



## Technical Data Sheet

### 0.51" Dual Digit SMD Displays

#### ELSD-506SURWA/S530-A4/S290

#### Features

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



#### Descriptions

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

#### Applications

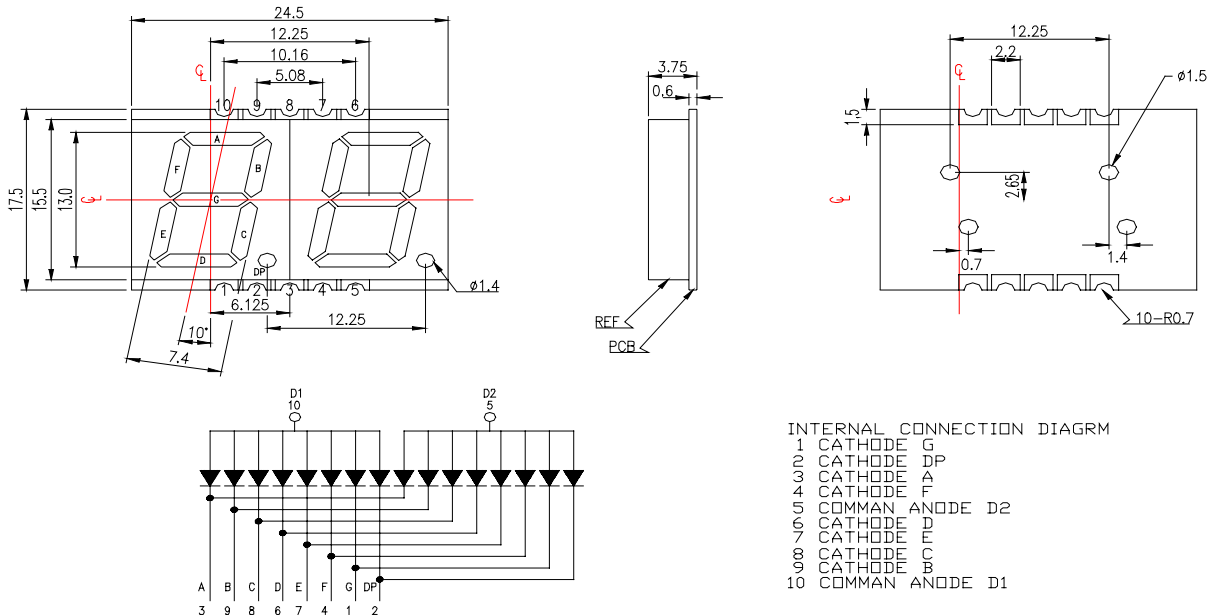
- Suitable for indoor use.
- Audio system.
- Set top box.
- Game machine.
- Channel indicator of TV.

#### Device Selection Guide

Chip		Face Color
Material	Emitted Color	
AlGaInP	Hyper Red	Gray

## ELSD-506SURWA/S530-A4/S290

### Package Dimensions



### 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°C)

Parameter	Symbol	Rating	Units
Forward Current	$I_F$	25	mA
Pulse Forward Current <sup>*1</sup>	$I_{FP}$	160	mA
Operating Temperature	$T_{opr}$	-40 ~ +105	°C
Storage Temperature	$T_{stg}$	-40 ~ +105	°C
Soldering Temperature <sup>*2</sup>	$T_{sol}$	260	°C
Power Dissipation	$P_d$	60	mW
Reverse Voltage	$V_R$	5	V

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

\*2:Soldering time  $\leq$  5 seconds.

## ELSD-506SURWA/S530-A4/S290

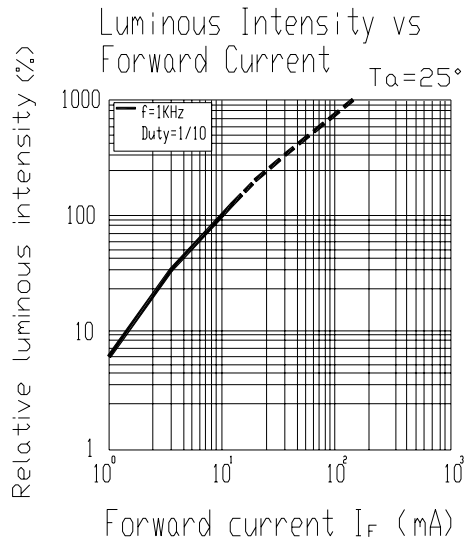
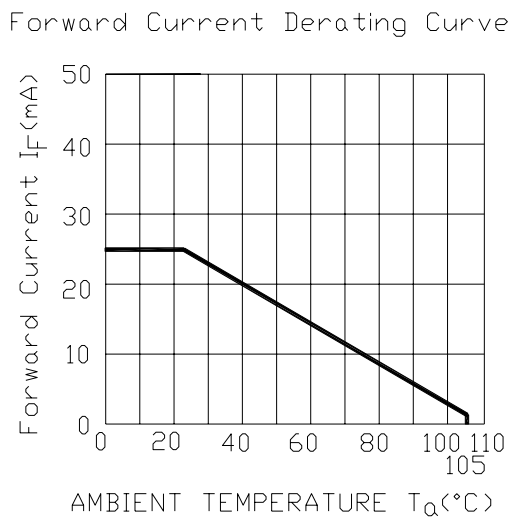
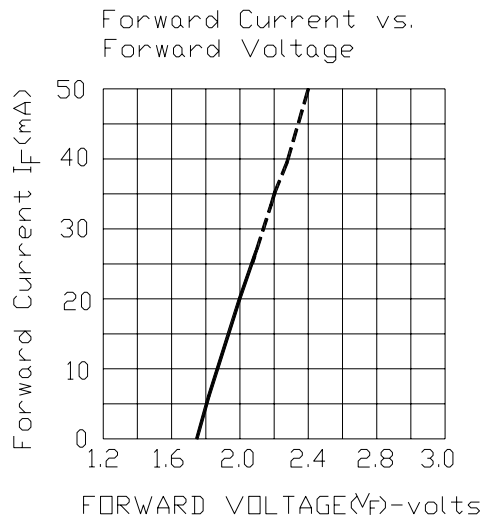
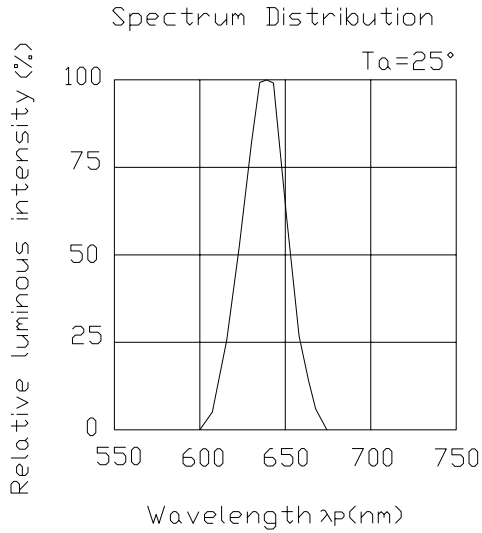
### Electro-Optical Characteristics (Ta=25°C)

Parameter		Symbol	Condition	Min.	Typ.	Max.	Units
Forward Voltage		$V_F$	$I_F=20mA$	---	2.0	2.4	V
Reverse Current		$I_R$	$V_R=5V$	--	--	10	$\mu A$
Luminous Intensity	Per segment	$I_V$	$I_F=10mA$	7.8	15.0	--	mcd
	Per decimal point		$I_F=10mA$	2.0	4.0	--	
Peak Wavelength		$\lambda_p$	$I_F=20mA$	--	632	--	nm
Dominant Wavelength		$\lambda_d$	$I_F=20mA$	--	624	--	nm
Spectrum Radiation Bandwidth		$\Delta \lambda$	$I_F=20mA$	--	20	--	nm

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

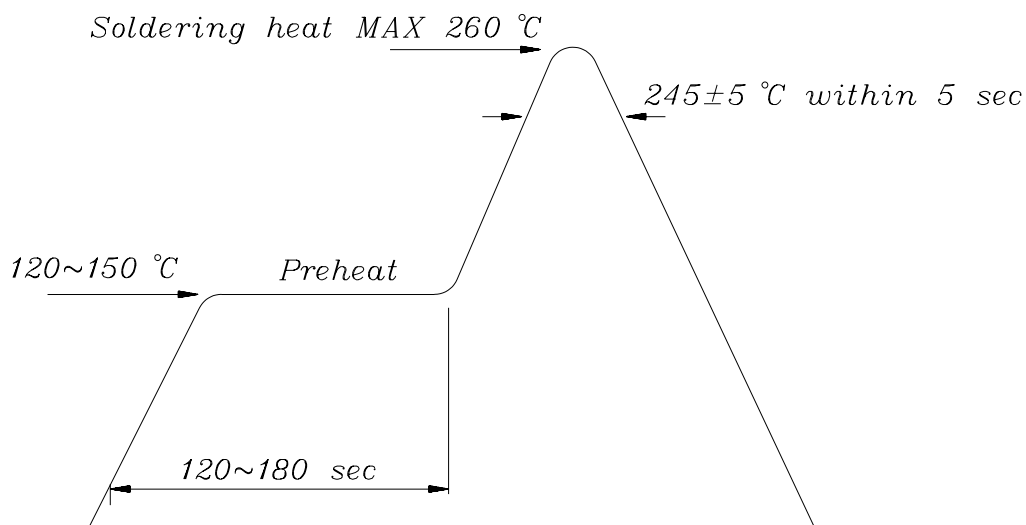
Rank	Min.	Max.	Rank	Min.	Max.
Q	7.8	12.5	T	21.0	34.0
R	11.0	17.6	U	30.0	48.0
S	15.0	24.0	--	--	--

**Typical Electro-Optical Characteristics Curves**



■ **Soldering heat reliability ( DIP ) :**

Please refer to the following figure :



■ **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.

■ Reflow Temp. / Time :

Reflow Temp./Time:

