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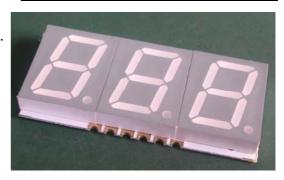


# Technical Data Sheet 0.51" Triple Digit SMD Displays

### ELST-506SYGWA/S530-E2

#### **Features**

- Packaged in tape and reel for SMT manufacturing.
- Design flexibility(common cathode or anode).
- Categorized for luminous intensity.
- The thickness is thinness than tradition display.
- Pb free
- The product itself will remain within RoHS compliant version



## **Descriptions**

• The SMD type is much smaller than tradition type components, thus enable smaller board size, higher packing density, reduced storage space and finally smaller equipment to be obtained.

#### **Applications**

- Suitable for indoor use.
- Audio system.
- Set top box.
- Game machine.
- Channel indicator of TV.

#### **Device Selection Guide**

	Face Color	
Material	Emitted Color	
AlGaInP	Brilliant Yellow Green	Gray

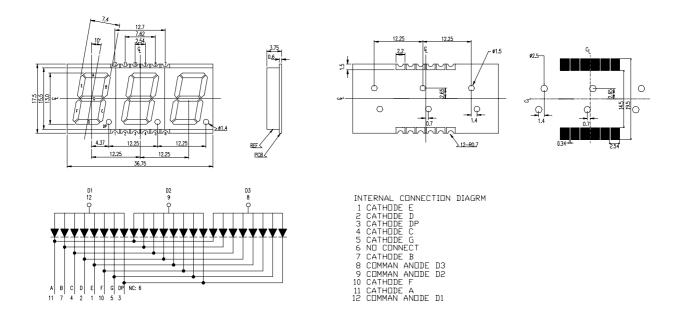
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## **Package Dimensions**

# **Land Pattern(Recommend)**



#### **Notes:**

- All dimensions are in millimeters, tolerance is 0.25mm unless otherwise noted.
- Above specification may be changed without notice. Supplier will reserve authority on material change for above specification.

# **Absolute Maximum Ratings (Ta=25℃)**

Parameter	Symbol	Rating	Units
Forward Current	$I_{\mathrm{F}}$	25	mA
Pulse Forward Current*1	$I_{FP}$	60	mA
Operating Temperature	Topr	-40 ~ +85	$^{\circ}$
Storage Temperature	T <sub>stg</sub>	-40 ~ +85	$^{\circ}\!\mathbb{C}$
Reflow Temperature*2	T <sub>sol</sub>	260	$^{\circ}$
Electrostatic Discharge	ESD	2000	V
Power Dissipation	P <sub>d</sub>	60	mW
Reverse Voltage	VR	5	V

**Notes:** \*1: $I_{FP}$  Conditions--Pulse Width  $\leq$  10msec and Duty  $\leq$  1/10.

\*2:Reflow time ≤ 5 seconds.

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# **Electro-Optical Characteristics (Ta=25°C)**

Para	ameter	Symbol	Min.	Тур.	Max.	Units	Condition
Forward V	oltage	$V_{\mathrm{F}}$		2.0	2.4	V	I <sub>F</sub> =20mA
Reverse Cu	ırrent	$I_R$			10	$\mu$ A	V <sub>R</sub> =5V
Luminous Intensity	Per segment	$\mathbf{I}_{\mathrm{V}}$	4.0	9.6		mcd	I <sub>F</sub> =10mA
	Per decimal point		2.0	3.7			
Peak Wave	elenght	λр		575		nm	I <sub>F</sub> =20mA
Dominant Wavelenght		λd		573		nm	I <sub>F</sub> =20mA
Spectrum F Bandwidth		Δλ		20		nm	I <sub>F</sub> =20mA

**Chromaticity Coordinates Specifications for Bin Grading (Unit: mcd)** 

	ey coordinates specifications for Diff Grading (Clift med)					
Rank	Min.	Max.	Rank	Min.	Max.	
N	4.0	6.4	Т	21.0	34.0	
P	5.6	8.9	U	30.0	48.0	
Q	7.8	12.5	V	42.0	67.0	
R	11.0	17.6	W	59.0	94.0	
S	15.0	24.0				

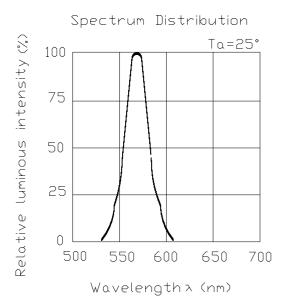
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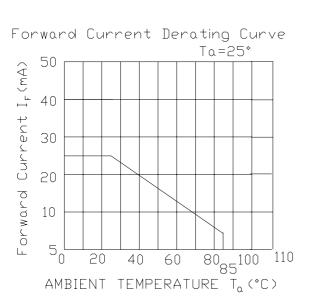
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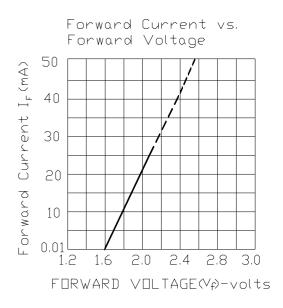


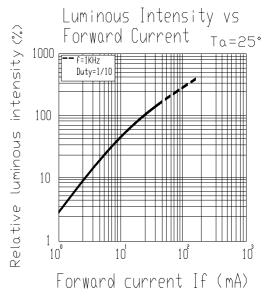
## **Typical Electro-Optical Characteristics Curves**









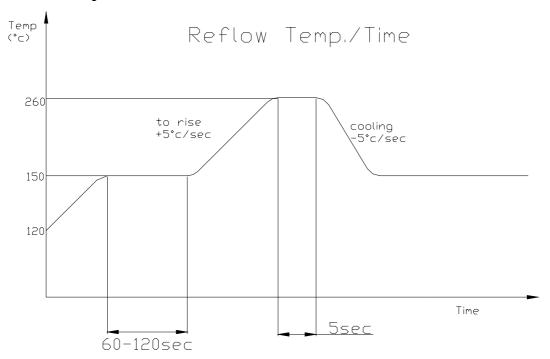


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## Reflow Temp. / Time :



## ■ Soldering Iron:

Basic spec is  $\leq 5$  sec when 260°C. If temperature is higher, time should be shorter (+10°C  $\rightarrow$  -1sec). Power dissipation of iron should be smaller than 15 W, and temperature should be controllable. Surface temperature of the device should be under 230 °C.

#### Rework:

- 1. Customer must finish rework within 5 sec under  $260^{\circ}$ C.
- 2. The head of iron can not touch copper foil.

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