

Technical Data Sheet

1.0" Single Digit Displays

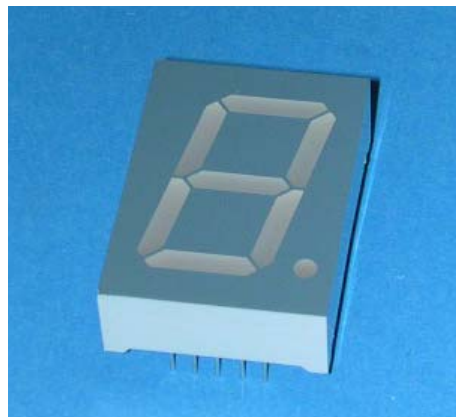
ELS-1005SURWA/S530-A3

■ Features :

- Industrial standard size.
- Low power consumption.
- Categorized for luminous intensity.
- Pb free

■ Descriptions :

- The ELS-1005 series is a large 25.4mm (1.0")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
ELS-1005SURWA/S530-A3	AlGaInP	Hyper Red



ELS-1005SURWA/S530-A3

Technical drawing of the ELS-XXX BIN connector, showing dimensions and labels.

Top View Dimensions:

- Overall width: 24.0
- Overall height: 34.0
- Top edge width: 14.0
- Top edge angle: 10°
- Top edge width segments: 10.6 and 1.5
- Bottom edge width segments: 1.5 and 10.6
- Internal width segments: 25.4 and 2.6
- Internal width segments: 1.5 and 10.6

Labels: A, B, C, D, E, F, G, DP

Side View Dimensions:

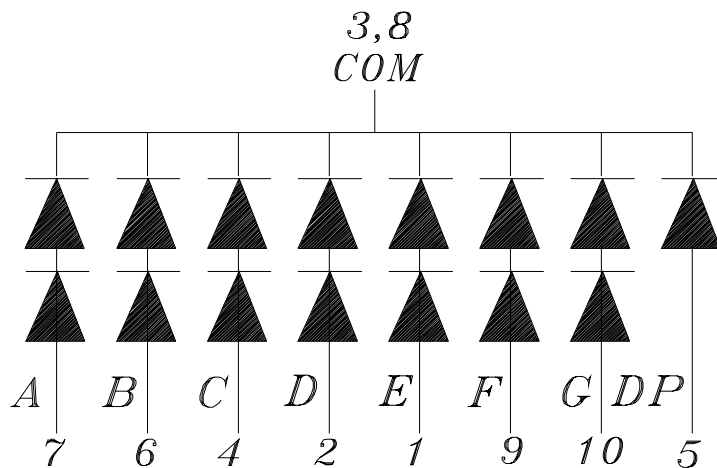
- Overall height: 30.5
- Top flange width: $\phi 0.51$
- Bottom flange width: 4.8 ± 0.5

Detail View Dimensions:

- Overall width: 2.54 * 4
- Overall height: 10.5
- Bottom flange width: 1.0

Text: ELS-XXX BIN, DATE, CODE

COMMON CATHODE
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 F
10 ANODE G



Supplier will reserve authority on material change for above specification.



Technical Data Sheet

1.0" Single Digit Displays

ELS-1005SURWA/S530-A3

■ Absolute maximum ratings at Ta = 25°C :

Parameter	Symbol	Rating	Unit
Reverse Voltage	V _R	5	V
Forward Current	I _F	25	mA
Operating Temperature	T _{opr}	-40 to +85	°C
Storage Temperature	T _{stg}	-40 to +100	°C
Soldering Temperature	T _{sol}	260 ± 5	°C
Electrostatic Discharge	ESD	2000	V
Power Dissipation	P _d	120	mW
Peak Forward Current(Duty 1/10 @ 1KHz)	I _F (Peak)	160	mA

■ Electronic optical characteristics :

Parameter		Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	Per segment	I _v	----	5.0	----	mcd	I _F =2mA
			15.0	24.0	----		I _F =10mA
	Per decimal point		----	1.5	----	mcd	I _F =2mA
			5.0	8.0	----		I _F =10mA
Peak Wavelength		λ _p	----	632	----	nm	I _F =20mA
Dominant Wavelength		λ _d	----	624	----	nm	I _F =20mA
Spectrum Radiation Bandwidth		△λ	----	20	----	nm	I _F =20mA
Forward Voltage		V _F	----	4.0	4.8	V	I _F =20mA
Reverse Current		I _R	----	----	100	μA	V _R =5V



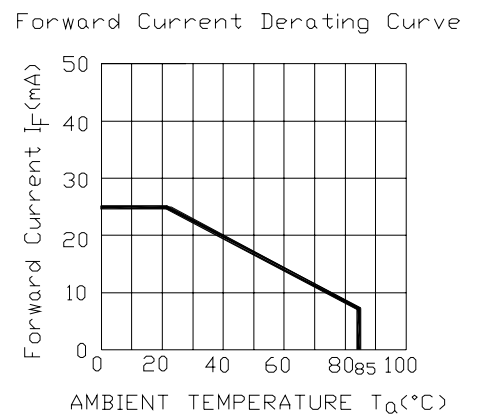
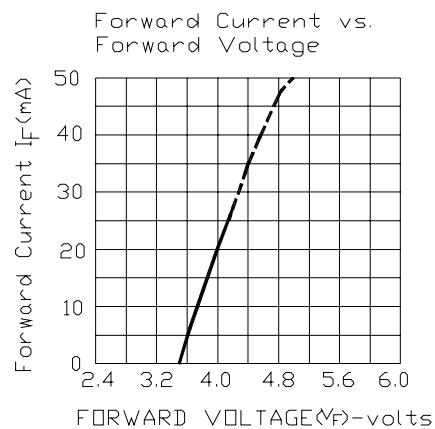
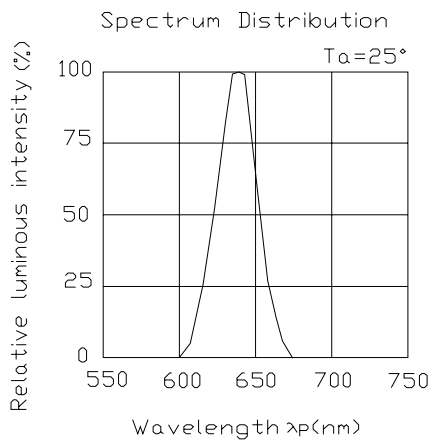
Technical Data Sheet

1.0" Single Digit Displays

ELS-1005SURWA/S530-A3

■ Typical Electro-Optical Characteristic Curves:

(SUR)



**Technical Data Sheet**
1.0" Single Digit Displays**ELS-1005SURWA/S530-A3****■ Reliability test items and conditions:**

NO	Item	Test Conditions	Test Hours/Cycle	Sample Size	Ac/Re
1	Solder Heat	TEMP : 260°C ± 5 °C	5 SEC	76 PCS	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