

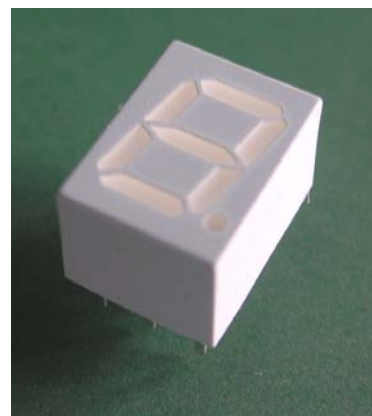
# Technical Data Sheet

## 0.28" Single Digit Leadframe Display

### ELLS-325SURWB/S530-A3

#### Features

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



#### Descriptions

- The ELLS-325 series is a large 7.0mm (0.28") 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

#### Device Selection Guide

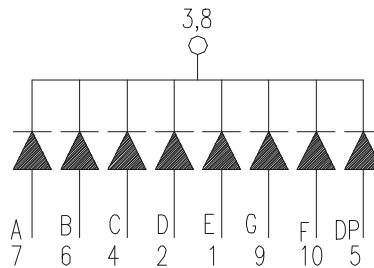
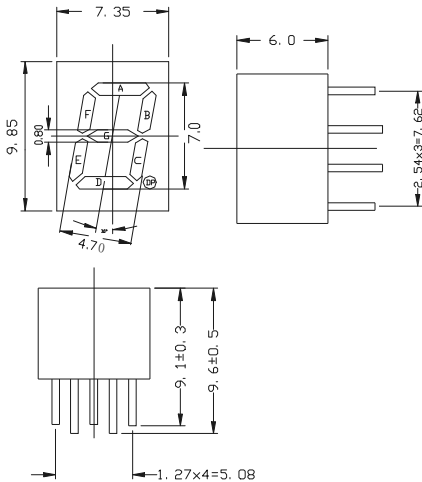
Chip		Face Color
Material	Emitted Color	
AlGaInP	Brilliant Red	Black

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#### Package Dimensions



INTERNAL CONNECTION DIAGRM

- 1 ANODE E
- 2 ANODE D
- 3 COMMON CATHODE
- 4 ANODE C
- 5 ANODE DP
- 6 ANODE B
- 7 ANODE A
- 8 COMMON CATHODE
- 9 ANODE G
- 10 ANODE F

- 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 <sub>F</sub>	25	mA
Pulse Forward Current <sup>*1</sup>	I <sub>FP</sub>	60	mA
Operating Temperature	T <sub>opr</sub>	-40 ~ +85	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +100	°C
Soldering Temperature	T <sub>sol</sub>	260	°C
Electrostatic Discharge	ESD	2000	V
Power Dissipation	P <sub>d</sub>	60	mW
Reverse Voltage	V <sub>R</sub>	5	V

Notes: \*Soldering time ≤ 5 seconds.

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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	15.0	--	mcd	$I_F=10mA$
	Per decimal point		2.3	5.7	--		
Peak Wavelength		$\lambda_p$	--	632	--	nm	$I_F=20mA$
Dominant Wavelength		$\lambda_d$	--	624	--	nm	$I_F=20mA$
Spectrum Radiation Bandwidth		$\Delta \lambda$	--	20	--	nm	$I_F=20mA$

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

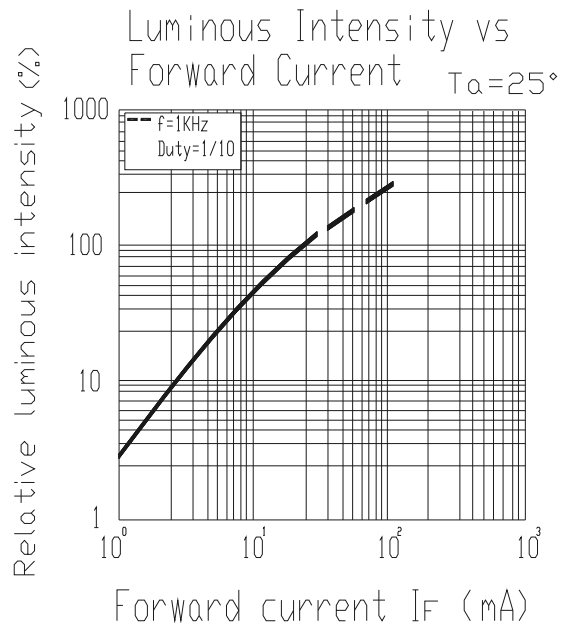
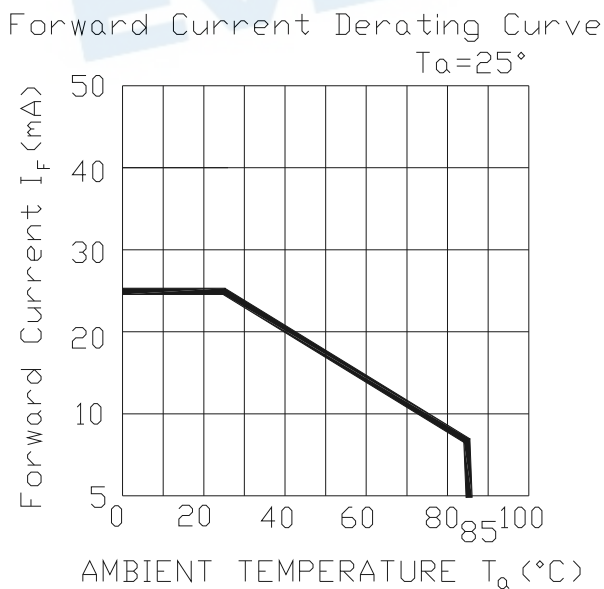
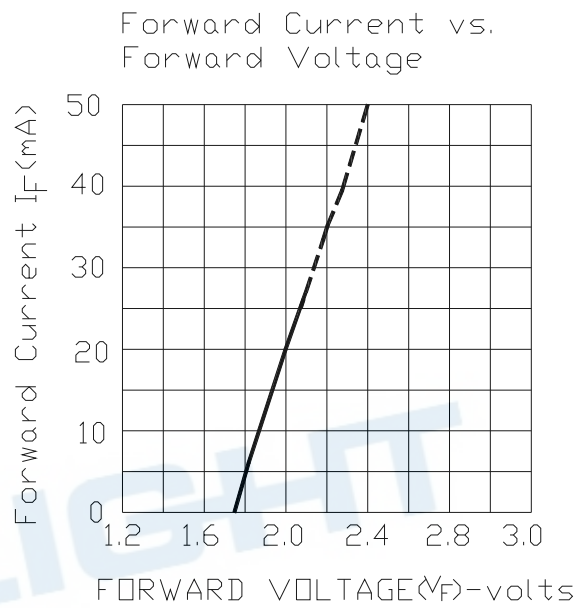
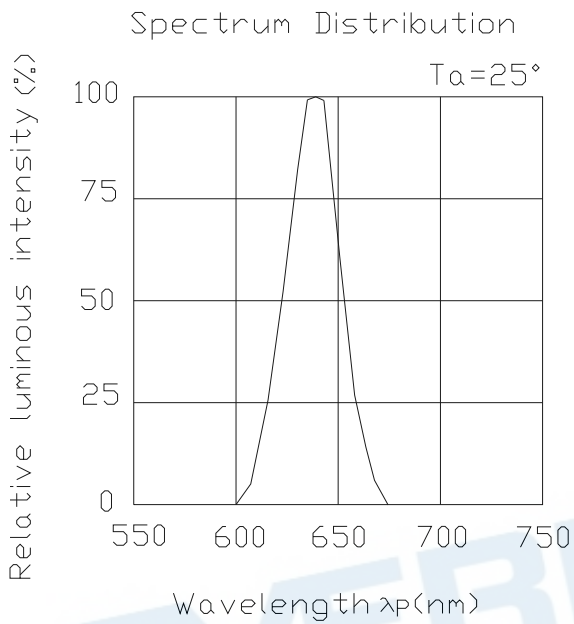
Rank	Min.	Max.	Rank	Min.	Max.
P	5.6	8.9	S	15.0	24.0
Q	7.8	12.5	T	21.0	34.0
R	11.0	17.6	U	30.0	48.0

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### ELLS-325SURWB/S530-A3

#### Typical Electro-Optical Characteristics Curves



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### ELLS-325SURWB/S530-A3

#### ■ Reliability test items and conditions:

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

Confidence level : 90%

LTPD : 10%

NO	Item	Test Conditions	Test Hours/Cycle	Sample Size	Failure Judgment Criteria	Ac/Re
1	Solder Heat	Temp : 260°C ± 5°C	5 sec.	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 : +85°C 15min. ↓ 5min. L : -40°C 15min.	50 cycles	22 PCS		0/1
3	Thermal Shock	H : +100°C 5min. ↓ 10sec. L : -10°C 5min.	50 cycles	22 PCS		0/1
4	High Temperature Storage	Temp : 100°C	1000 hrs.	22 PCS		0/1
5	Low Temperature Storage	Temp : -40°C	1000 hrs.	22 PCS		0/1
6	DC Operating Life	$I_F = 10\text{mA}$ ( $T_a = 25^\circ\text{C}$ )	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






## 0.28" Single Digit Leadframe Display

**ELLS-325SURWB/S530-A3**

### Packing Quantity Specification

- 1.50PCS/tube,10tubes/box
- 2.16 Boxes/Carton

### Label Form Specification

	<b>EVERLIGHT</b>	<b>11</b>
CPN:		
P/N:		
		<b>RoHS</b>
LS325SURWB/S530-A3		
QTY:	CAT:	
	HUE:	
	REF:	
LOT NO:		
		
REFERENCE:		
		DC:

CPN: Customer's Production Number

S/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.
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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