



# EVERLIGHT ELECTRONICS CO.,LTD.

Device Number : CDDS-401-008 REV: 1

## 0.4" Single Digit Displays

PART NO. : ELS-401EWA ECN :                      Page: 1/5

### Features :

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

### Applications:

- Audio equipment
- Instrument panels
- Digital read out display

### Descriptions :

The ELS-401 series is a large 10.16 mm (0.4")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.

PART NO.	Chip	
	Material	Emitted Color
ELS-401EWA	GaAsP/GaP	Orange

OFFICE : NO. 25,Lane 76,Sec.3, Chung Yang Rd., Tucheng 236, Taipei, Taiwan, R.O.C.

TEL : 886-2-2267-2000,2267-9936

FAX : 886-2-2267-6244,22676189,22676306

<http://www.everlight.com>



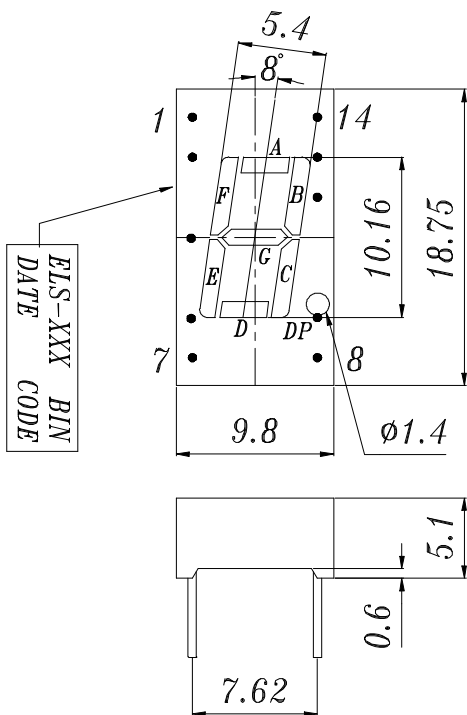
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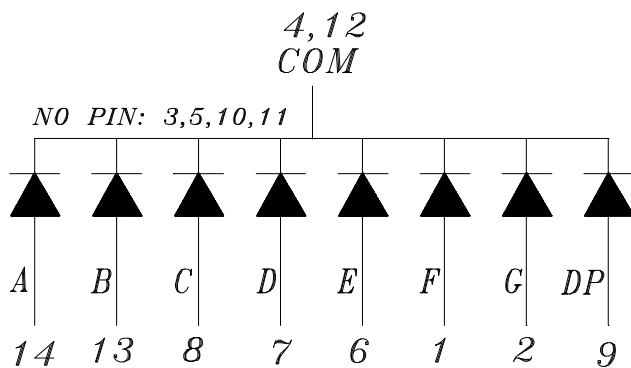
0.4" Single Digit Displays

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### Package Dimensions:



- COMMON CATHODE*
- 1 ANODE F
  - 2 ANODE G
  - 3 NO PIN
  - 4 COMMON CATHODE
  - 5 NO PIN
  - 6 ANODE E
  - 7 ANODE D
  - 8 ANODE C
  - 9 ANODE DP
  - 10 NO PIN
  - 11 NO PIN
  - 12 COMMON CATHODE
  - 13 ANODE B
  - 14 ANODE A



### 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 :

Parameter	Symbol	Rating	Unit
Reverse Voltage	VR	5	V
Forward Current	IF	30	mA
Operating Temperature	Topr	-40 to +85	
Storage Temperature	Tstg	-40 to +100	
Soldering Temperature	Tsol	260 ±5	
Power Dissipation	Pd	100	mW
Peak Forward Current(Duty 1/10 @ 1KHZ)	IF(Peak)	160	mA

Electronic optical characteristics :

Parameter		Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	Per segment	Iv	0.45	1.2	----	mcd	IF=10mA
	Per decimal point		0.15	0.4	----		
Peak Wavelength		p	----	635	----	nm	IF=20mA
Dominant Wavelength		d	----	625	----	nm	IF=20mA
Spectrum Radiation Bandwidth			----	45	----	nm	IF=20mA
Forward Voltage		VF	1.7	2.0	2.4	V	IF=20mA
Reverse Current		IR	----	----	10	μ A	VR=5V



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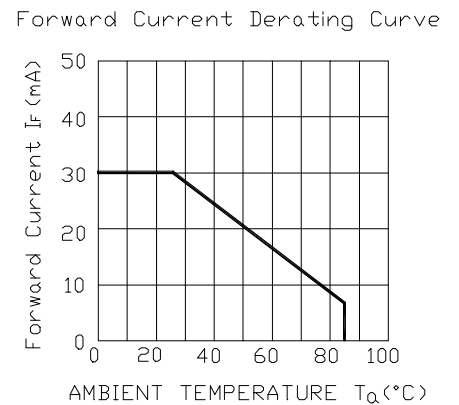
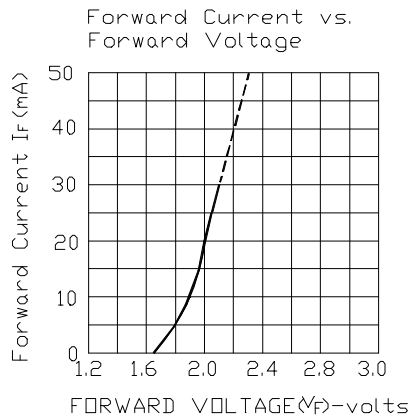
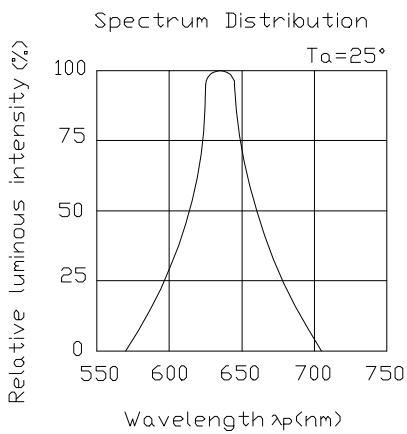
PART NO. : ELS-401EWA

ECN :                     

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## Typical Electro-Optical Characteristic Curves:

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





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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 ±5	5 SEC	76 PCS	0/1
2	Temperature Cycle	H : +85 30min 5 min L : -55 30min	50 CYCLE	76 PCS	0/1
3	Thermal Shock	H : +100 5min 10 sec L : -10 5min	50 CYCLE	76 PCS	0/1
4	High Temperature Storage	TEMP : 100	1000 HRS	76 PCS	0/1
5	Low Temperature Storage	TEMP : -55	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 /85% RH	1000 HRS	76 PCS	0/1