



**THE DATASHEET OF  
ELSD-405SYGWA/S530-E2**



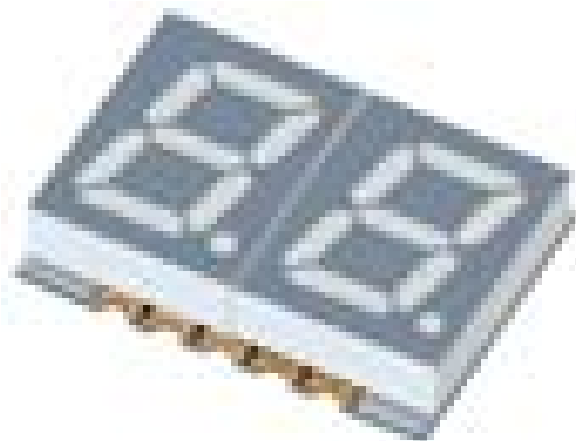
## Technical Data Sheet

### 0.39" Dual Digit SMD Displays

#### ELSD-405SYGWA/S530-E2

#### Features

- Packaged in tape and reel for SMT manufacturing.
- Design flexibility (common cathode or anode).
- Categorized for luminous intensity.
- The thickness is thinner 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

Chip		Face Color
Material	Emitted Color	
AlGaInP	Brilliant Yellow Green	Gray



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

Parameter		Symbol	Min.	Typ.	Max.	Units	Condition
Forward Voltage		$V_F$	--	2.0	2.4	V	$I_F=20mA$
Reverse Current		$I_R$	--	--	10	$\mu A$	$V_R=5V$
Luminous Intensity	Per segment	$I_V$	5.6	9.4	--	mcd	$I_F=10mA$
	Per decimal point		2.0	3.9	--		
Peak Wavelength		$\lambda_p$	--	575	--	nm	$I_F=20mA$
Dominant Wavelength		$\lambda_d$	--	573	--	nm	$I_F=20mA$
Spectrum Radiation Bandwidth		$\Delta \lambda$	--	20	--	nm	$I_F=20mA$

#### Bin Range of Luminous Intensity (Unit: mcd)

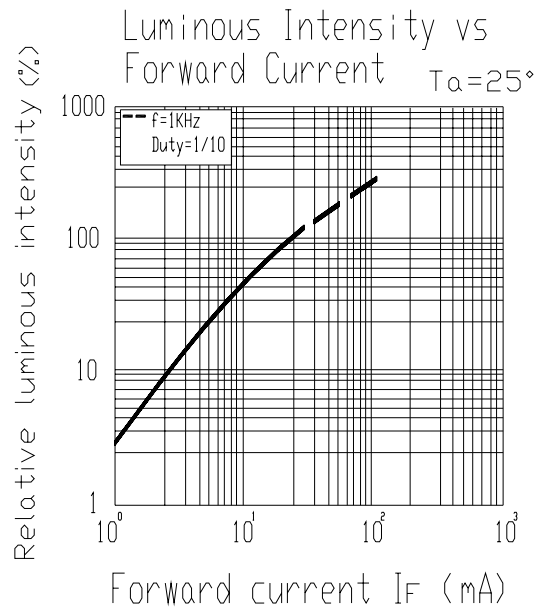
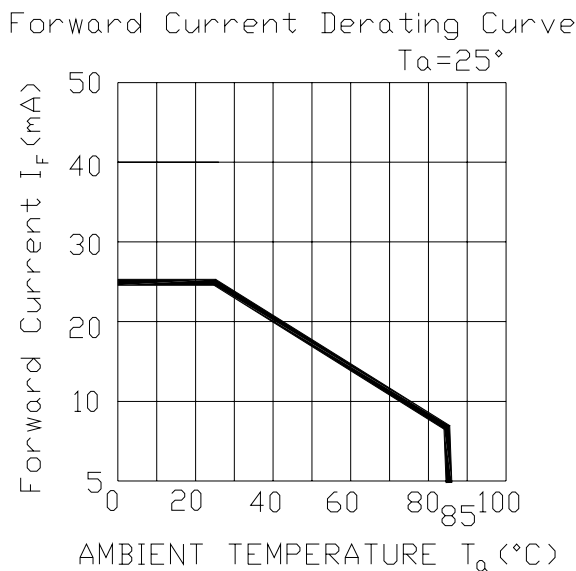
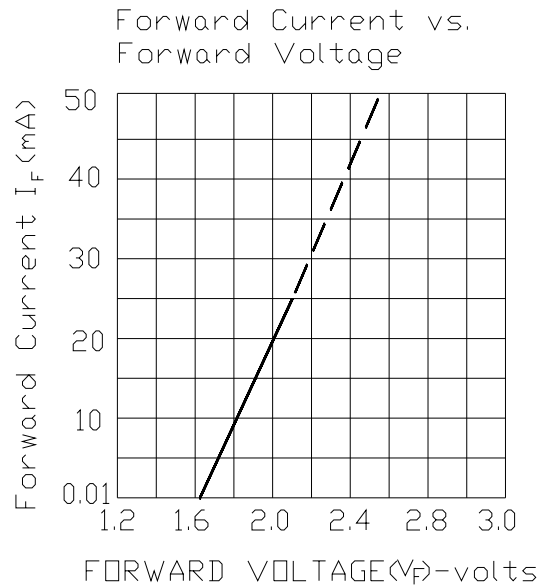
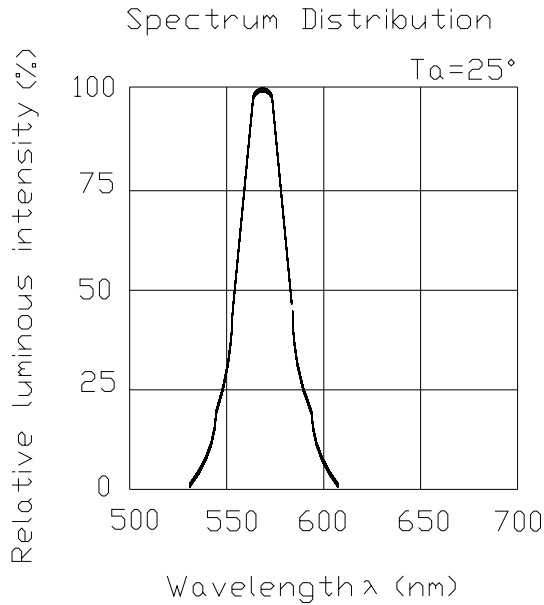
Rank	Min.	Max.	Rank	Min.	Max.
P	5.6	8.9	S	15.0	24.0
Q	7.8	12.5	T	21.0	34.0
R	11.0	17.6	--	--	--

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### ELSD-405SYGWA/S530-E2

#### Typical Electro-Optical Characteristics Curves

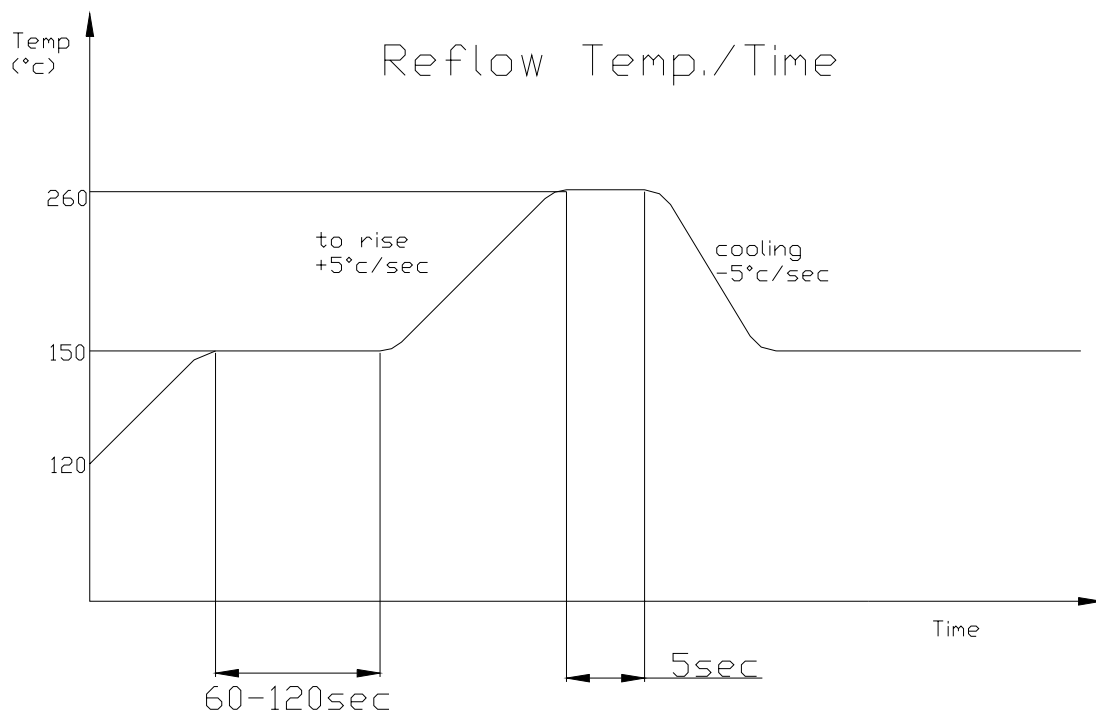


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#### ■ Reflow Temp. / Time :



#### ■ Soldering Iron :

Basic spec is  $\leq 5$  sec when 260°C. If temperature is higher, time should be shorter (+10°C → -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°C.
2. The head of iron can not touch copper foil.

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#### ■ Reliability test items and conditions:

The reliability of products shall be satisfied with items listed below.

Confidence level : 97%

LTPD : 3%

NO	Item	Test Conditions	Test Hours/Cycle	Sample Size	Failure Judgment Criteria	Ac/Re
1	Reflow Heat	TEMP:260°C±5°C 5~10SEC	6Min	22 PCS	$I_v \leq I_{vt} * 0.5$ or $V_f \geq U$ or $V_f \leq L$	0/1
2	Temperature Cycle	H : +100°C 15min § 5min L : -40°C 15min	300 CYCLES	22 PCS		0/1
3	Thermal Shock	H : +100°C 5min § 10 sec L : -10°C 5min	300 CYCLES	22 PCS		0/1
4	High Temperature Storage	TEMP:100°C	1000 HRS	22PCS		0/1
5	Low Temperature Storage	TEMP:-40°C	1000 HRS	22 PCS		0/1
6	DC Operating Life	TEMP:25°C If = 10mA	1000 HRS	22 PCS		0/1
7	High Temperature / High Humidity	85°C / 85% RH	1000 HRS	22 PCS		0/1

Note :  $I_{vt}$  : The test  $I_v$  value of the chip before the reliability test

$I_v$  : The test value of the chip that has completed the reliability test

U : Upper Specification Limit

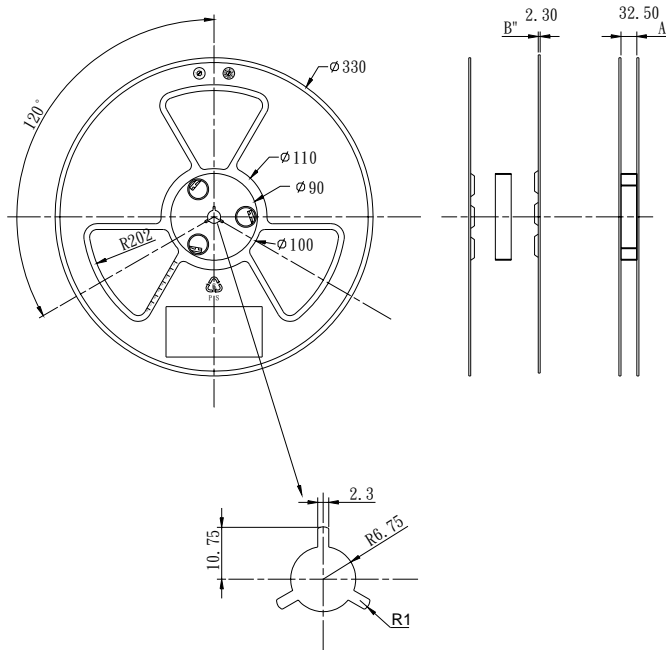
L : Lower Specification Limit

# Technical Data Sheet

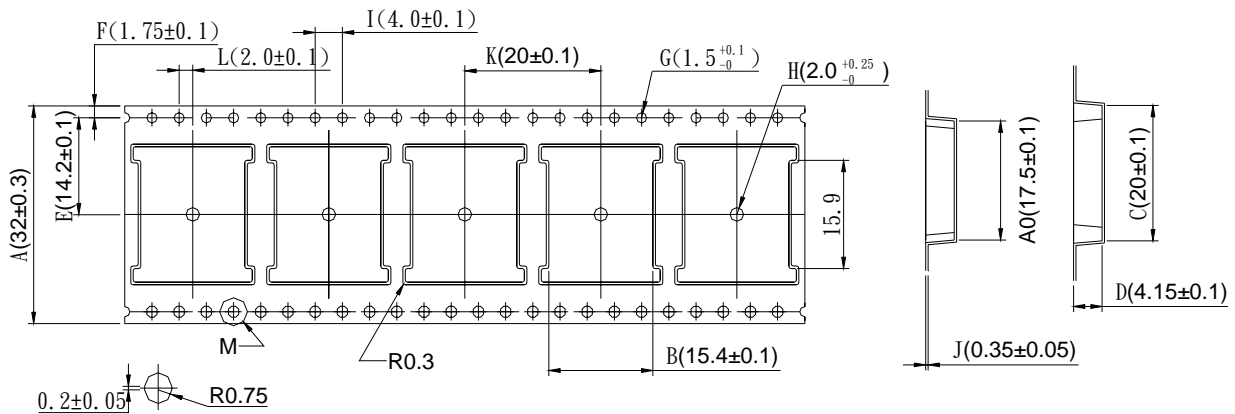
## 0.39" Dual Digit SMD Displays

### ELSD-405SYGWA/S530-E2

#### Package Dimensions



#### Taping Dimensions



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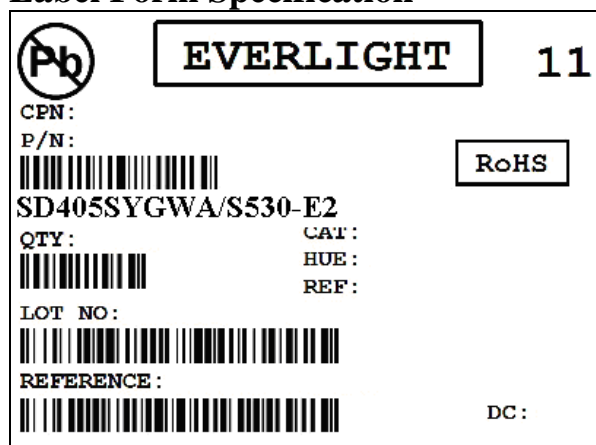
## 0.39" Dual Digit SMD Displays

### ELSD-405SYGWA/S530-E2

#### Packing Quantity Specification

800PCS/Roll , 1Roll /Small box , 6Rolls/ Big Box

#### Label Form Specification



CPN: Customer's Production Number

P/N : Production Number

QTY: Packing Quantity

CAT: Ranks

HUE: Peak Wavelength

REF: Reference

LOT No: Lot Number

DC: Year and Weekly

REFERENCE: Label identify code

#### Notes :

1. Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.
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