

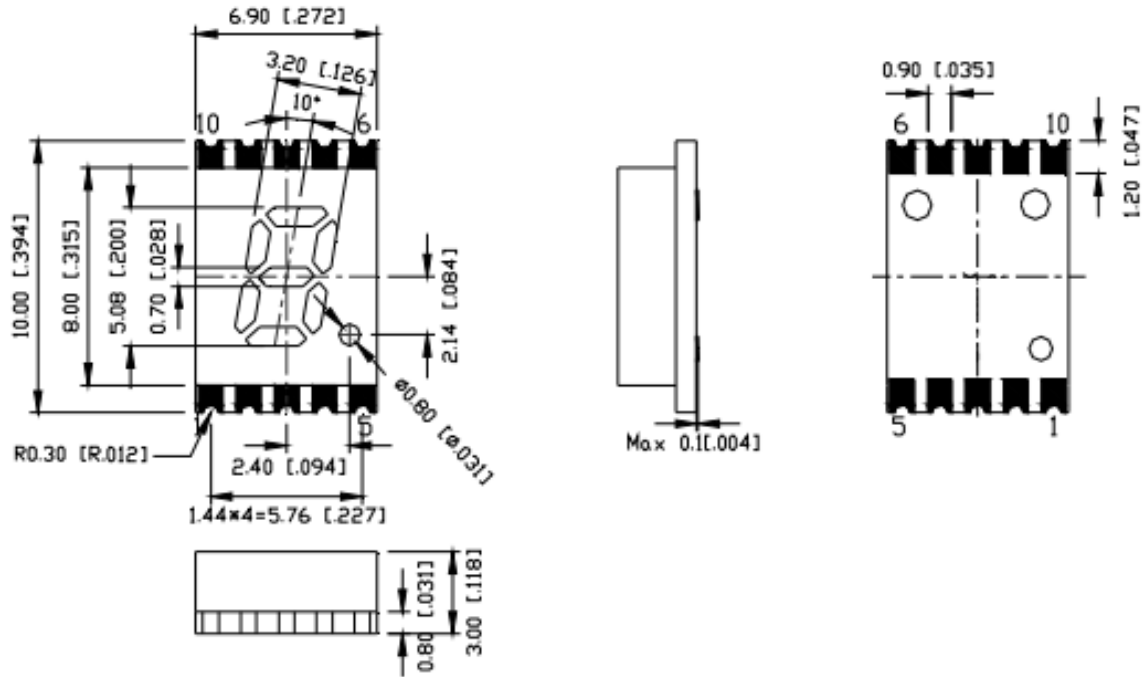


American Opto Plus LED Corp.

SMAC201LB G/W

0.2" Blue Single Digit SMD Display

MECHANICAL DIMENSIONS



Notes:

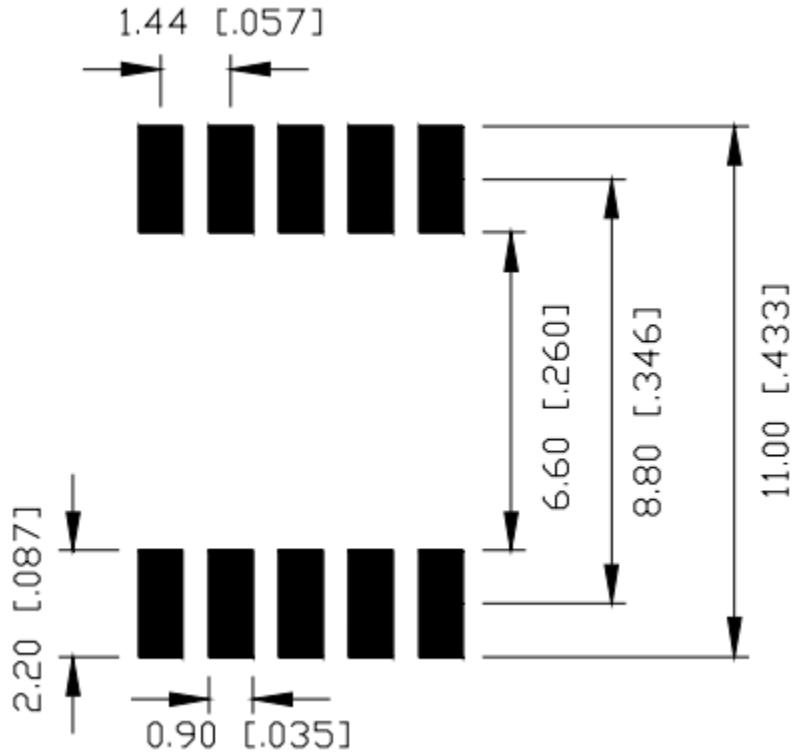
1. Dimension in millimeter [inch], tolerance is ± 0.25 [0.10] unless otherwise noted.
2. All pins are $\Phi 0.6 \pm 0.1$

Chip Material	Emitted Color	Segment/Face	Description
InGaN	Blue	White/Gray	Common Anode Common Cathode



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RECOMMENDED SOLDERING PAD SIZE



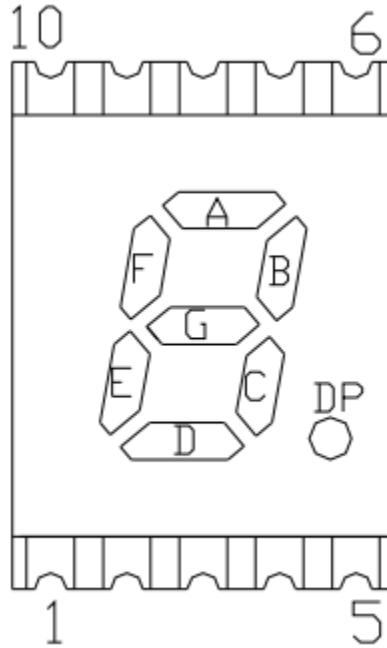


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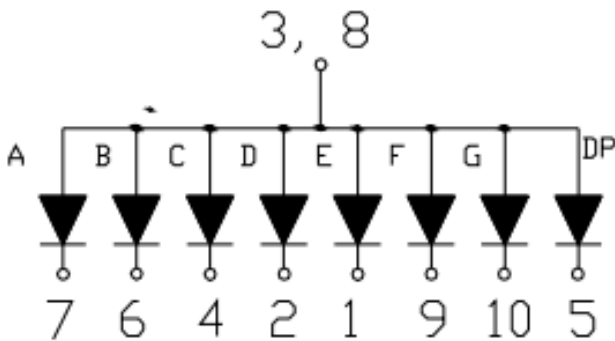
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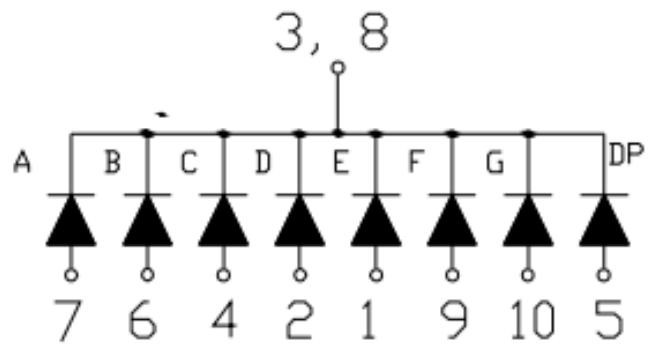
ALL LIGHT ON SEGMENTS FEATURE AND PAD POSITION



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	114	mW
Continuous Forward Current (Per Dice)	I_F	30	mA
Peak Current (Per Dice, duty cycle 1/10,1KHz)	I_{FP}	100	mA
Derating Liner from 25°C(Per Dice)	$\Delta I_F/\Delta T$	0.4	mA/°C
Reverse Voltage (Per Dice)	V_R	5	V
Electrostatic discharge(HBM)	ESD	1500	V
Operating Temp.	T_{OPR}	-40 ~ +105	°C
Storage Temp.	T_{STG}	-40 ~ +105	°C
Hand Soldering Temp.	T_{SOL}	350	°C

ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage (Per Segment)	V_F	$I_F=20mA$	--	3.2	3.8	V
Dominant Wavelength	λ_D		--	465	--	nm
Luminous Intensity (Per Segment)	I_V	$I_F=10mA$	--	11	--	mcd
Luminous Intensity Matching Ratio	I_{V-m}		--	--	2:1	--
Reverse Current	I_r	$V_R=5V$	--	--	50	μA



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LUMINOUS INTENSITY CLASSIFICATION

(IF=10mA)

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

Notes:

1. Tolerance: $\pm 20\%$

COLORE BIN CLASSIFICATION

(IF=20mA)

Bin Code	Min	Max	Unit
2	456	459	nm
3	459	462	
4	462	465	
5	465	468	
6	468	471	

Notes:

1. Tolerance: ± 1



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ELECTRICAL/OPTICAL CHARACTERISTICS CURVES

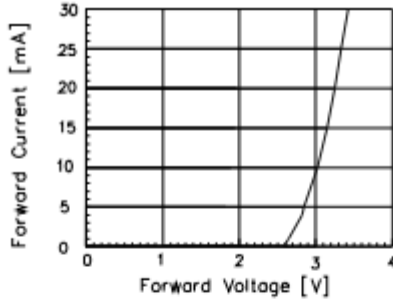


Fig 1. Forward Current vs. Forward Voltage

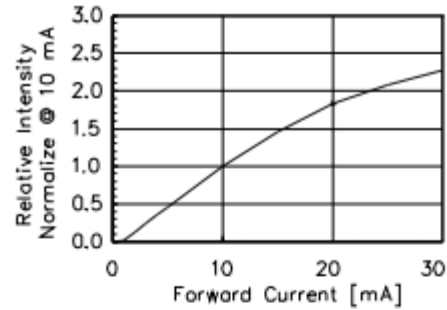


Fig 2. Relative Intensity vs. Forward Current

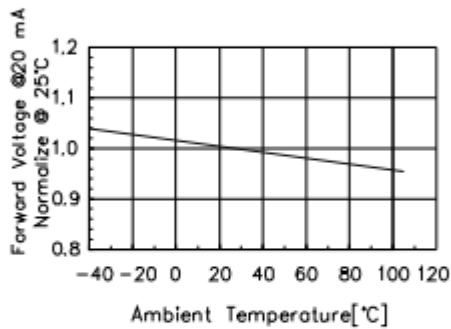


Fig 3. Forward Voltage vs. Temperature

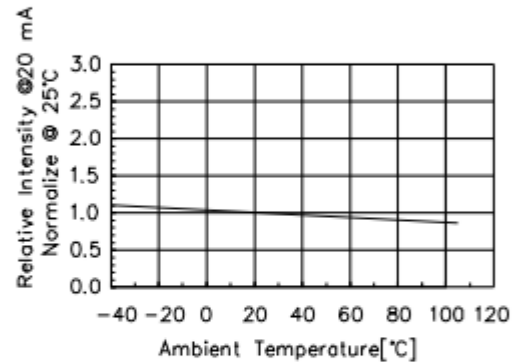


Fig 4. Relative Intensity vs. Temperature

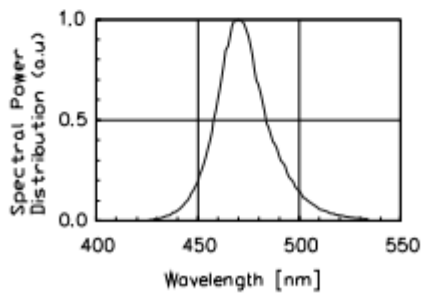


Fig 5. Spectral Power Distribution vs. Wavelength

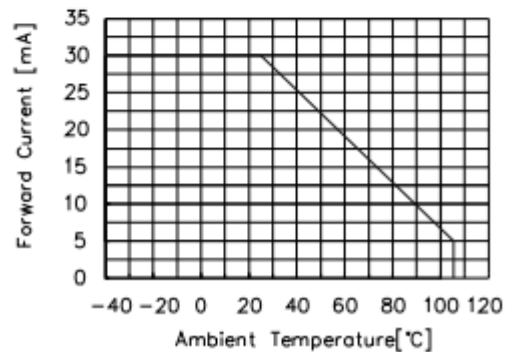


Fig 6. Forward current vs. Temperature



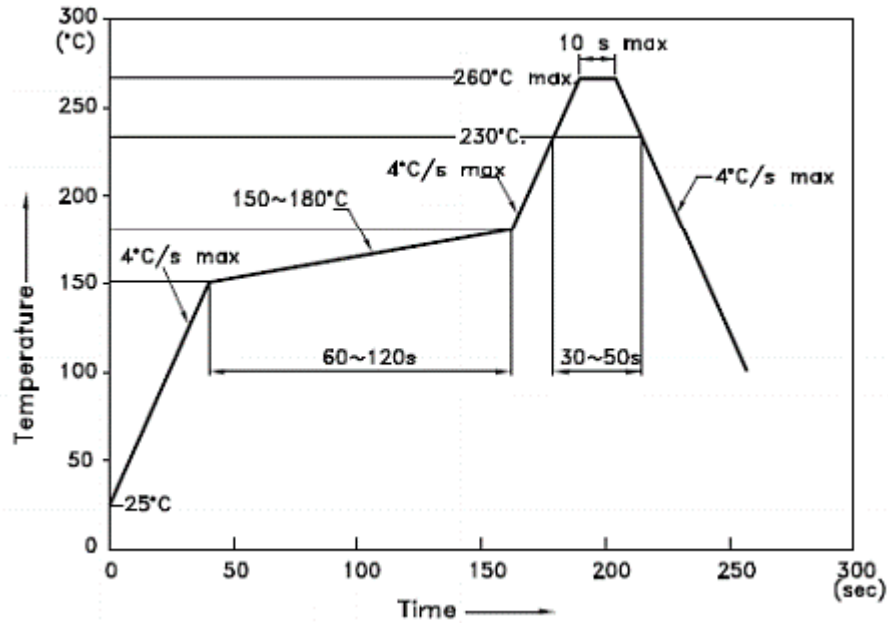
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REFLOW SOLDERING CONDITION

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.

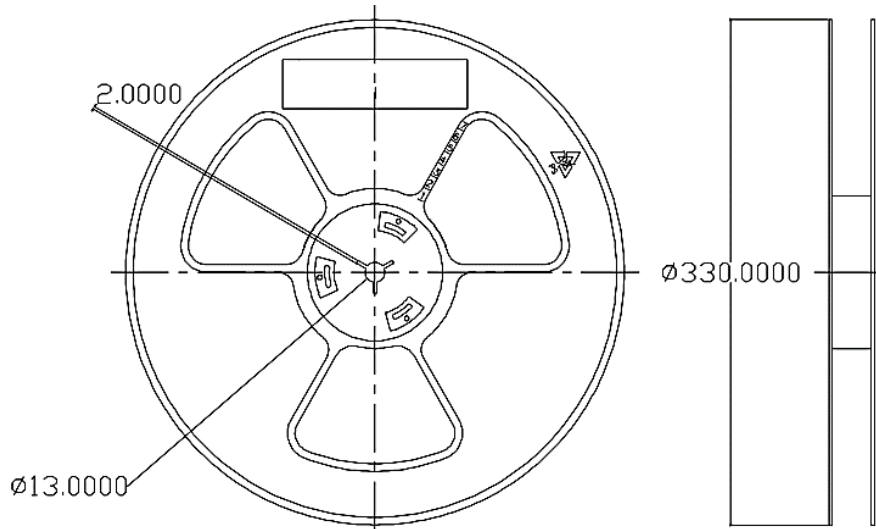


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REEL DIMENSIONS



PACKING & LABEL DIMENSIONS

