

Display ▪ Surface-mount ELSF-511SURWA/S530-A3/S290



Features

- Industrial standard size.
- Packaged in tape and reel for SMT manufacturing.
- The thickness is thinner than tradition display.
- Low power consumption.
- Categorized for luminous intensity.
- The product itself will remain with RoHS compliant version.
- Compliance with EU REACH.
- Compliance with Pb free.(Br < 900ppm, Cl < 900ppm, Br+Cl < 1500ppm)

Description

- The ELSF-511SURWA/S530-A3/S290 is a 14.22mm (0.56") digit height seven-segment display.
- The display provides excellent reliability in bright ambient light.
- The device is made with white segments and gray surface.

Applications

- Home appliances
- Instrument panels
- Digital readout displays

Device Selection Guide

Chip Materials	Emitted Color	Resin Color
AlGaInP	Brilliant Red	White Diffusion

Absolute Maximum Ratings (Ta=25 °C)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	5	V
Forward Current	I_F	25	mA
Peak Forward Current (Duty 1/10 @1KHz)	I_{FP}	60	mA
Power Dissipation	P_d	60	mW
Operating Temperature	T_{opr}	-40 ~ +105	
Storage Temperature	T_{stg}	-40 ~ +105	
Soldering Temperature (Soldering time 5 seconds)	T_{sol}	260	

Electro-Optical Characteristics (Ta=25 °C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity ^{*1}	I_v	11.0	24.0	-----	mcd	$I_F=10mA$
Peak Wavelength	λ_p	-----	632	-----	nm	$I_F=20mA$
Dominant Wavelength	λ_d	-----	624	-----	nm	$I_F=20mA$
Spectrum Radiation Bandwidth	$\Delta\lambda$	-----	20	-----	nm	$I_F=20mA$
Forward Voltage	V_F	-----	2.0	2.4	V	$I_F=20mA$
Reverse Current	I_R	-----	-----	10	μA	$V_R=5V$

Note:

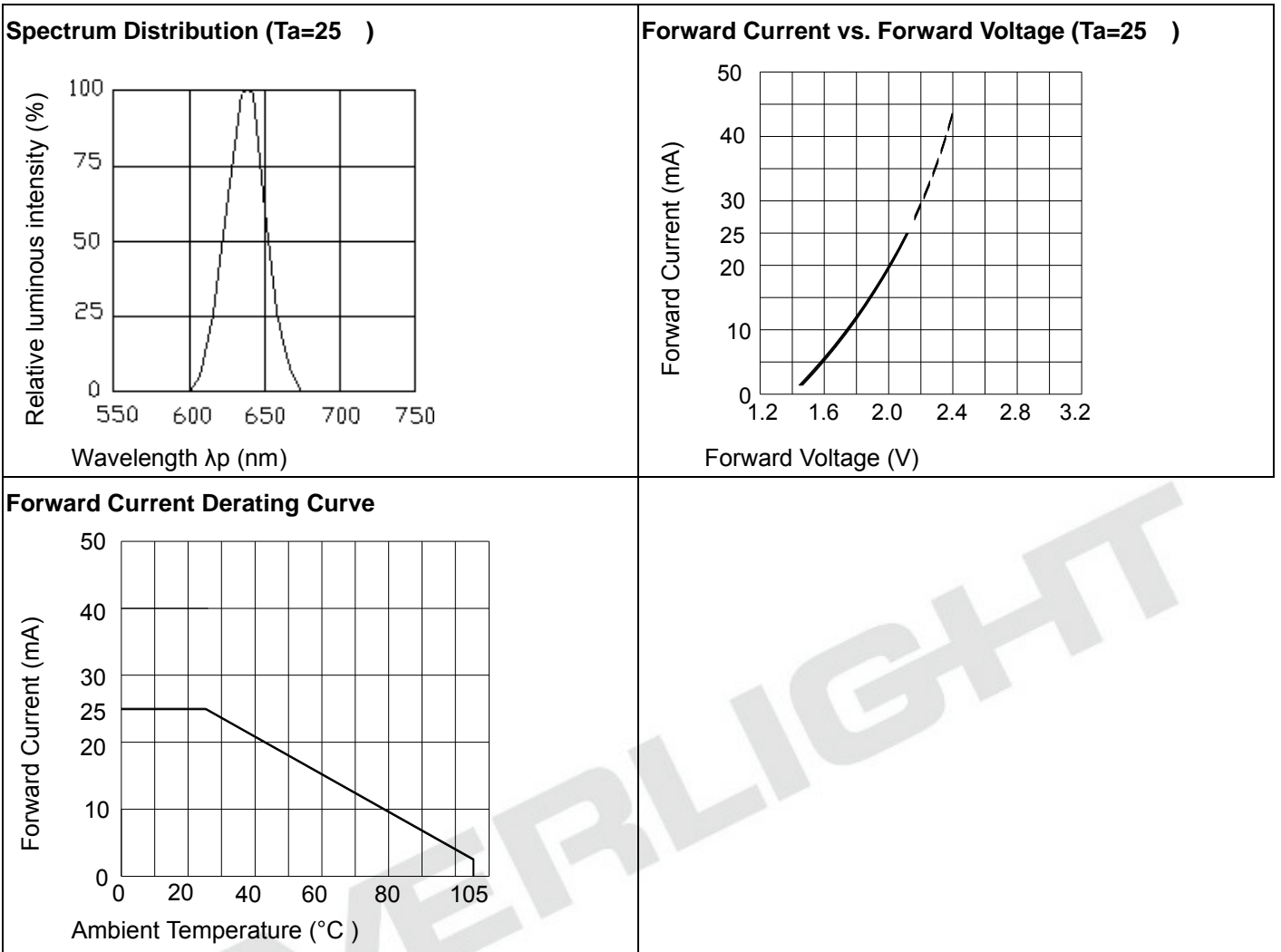
- Luminous Intensity is a average value which is measured one 7-segment.
- Tolerance of Luminous Intensity: $\pm 10\%$
- Tolerance of Forward Voltage: $\pm 0.1V$

Bin Range of Luminous Intensity

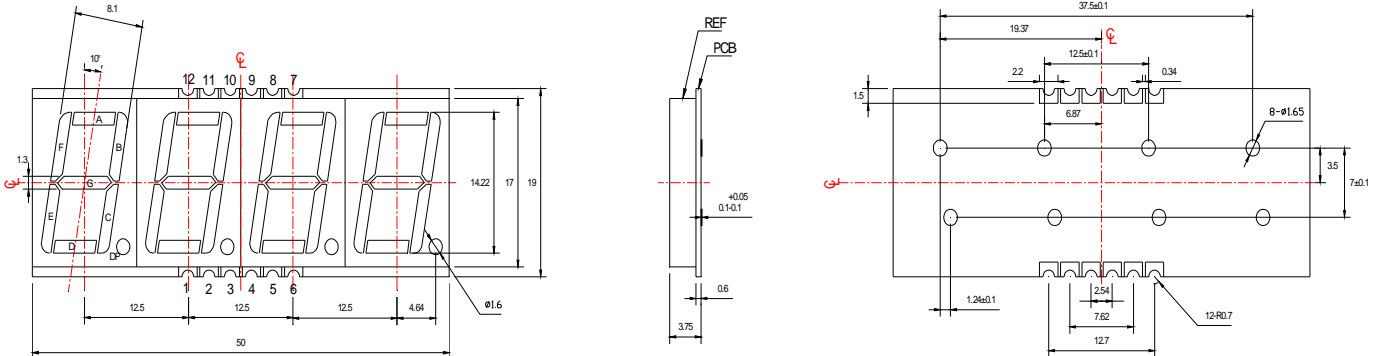
Bin Code	Min.	Max.	Unit	Condition
R	11.0	17.6	mcd	$I_F = 10\text{mA}$
S	15.0	24.0		
T	21.0	34.0		
U	30.0	48.0		
V	42.0	67.0		
W	59.0	94.0		

EVERLIGHT

Typical Electro-Optical Characteristics Curves

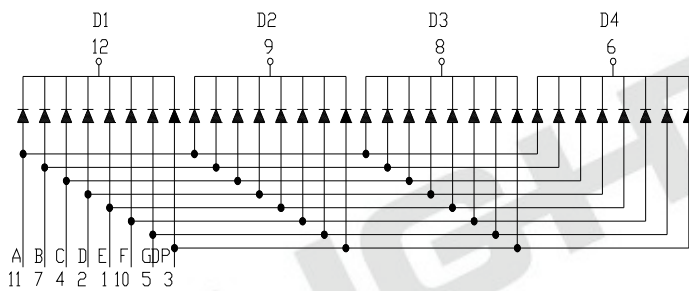


Package Dimension & Internal Circuit Diagram



INTERNAL CONNECTION DIAGRAM

- 1 ANODE E
- 2 ANODE D
- 3 ANODE DP
- 4 ANODE C
- 5 ANODE G
- 6 COMMON CATHODE D4
- 7 ANODE B
- 8 COMMON CATHODE D3
- 9 COMMON CATHODE D2
- 10 ANODE F
- 11 ANODE A
- 12 COMMON CATHODE D1

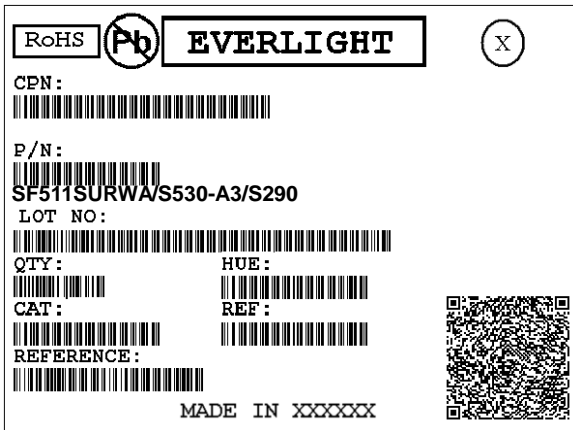


Note:

1. Tolerances unless mentioned $\pm 0.25\text{mm}$. Unit = mm
2. Isolation material on the PCB surface.
3. No copper ring.

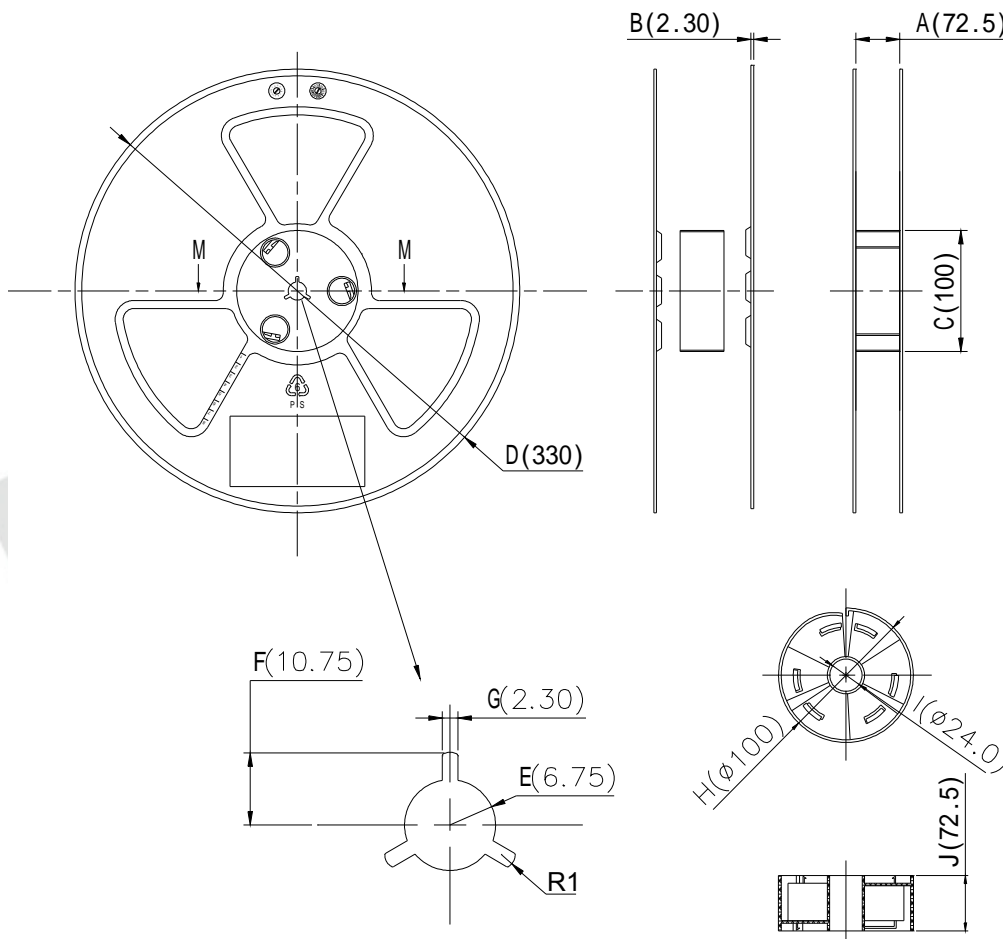
Packing Materials

Label Explanation

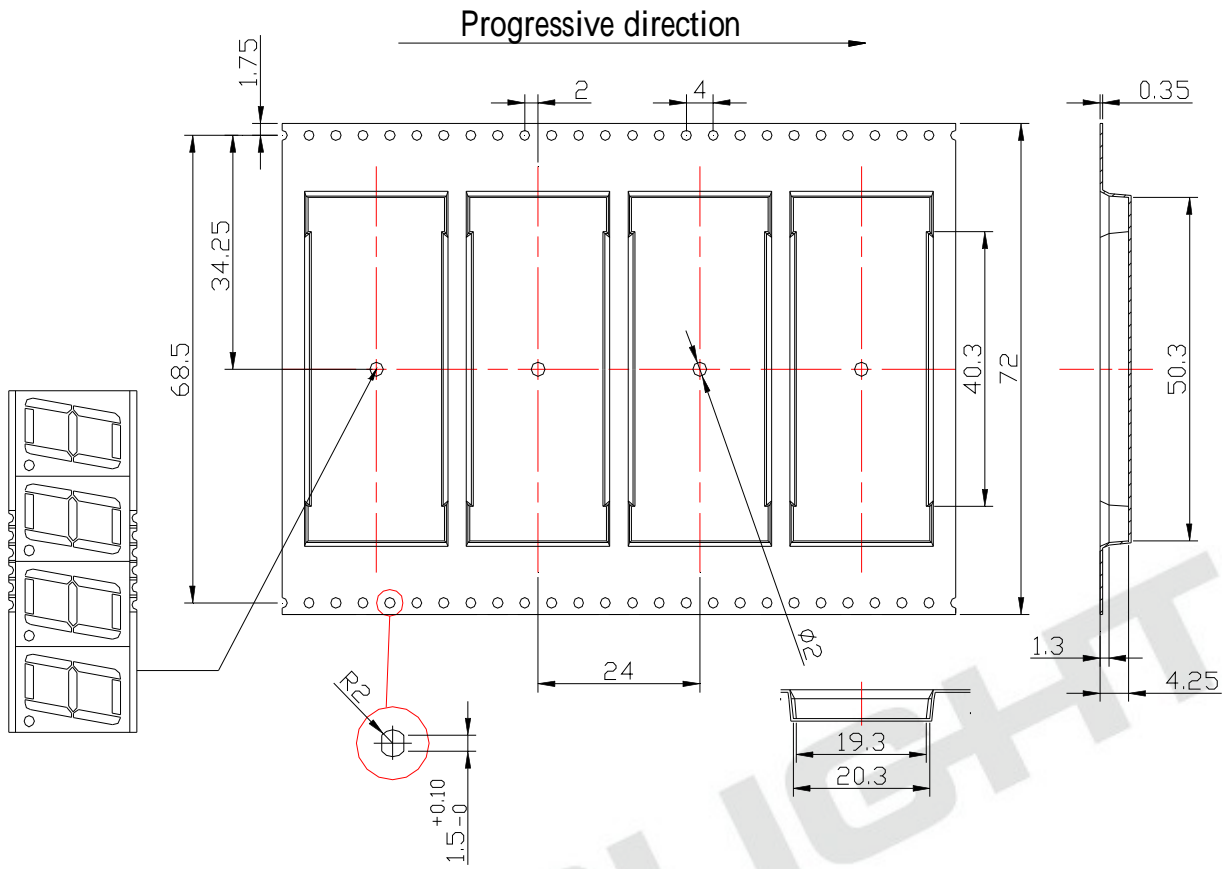


- CPN: Customer's Product Number
- P/N: Product Number
- QTY: Packing Quantity
- CAT: Luminous Intensity Rank
- HUE: Reference
- REF: Reference
- LOT No: Lot Number
- DC: Year and Weekly
- REFERENCE: Volume Label code

Reel Dimensions

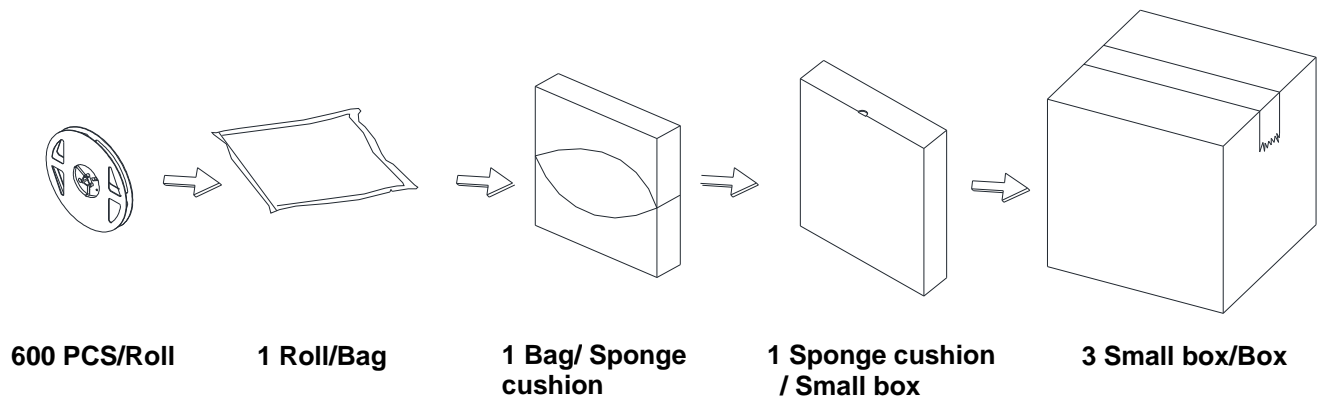


Carrier Tape Dimensions: Loaded Quantity 600 PCS Per Reel



Note: Tolerances unless mentioned $\pm 0.25\text{mm}$. Unit = mm

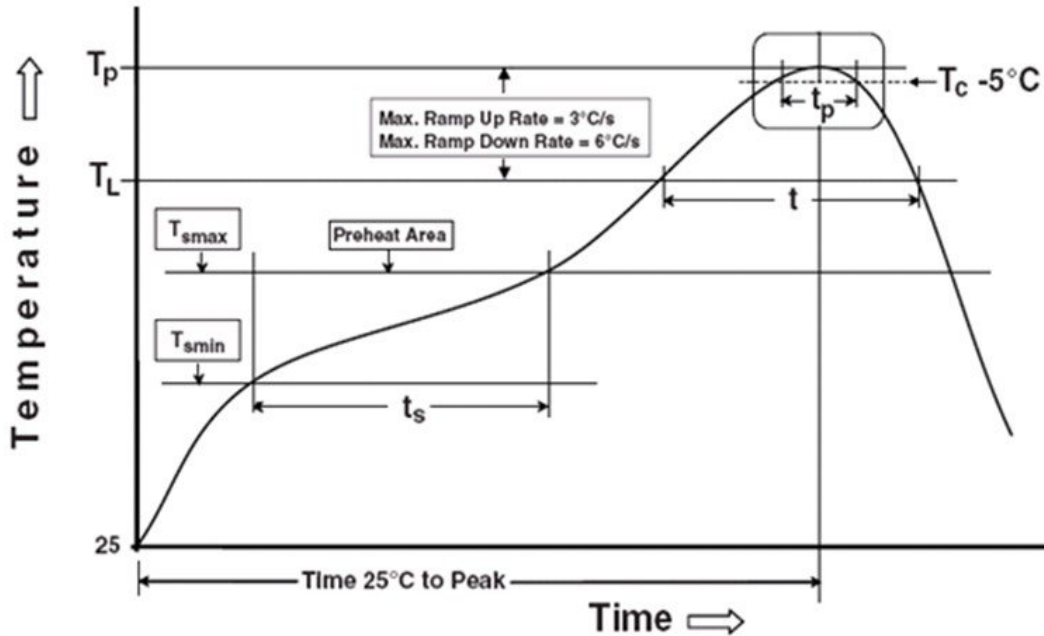
Packing Process



Precautions for Use

1. Soldering Condition

1.1 (A) Maximum Body Case Temperature Profile for evaluation of Reflow Profile



Note:

Reference: IPC/JEDEC J-STD-020D

Preheat

Temperature min (T_{smin})	150 °C
Temperature max (T_{smax})	200 °C
Time (T_{smin} to T_{smax}) (t_s)	60-120 seconds
Average ramp-up rate (T_{smax} to T_p)	3 °C/second max.

Other

Liquidus Temperature (T_L)	217 °C
Time above Liquidus Temperature (t_L)	60-150 seconds
Peak Temperature (T_p)	260 °C
Time within 5 °C of Actual Peak Temperature: $T_p - 5^\circ\text{C}$	30 seconds
Ramp- Down Rate from Peak Temperature	6 °C/second max.
Time 25°C to peak temperature	8 minutes max.
Reflow times	1 time

All parameters are maximum body case temperature values and cannot be considered as a soldering profile. The body case temperature was measured by soldering a thermal couple to the soldering point of LEDs.

单击下面可查看定价，库存，交付和生命周期等信息

[>>Everlight \(亿光\)](#)