

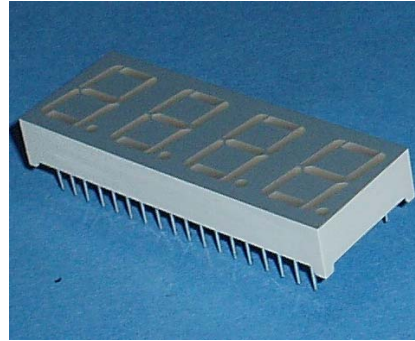


Technical Data Sheet
0.56" Quadruple Digit Displays

ELF-511SURWA/S530-A3/S154

■ Features :

- Industrial standard size.
- Low power consumption.
- Categorized for luminous intensity.
- Pb free
- The product itself will remain within RoHS compliant version



■ Descriptions :

- The ELF-511 series is a large 14.22 mm (0.56")high seven segment display designed for viewing distances up to 7 meters.
- These displays provide excellent reliability in bright ambient light.
- These devices are made with white segments and gray surface.

■ Applications :

- Audio equipment
- Instrument panels
- Digital read out display

PART NO.	Chip	
	Material	Emitted Color
ELF-511SURWA/S530-A3/S154	AlGaInP	Hyper Red

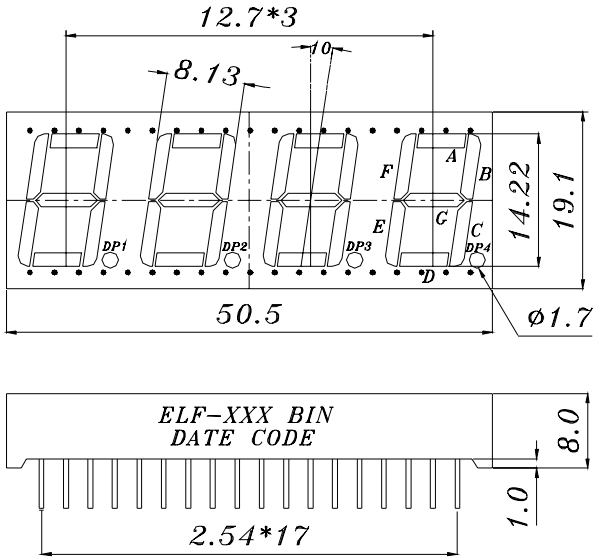
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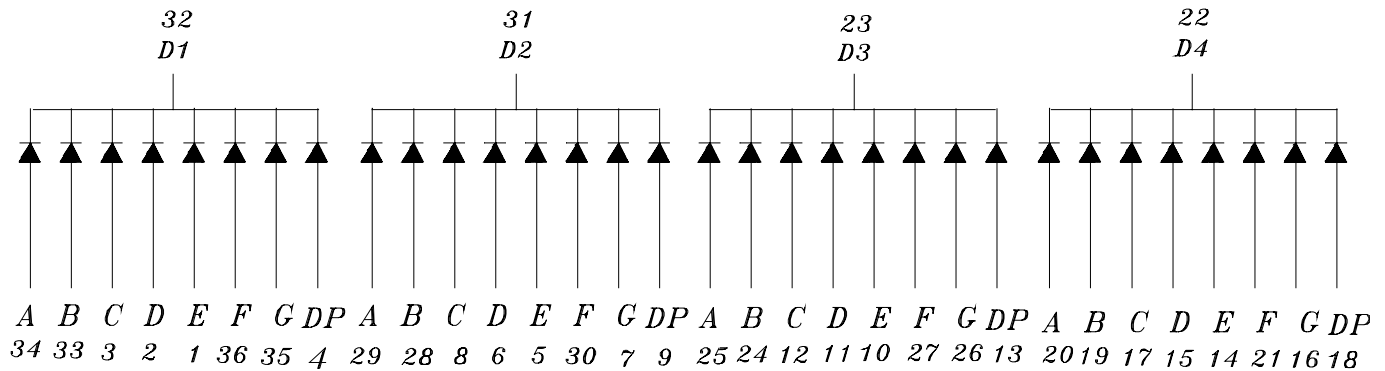
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Package Dimensions



COMMON CATHODE

1 ANODE 1E	19 ANODE 4B
2 ANODE 1D	20 ANODE 4A
3 ANODE 1C	21 ANODE 4F
4 ANODE DP1	22 COMMON CATHODE D4
5 ANODE 2E	23 COMMON CATHODE D3
6 ANODE 2D	24 ANODE 3B
7 ANODE 2G	25 ANODE 3A
8 ANODE 2C	26 ANODE 3G
9 ANODE DP2	27 ANODE 3F
10 ANODE 3E	28 ANODE 2B
11 ANODE 3D	29 ANODE 2A
12 ANODE 3C	30 ANODE 2F
13 ANODE DP3	31 COMMON CATHODE D2
14 ANODE 4E	32 COMMON CATHODE D1
15 ANODE 4D	33 ANODE 1B
16 ANODE 4G	34 ANODE 1A
17 ANODE 4C	35 ANODE 1G
18 ANODE DP4	36 ANODE 1F



- 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.



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■ Absolute maximum ratings at Ta = 25°C :

Parameter	Symbol	Rating	Unit
Reverse Voltage	VR	5	V
Forward Current	IF	25	mA
Operating Temperature	Topr	-40 to +85	°C
Storage Temperature	Tstg	-40 to +100	°C
Soldering Temperature *	Tsol	260 ± 5	°C
Electrostatic Discharge	ESD	2000	V
Power Dissipation	Pd	60	mW

Note: *Soldering time ≤ 5 seconds.

■ Electronic optical characteristics :

Parameter		Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	Per segment	Iv	----	3.0	----	mcd	IF=2mA
			7.8	15.0	----	mcd	IF=10mA
	Per decimal point		----	0.7	----	mcd	IF=2mA
			2.5	3.5	----	mcd	IF=10mA
Peak Wavelength		λ p	----	632	----	nm	IF=20mA
Dominant Wavelength		λ d	----	624	----	nm	IF=20mA
Spectrum Radiation Bandwidth		△ λ	----	20	----	nm	IF=20mA
Forward Voltage		VF	----	2.0	2.4	V	IF=20mA
Reverse Current		IR	----	----	100	μ A	VR=5V

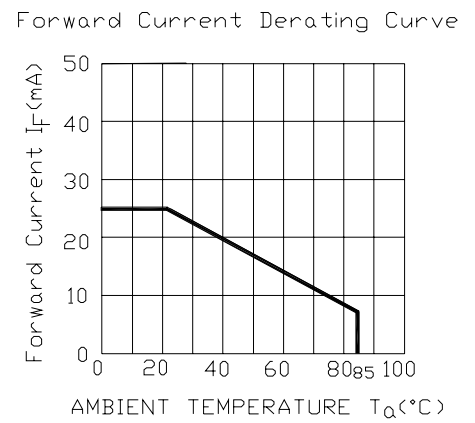
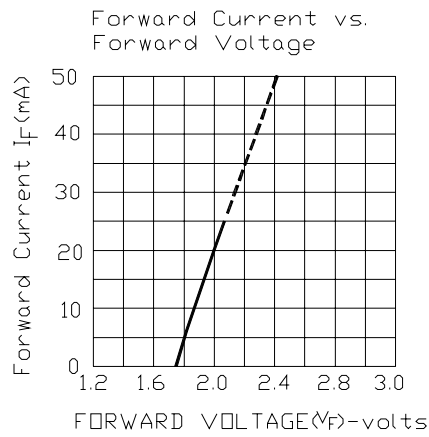
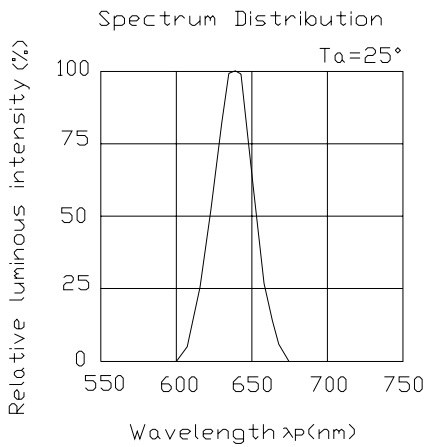


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■ Typical Electro-Optical Characteristic Curves:

(SUR)





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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	Solder Heat	TEMP : 260°C ± 5 °C	5 SEC	76 PCS	$I_v \leq I_{vt} * 0.5$ or $V_f \geq U$ or $V_f \leq L$	0/1
2	Temperature Cycle	H : +85°C 30min ∫ 5 min L : -55°C 30min	50 CYCLE	76 PCS		0/1
3	Thermal Shock	H : +100°C 5min ∫ 10 sec L : -10°C 5min	50 CYCLE	76 PCS		0/1
4	High Temperature Storage	TEMP : 100°C	1000 HRS	76 PCS		0/1
5	Low Temperature Storage	TEMP : -55°C	1000 HRS	76 PCS		0/1
6	DC Operating Life	IF = 10 mA	1000 HRS	76 PCS		0/1
7	High Temperature / High Humidity	85°C/85% RH	1000 HRS	76 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



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■ Packing Quantity Specification

1.10PCS/tube, 54 tubes/box

2.4Boxes/Carton

Label Form Specification



CPN:

P/N:



F511SURWA/S530-A3/S154

QTY:



LOT NO:

MADE IN CHINA

CAT:

HUE:

REF:

CPN: Customer's Production Number

P/N : Production Number

QTY: Packing Quantity

CAT: Ranks

HUE: Dominant Wavelength

REF: Reference

LOT No: Lot Number

MADE IN CHINA: Production Place

Notes :

1. Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.
2. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
3. These specification sheets include materials protected under copyright of EVERLIGHT corporation. Please don't reproduce or cause anyone to reproduce them without EVERLIGHT's consent.

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