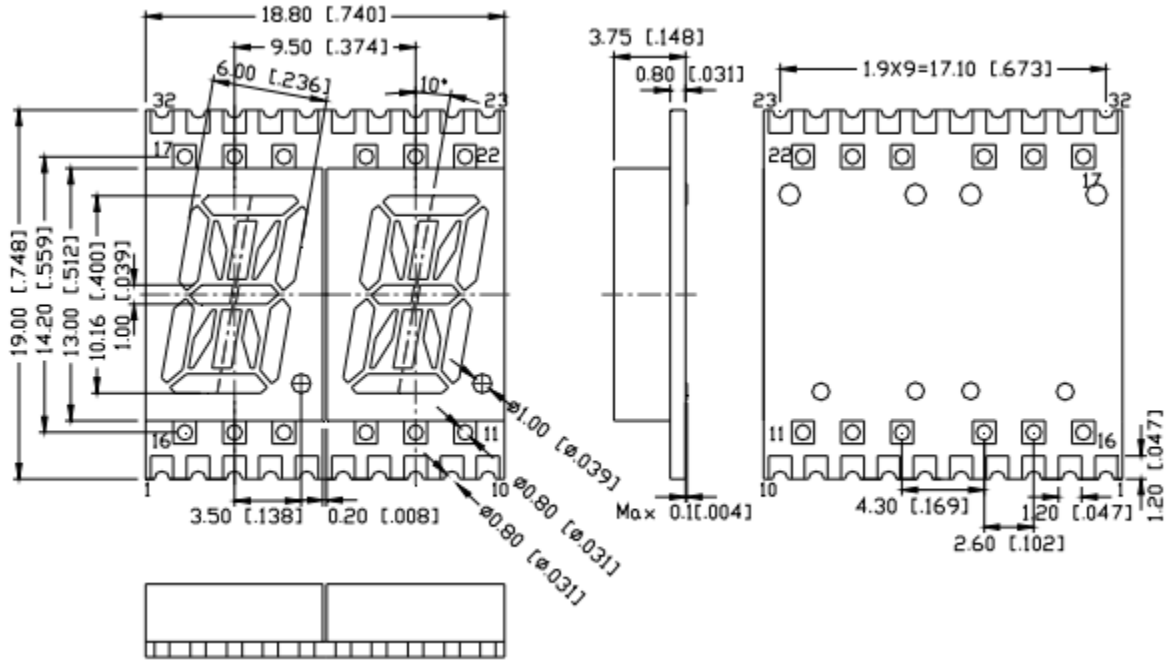




American Opto Plus LED Corp.
SMA4028E-C GW
SMC4028E-C GW
0.4" Red Dual Digit Alphanumeric SMD Display

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	Red	White/Gray	Common Anode Common Cathode



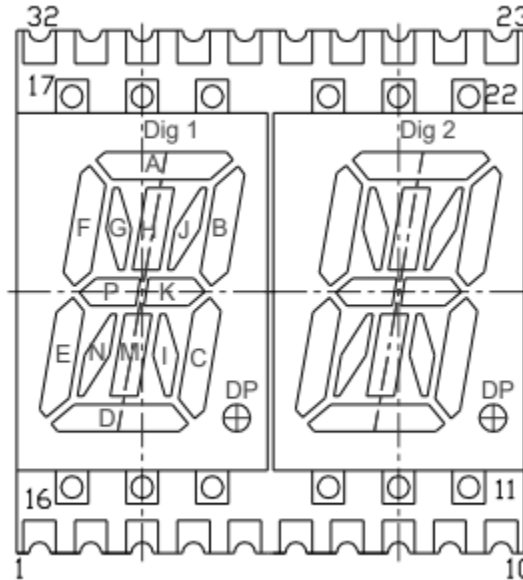
American Opto Plus LED Corp.

SMA4028E-C GW

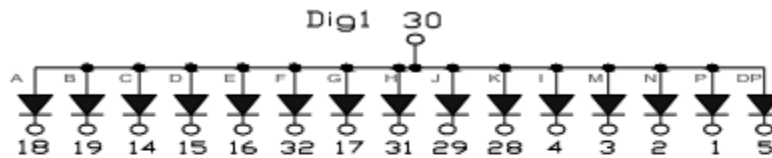
SMC4028E-C GW

0.4" Red Dual Digit Alphanumeric SMD Display

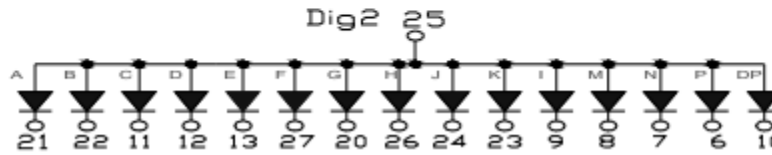
ALL LIGHT ON SEGMENTS FEATURE



INTERNAL CIRCUIT DIAGRAMS



Common Anode



Common Cathode



American Opto Plus LED Corp.
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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)	ΔI _F /ΔT	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 Segment)	V _F	I _F =20mA	--	2.0	2.8	V
Dominant Wavelength	λ _d	I _F =10mA	--	630	--	nm
Peak Wavelength	λ _p		--	644	--	nm
Luminous Intensity Matching Ratio	I _{V-m}		--	--	2:1	--
Luminous Intensity (Per Segment)	I _V		--	7	--	mcd
Reverse Current	I _r	V _R =5V	--	--	100	μA



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LUMINOUS GENERAL LV 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: $\pm 20\%$



American Opto Plus LED Corp.

SMA4028E-C GW

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ELECTRICAL/OPTICAL CHARACTERISTICS CURVES

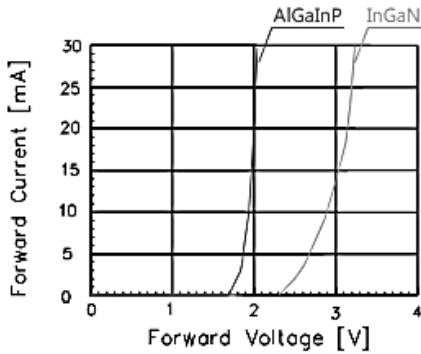


Fig 1. Forward Current vs. Forward Voltage

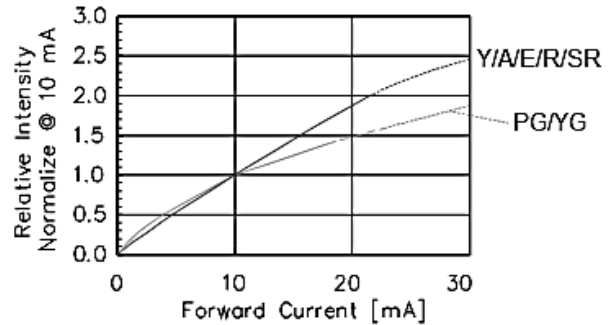


Fig 2. Relative Intensity vs. Forward Current

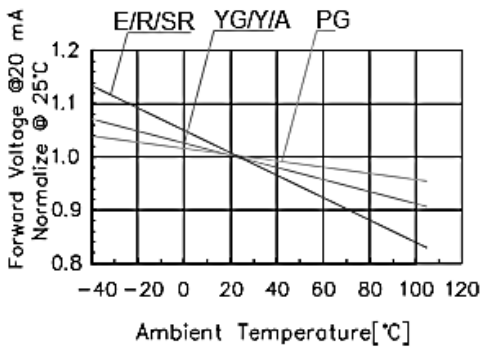


Fig 3. Forward Voltage vs. Temperature

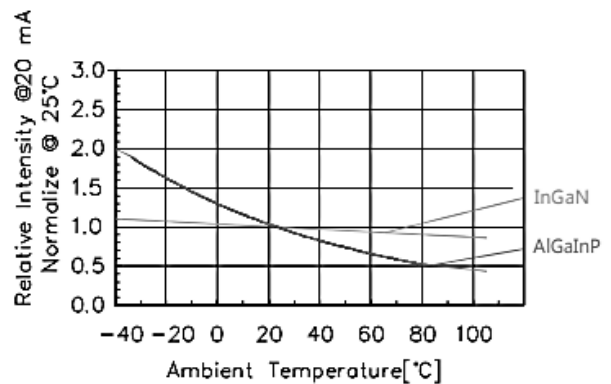


Fig 4. Relative Intensity vs. Temperature

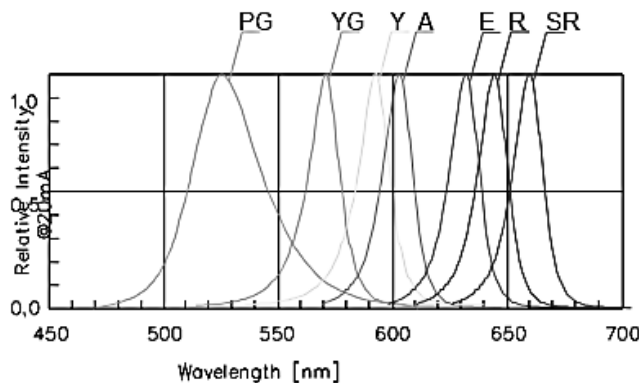


Fig 5. Relative Intensity vs. Wavelength

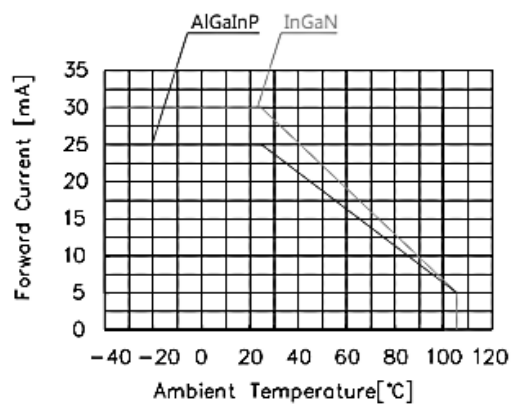


Fig 6. Forward current vs. Temperature



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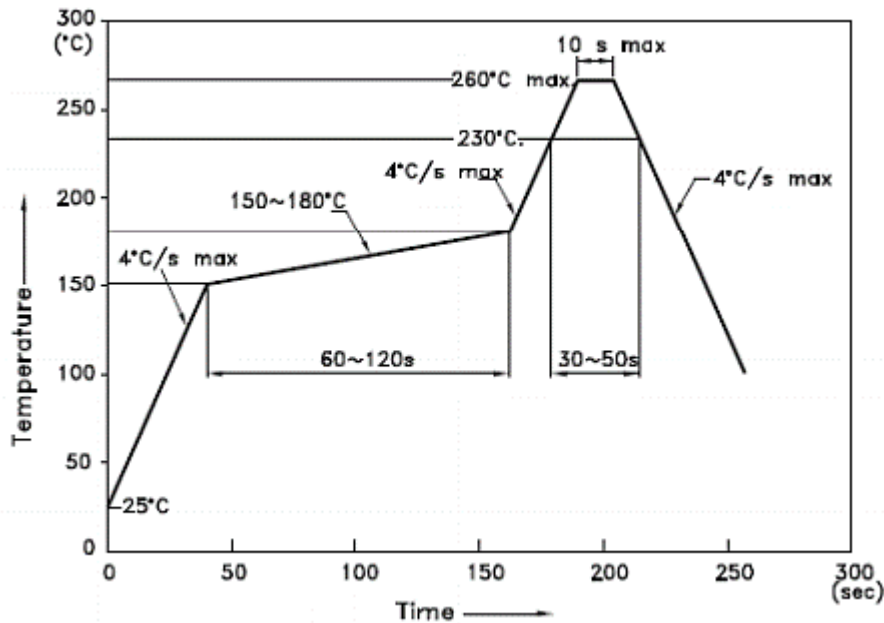
SMA4028E-C GW

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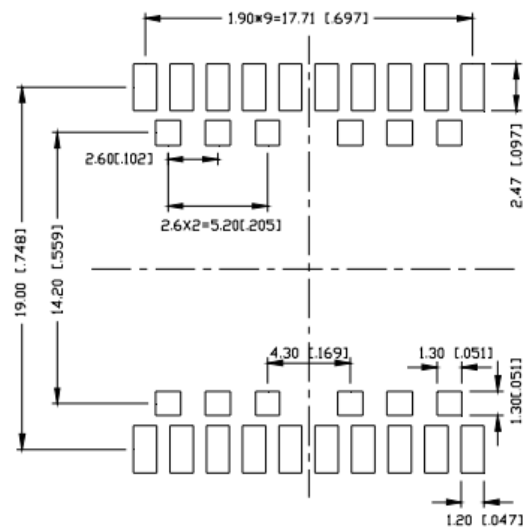
REFLOW SOLDERING CONDITION

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.

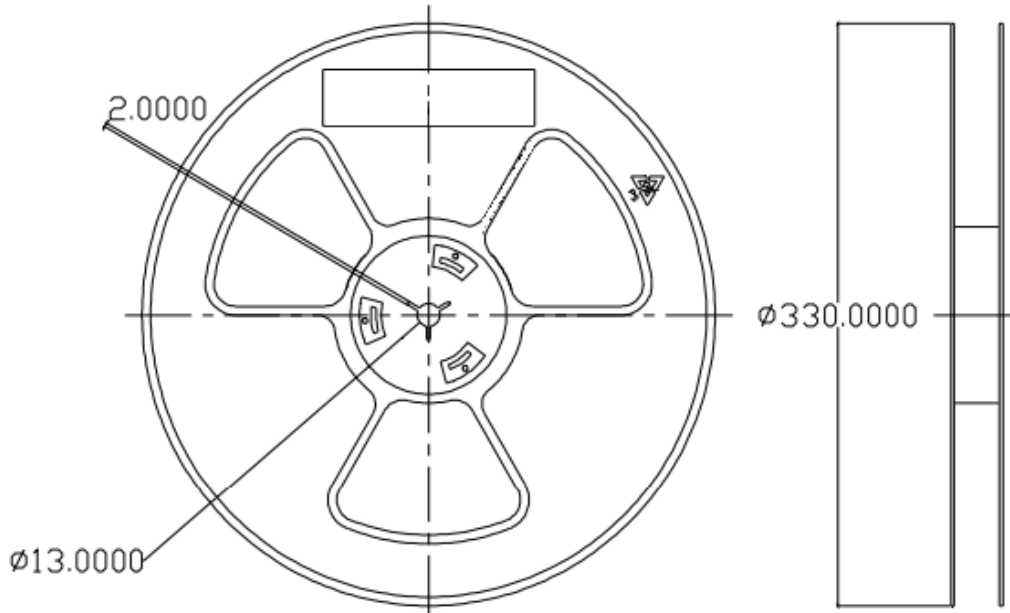
RECOMMENDED PCB LAYOUT



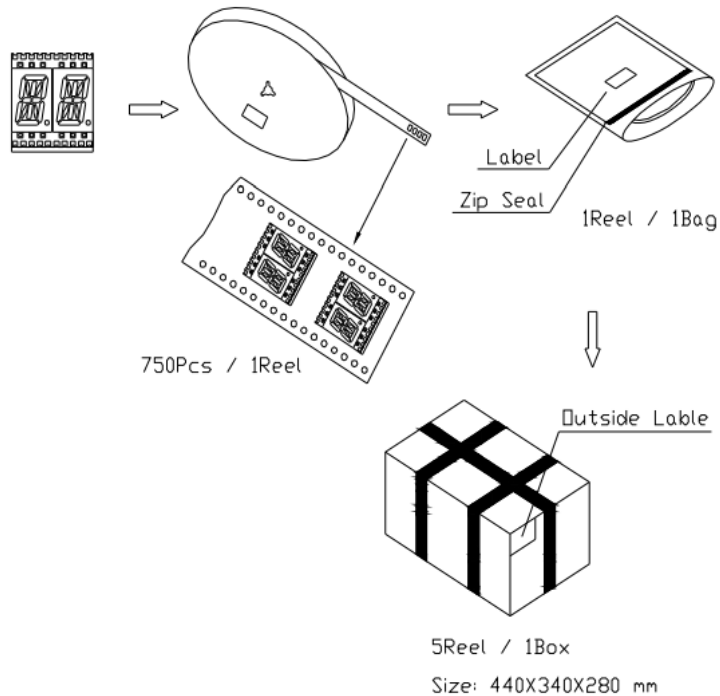


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REEL DIMENSION



PACKING & LABEL DIMENSIONS



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