



Technical Data Sheet 1.8" Single Digit Displays

ELS-1806EVGWB

■ Features :

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

■ Descriptions :

- The ELS-1806 series is a large 44.8 mm (1.8")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 black surface.



■ Applications :

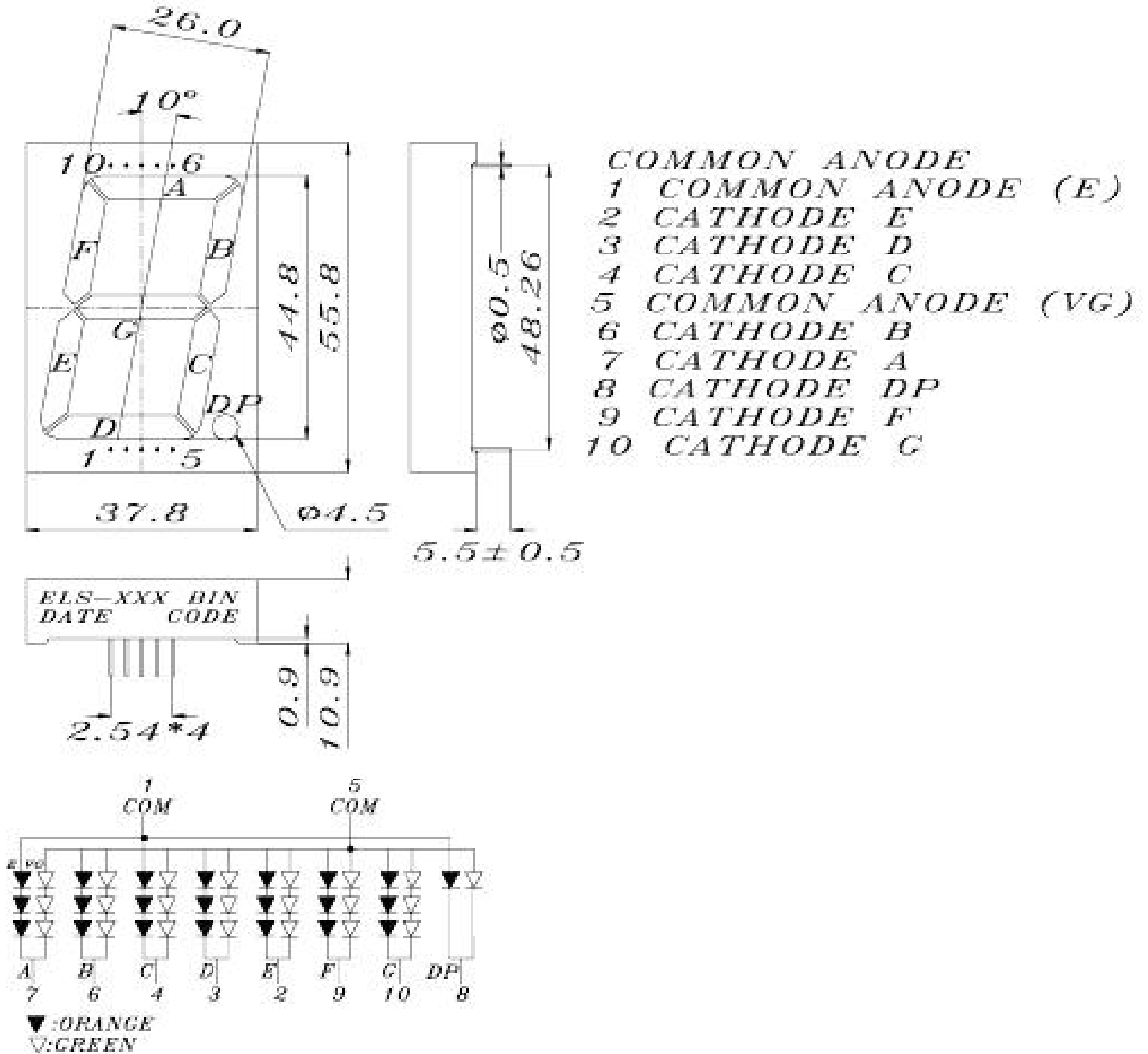
- Audio equipment
- Instrument panels
- Digital read out display

PART NO.	Chip	
	Material	Emitted Color
ELS-1806EVGWB	GaAsP/GaP(E)	Orange
	GaP(VG)	Green

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Package Dimensions



Notes: 1.All dimensions are in millimeters, tolerance is 0.25mm unless otherwise noted.

2.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	V _R	5	V
Forward Current	I _{F(E)}	30	mA
	I _{F(VG)}	30	mA
Operating Temperature	T _{opr}	-40 to +85	°C
Storage Temperature	T _{stg}	-40 to +100	°C
Soldering Temperature	T _{sol}	260 ± 5	°C
Power Dissipation	P _{d(E)}	300	mW
	P _{d(VG)}	300	mW
Peak Forward Current(Duty 1/10 @ 1KHZ)	I _{F(Peak)(E)}	160	mA
	I _{F(Peak)(VG)}	160	mA

■ Electronic optical characteristics :

Parameter		Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	Per segment	I _{v(E)}	2.00	3.20	----	mcd	I _F =10mA
		I _{v(VG)}	2.80	4.50	----		
	Per decimal point	I _{v(E)}	0.45	0.90	----	mcd	
		I _{v(VG)}	0.75	1.2	----		
Peak Wavelength	λ _{p(E)}	----	635	----	nm	I _F =20mA	
	λ _{p(VG)}	----	570	----	nm	I _F =20mA	
Dominant Wavelength	λ _{d(E)}	----	625	----	nm	I _F =20mA	
	λ _{d(VG)}	----	571	----	nm	I _F =20mA	
Spectrum Radiation Bandwidth	Δλ(E)	----	45	----	nm	I _F =20mA	
	Δλ(VG)	----	30	----	nm	I _F =20mA	
Forward Voltage	V _{F(E)}	5.1	6.0	7.2	V	I _F =20mA	
	V _{F(VG)}	5.1	6.3	7.2	V	I _F =20mA	
Reverse Current	I _R	----	----	10	μA	V _R =5V	

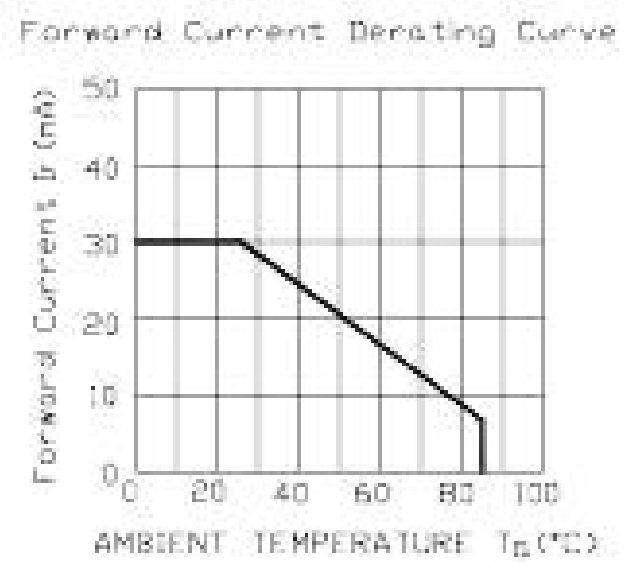
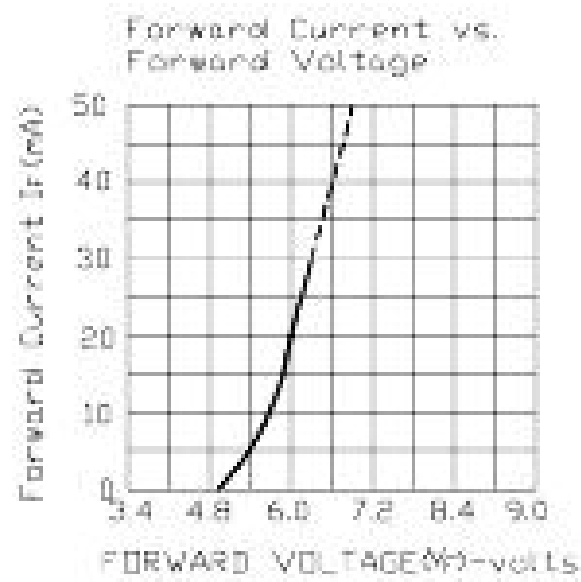
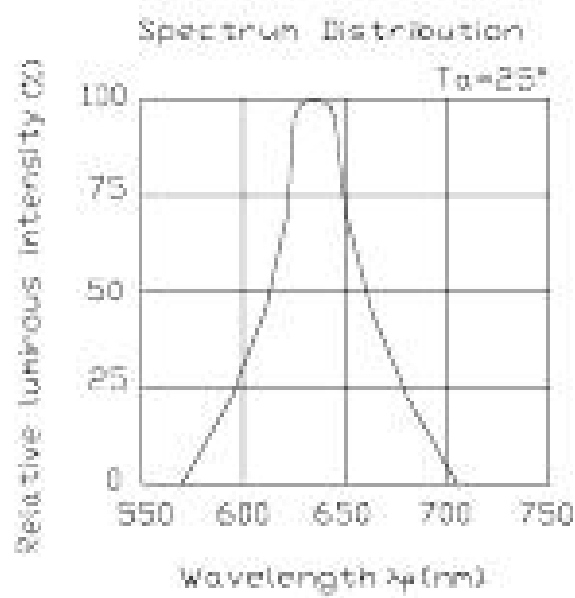


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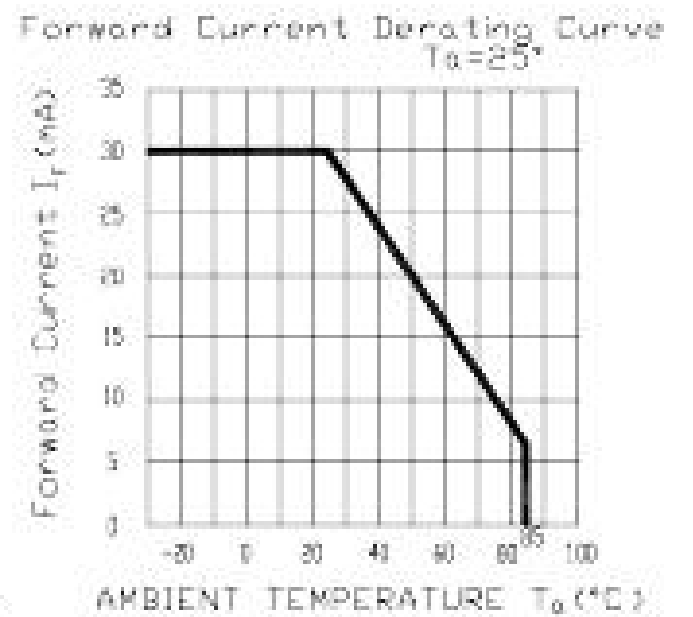
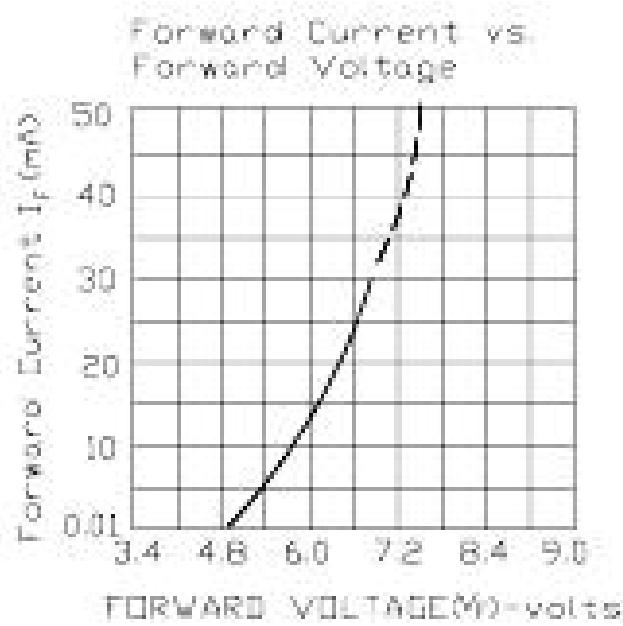
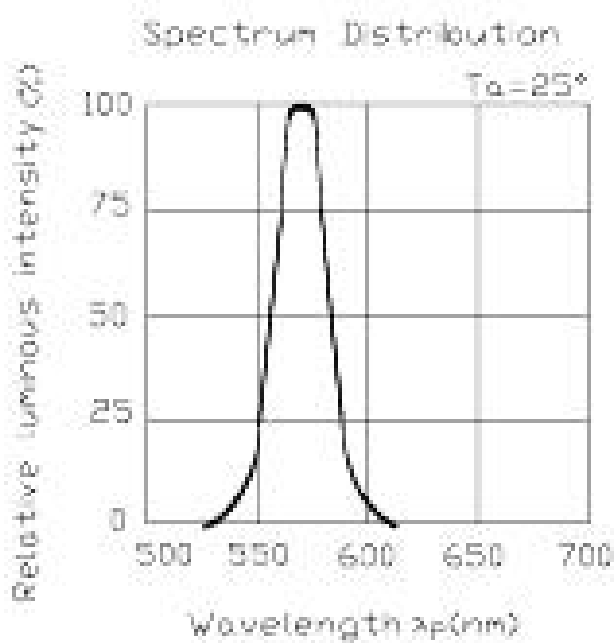
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■ Typical Electro-Optical Characteristic Curves:

CHIP Material:GaAsP/GaP
Emitted Color:HI-Eff Red/Orange



(VG)



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■ 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

