DATA SHEET

PART NO.: SA561UB105

REV: A / 1

PACKAGE DIMENSIONS
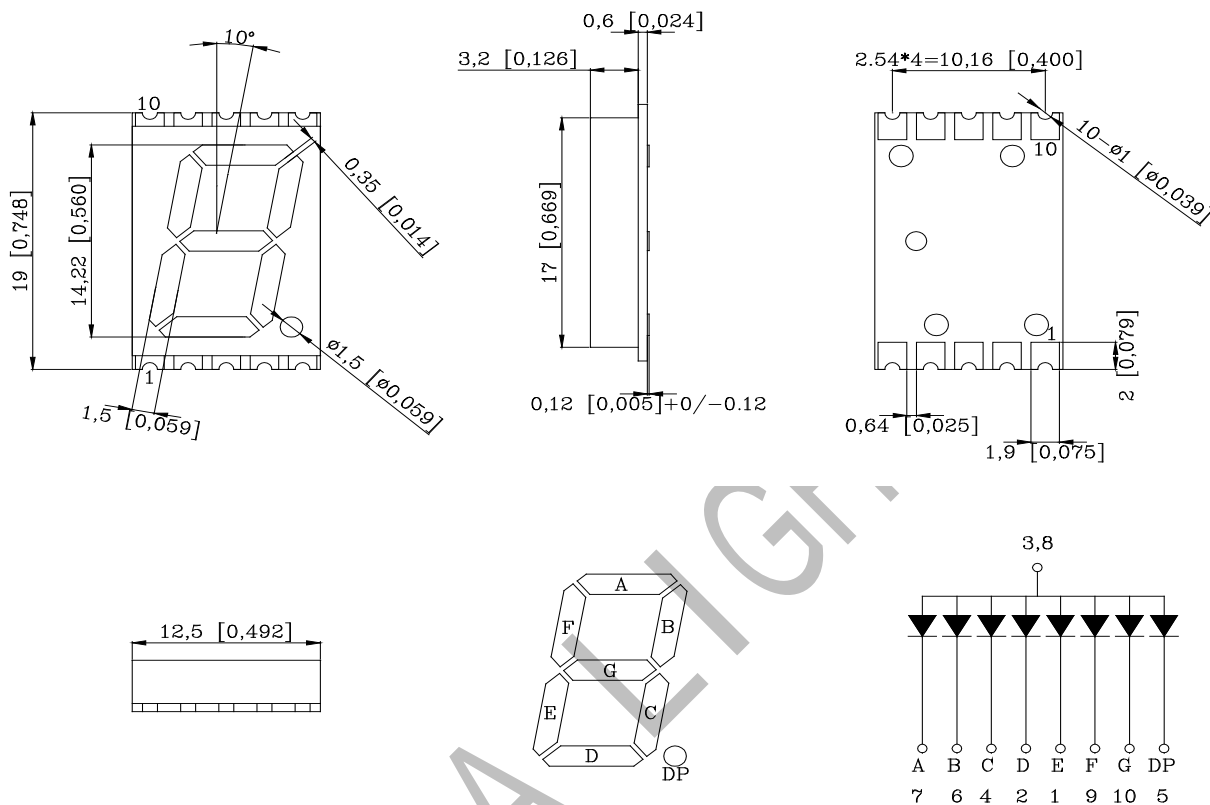
RECOMMENDED SOLDERING PATTERN

A	B	C	D	E	F	G	DP
7	6	4	2	1	9	10	5
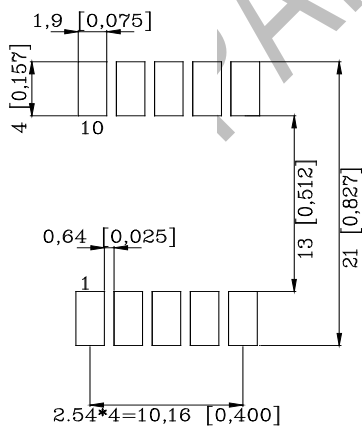
NOTES: 1. All dimensions are in millimeters (inches)

2. Tolerance is +/- 0.25mm (0.010") unless otherwise specified

3. The specifications, electrical characteristics and technical data described in this datasheet are subject to change without prior notice

FEATURES

- 14.22mm (0.56 inch) DIGIT HEIGHT
- COMMON ANODE
- SMD TYPE
- MOISTURE SENSITIVITY LEVEL: 2a
- LOW POWER CONSUMPTION
- Pb FREE PRODUCT
- GRAY FACE, WHITE SEGMENTS
- 750PCS/ROL
- HIGHLIGHT<-1000V THE LED CAN WITHSTAND THE MAX STATIC LEVELWHEN ASSEMBLING OR OPERATION.

Raw Material : SMD:InGaN/Ga/N

ABSOLUTE MAXIMUM RATING : (Ta = 25℃)

SYMBOL	PARAMETER	ULTRA BLUE	UNIT
P_D	Power Dissipation Per Segment	80	mW
V_R	Reverse Voltage Per Segment	5	V
I_{AF}	Continuous Forward Current Per Segment	25	mA
I_{PF}	Peak Forward Current Per Segment (1/10 Duty Cycle,0.1ms Pulse Width)	80	mA
Topr	Operating Temperature Range	−40℃ to 85℃	
Tstg	Storage Temperature Range	−40℃ to 85℃	

ELECTRO-OPTICAL CHARACTERISTICS : (Ta = 25℃)

| SYMBOL	PARAMETER	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
V_F	Forward Voltage , Per Segment	IF = 5mA	-	2.8	3.2	V
I_R	Reverse Current , Per Segment	VR = 5V		-	10	μA
λ_D	Dominant Wavelength	IF = 5mA		466		nm
$\Delta\lambda$	Spectral Line Half−Width	IF = 5mA		30		nm
I_V	Luminous Intensity Per Segment	IF = 5mA	3.2	8.0		mcd

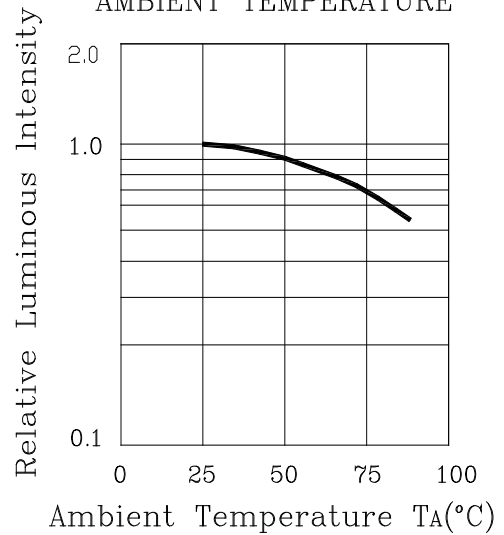## FORWARD CURRENT Vs. FORWARD VOLTAGE
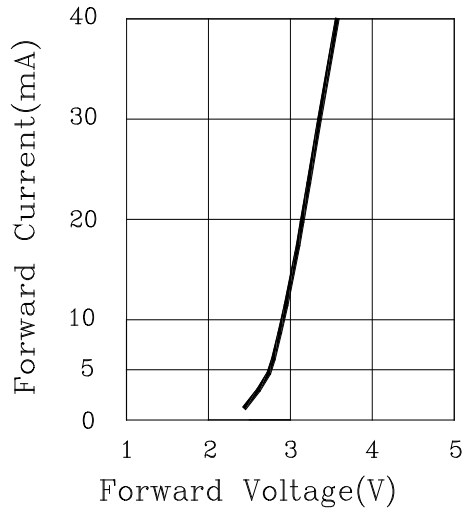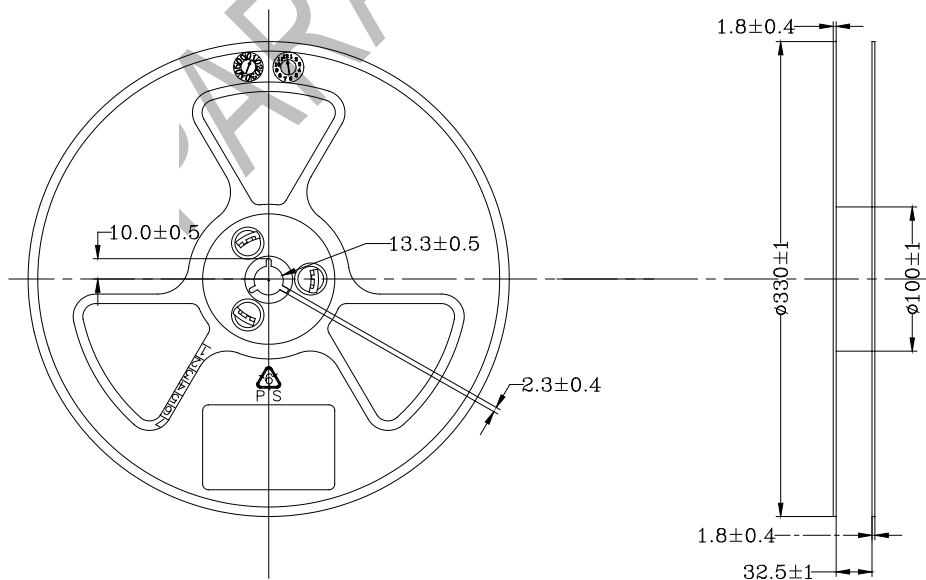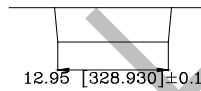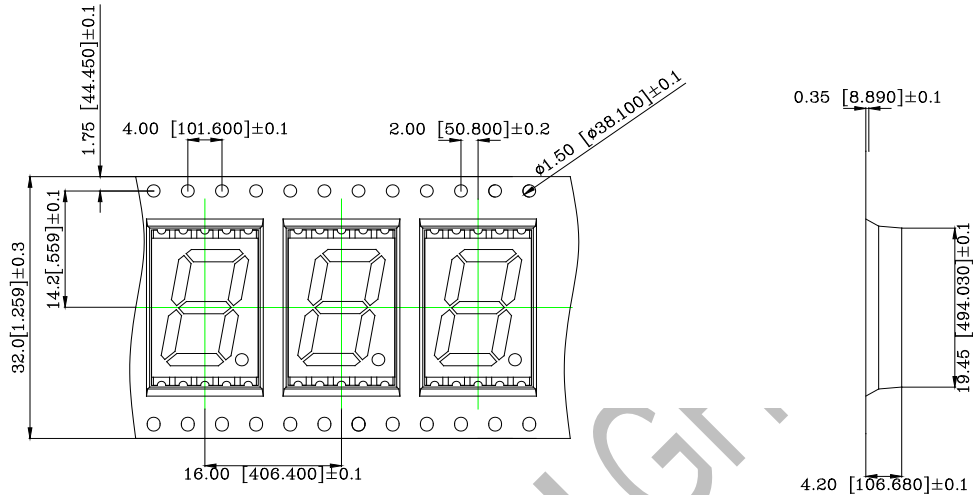

RELATIVE INTENSITY Vs. FORWARD CURRENT
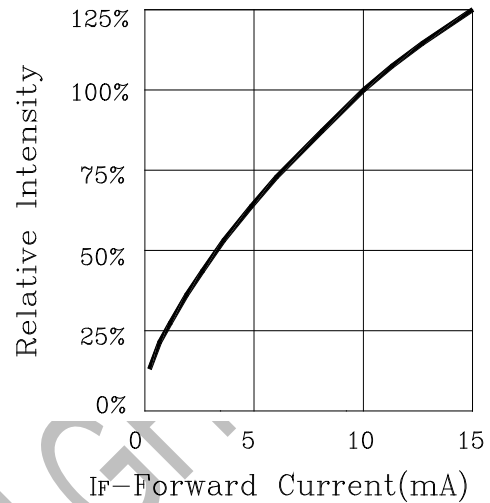
FORWARD CURRENT DERATING CURVE
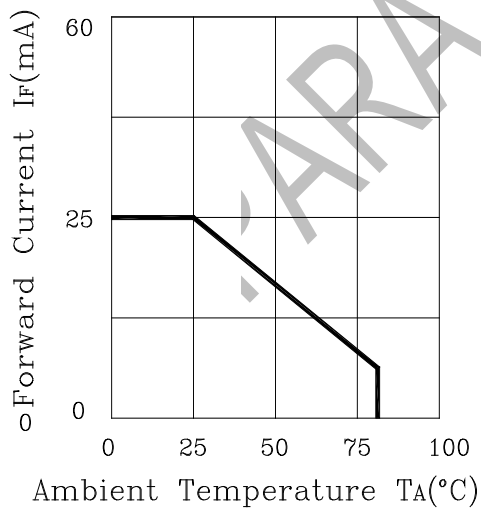
## LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE

PACKAGING SPECIFICATIONS

CIRCUIT DESIGN NOTES

1. Protective current-limiting resistors may be necessary to operate the LEDs within the specified range.

2. LEDs mounted in parallel should each be placed in series with its own current-limiting resistor.

3. The driving circuit should be designed to protect the LED against reverse voltages and transient voltage spikes when the circuit is powered up or shut down.

4. The safe operating current should be chosen after considering the maximum ambient temperature of the operating environment.

5. Prolonged reverse bias should be avoided, as it could cause metal migration, leading to an increase in leakage current or causing a short circuit.
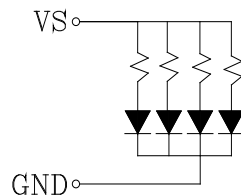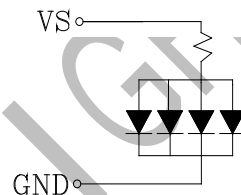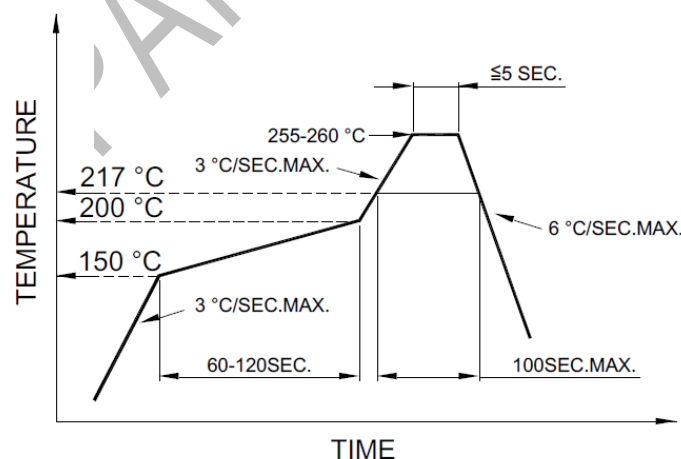

SMT REFLOW SOLDERING INSTRUCTIONS

NOTES

1. Avoid causing stress to the LEDs while it is exposed to high temperature.

2. The maximum number of reflow soldering passes is no more than 2 times.

3. Reflow soldering is recommended. Other soldering methods are not recommended as they might cause damage to the product.