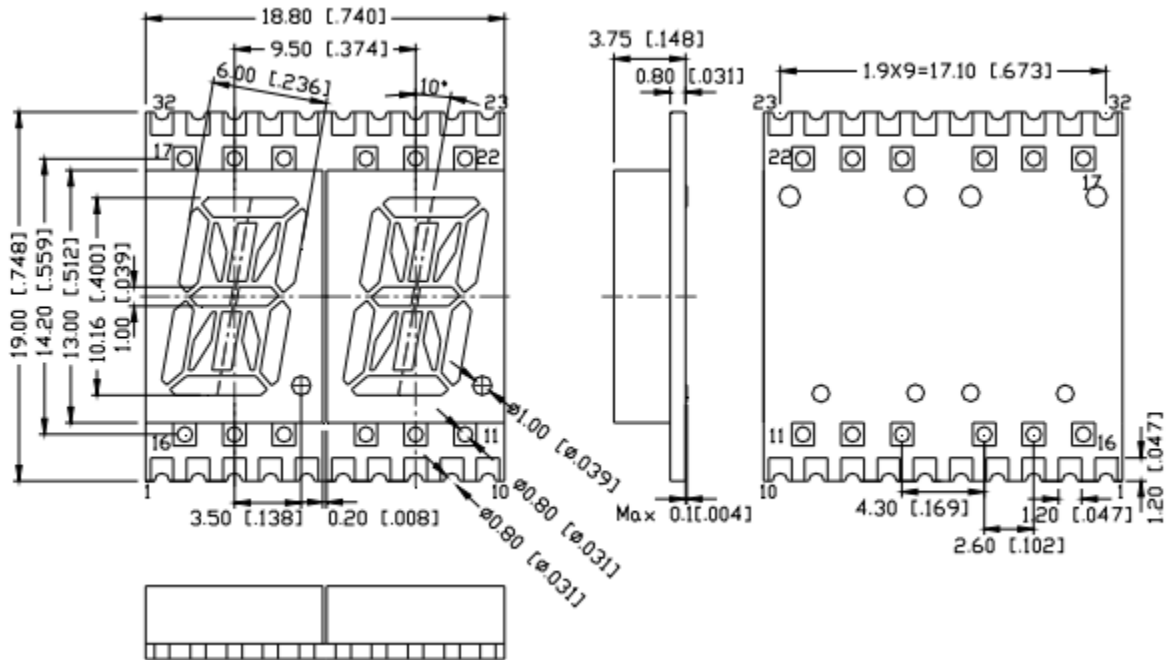
American Opto Plus LED Corp.

SMA4028A-C G/W

SMC4028A-C G/W

0.4" Amber Dual Digit Alphanumeric SMD Display

MECHANICAL DIMENSIONS



Notes:

1. Dimension in millimeter [inch], tolerance is ± 0.25 [0.10] and the angle is $\pm 1\%$ unless otherwise noted.
2. Bending \leq Length * 1%.

Chip Material	Emitted Color	Segment/Face	Description
AlGaInP	Amber	White/Gray	Common Anode Common Cathode



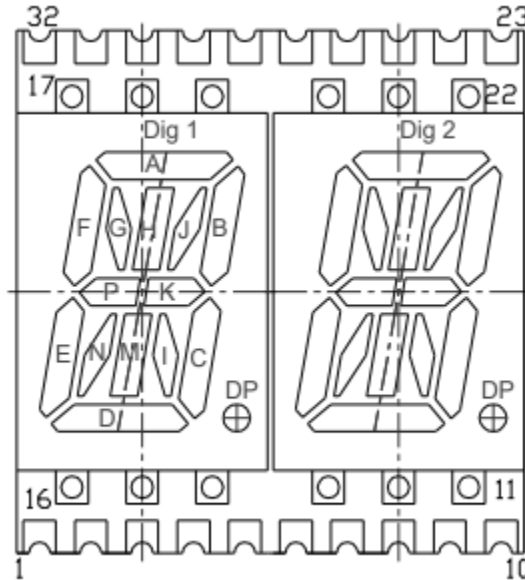
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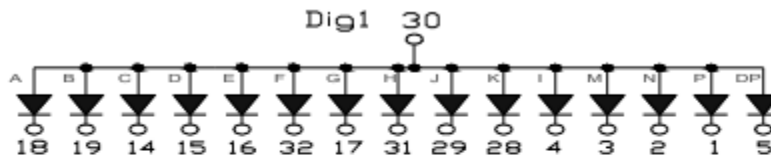
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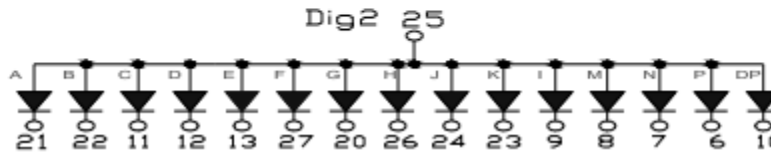
ALL LIGHT ON SEGMENTS FEATURE



INTERNAL CIRCUIT DIAGRAMS



Common Anode



Common Cathode



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ABSOLUTE MAXIMUM RATING

(Ta=25°C)

Parameter	Symbol	Rating	Unit
Power Dissipation (Per Dice)	P_D	70	mW
Continuous Forward Current (Per Dice)	I_F	25	mA
Peak Current (Per Dice, duty cycle 1/10,1KHz)	I_{FP}	90	mA
Derating Liner from 25°C(Per Dice)	$\Delta I_F/\Delta T$	0.33	mA/°C
Reverse Voltage (Per Dice)	V_R	5	V
Electrostatic discharge(HBM)	ESD	--	V
Operating Temp.	T_{OPR}	-40 ~ +105	°C
Storage Temp.	T_{STG}	-40 ~ +105	°C

ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage (Per Dice)	VF	IF=20mA	--	2.0	2.8	V
Dominant Wavelength	λ_d	IF=10mA	--	605	--	nm
Peak Wavelength	λ_p		--	612	--	nm
Luminous Intensity Matching Ratio	IV-m		--	--	2:1	--
Luminous Intensity (Per Segment)	IV		--	7	--	mcd
Reverse Current	Ir	VR=5V	--	--	100	μA



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LUMINOUS GENERAL IV BIN GRADE

($I_f = 10\text{mA}$)

Bin	Min	Max	Unit
H	4.204	6.726	mcd
J	6.727	10.763	
K	10.764	17.223	

Notes: Tolerance: $\pm 20\%$



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ELECTRICAL/OPTICAL CHARACTERISTICS CURVES

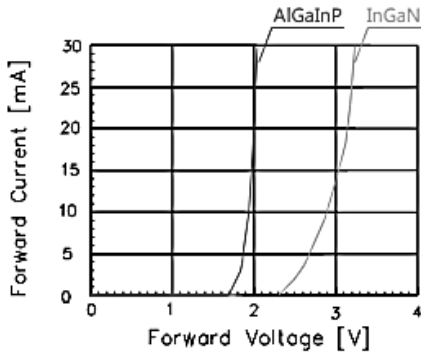


Fig 1. Forward Current vs. Forward Voltage

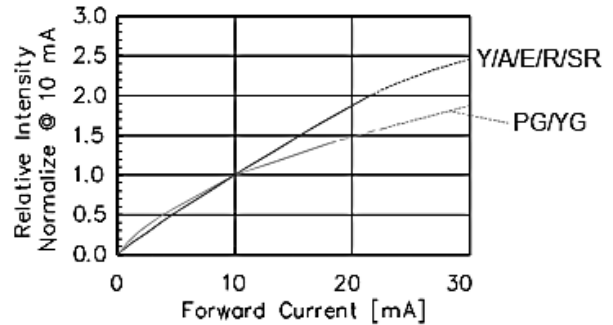


Fig 2. Relative Intensity vs. Forward Current

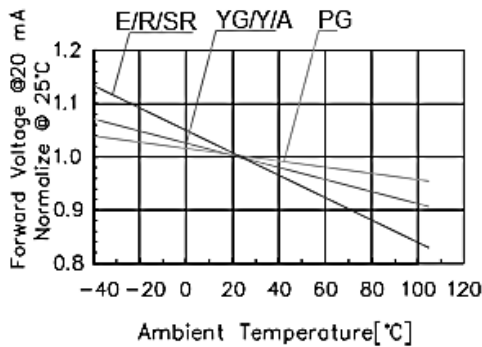


Fig 3. Forward Voltage vs. Temperature

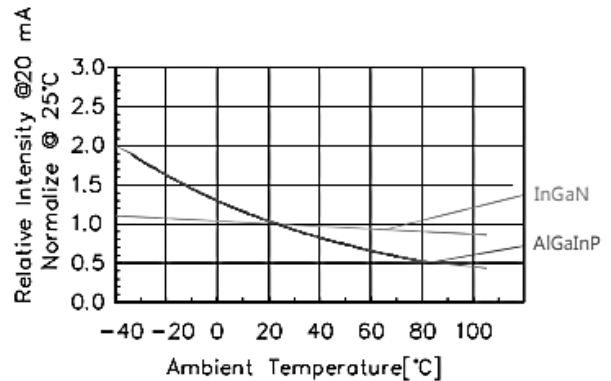


Fig 4. Relative Intensity vs. Temperature

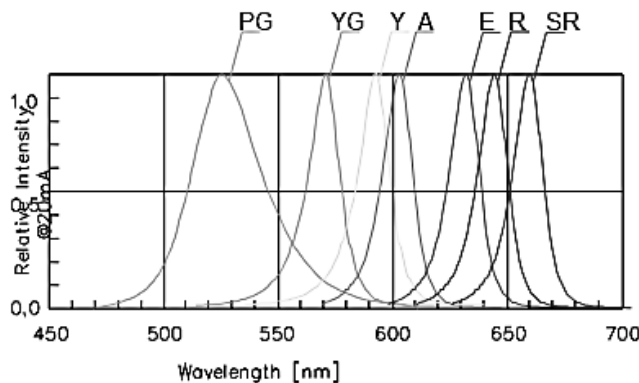


Fig 5. Relative Intensity vs. Wavelength

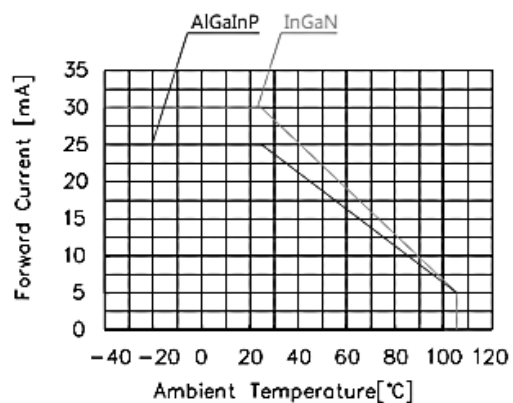


Fig 6. Forward current vs. Temperature



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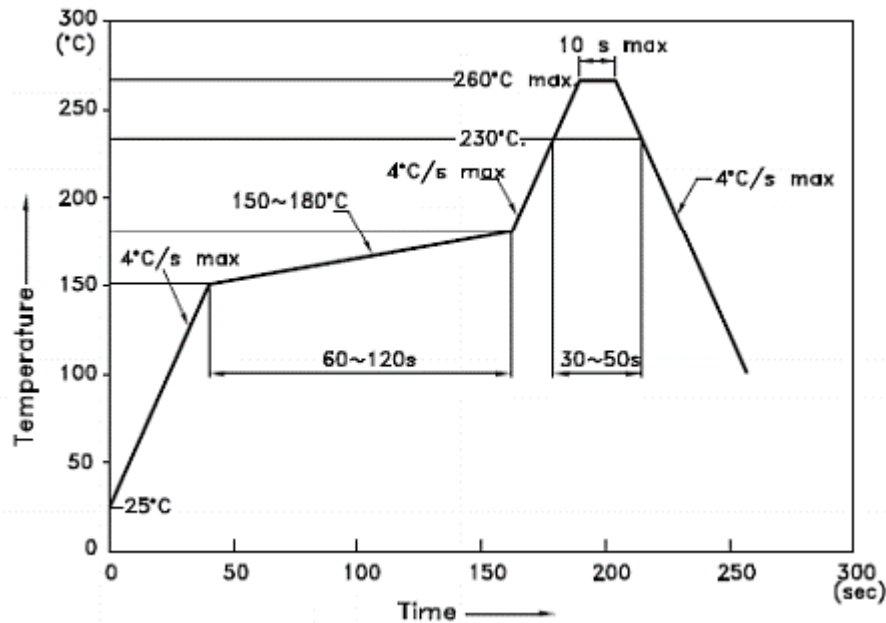
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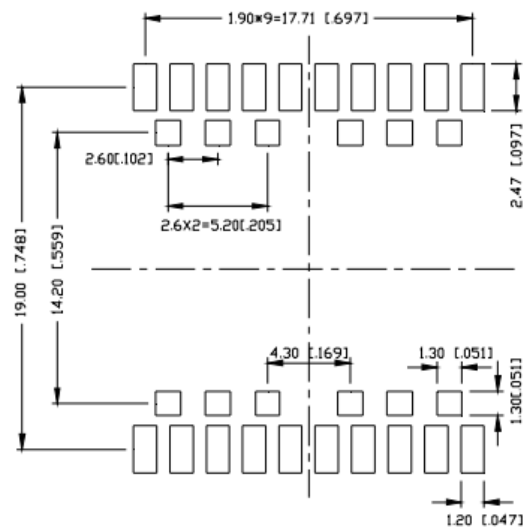
REFLOW SOLDERING CONDITION

IR Reflow Temperature/ Time



1. We recommend the reflow temperature is $245^{\circ}\text{C} \pm 5^{\circ}\text{C}$.
2. The maximum soldering temperature should be limited to 260°C .
3. Do not cause any stress to the epoxy resin while it is exposed to the high temperature.
4. Number of reflow process shall be 2 times or less.

RECOMMENDED PCB LAYOUT





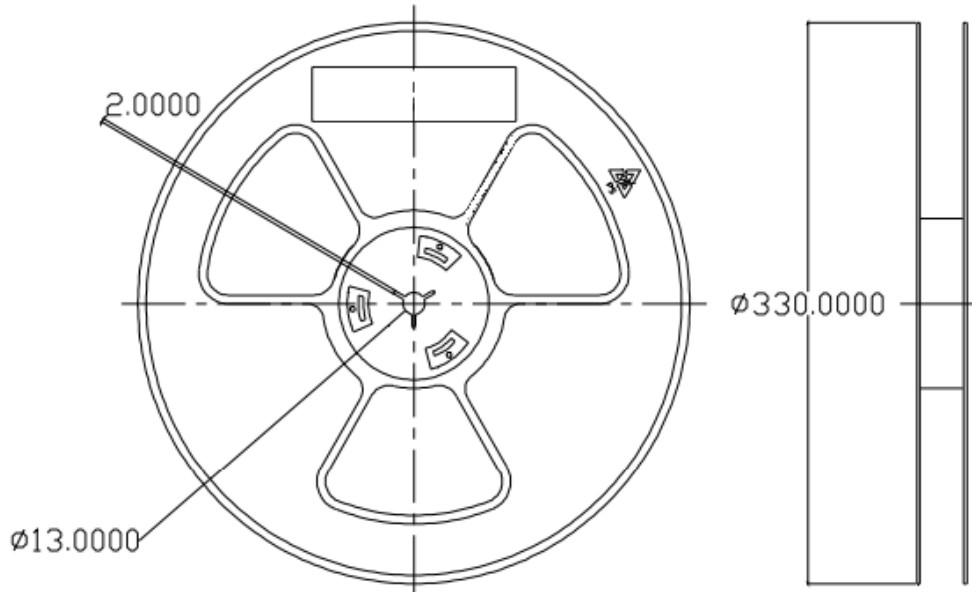
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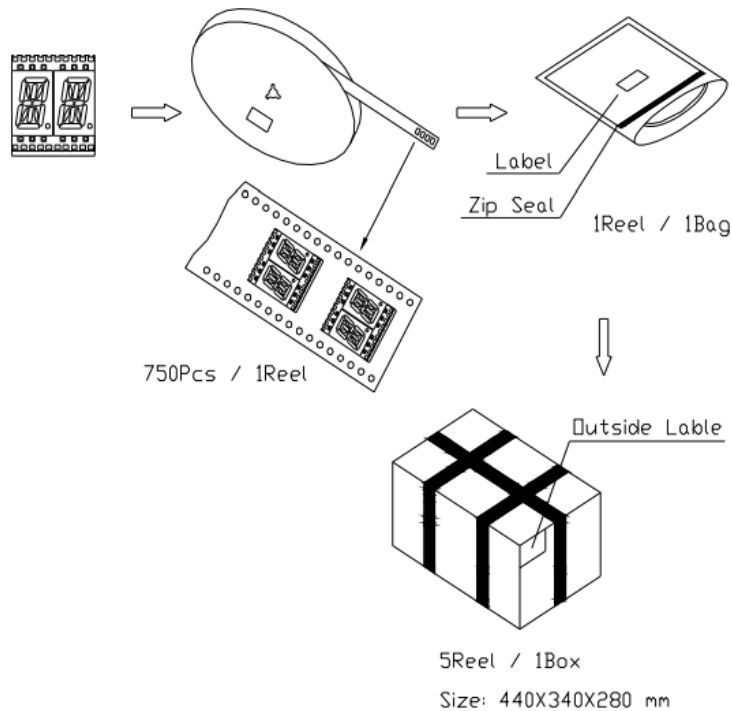
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REEL DIMENSION



PACKING & LABEL DIMENSIONS



Note: specifications are subject to change without notice.
Please contact us for the updated information.