EVERLIGHT ELECTRONICS CO.,LTD.

Device Number : DDS-422-004 REV: 1.1

0.43" Single Digit Displays

PART NO. : ELS-422EWA 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-422 series is a large 10.8 mm (0.43")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.

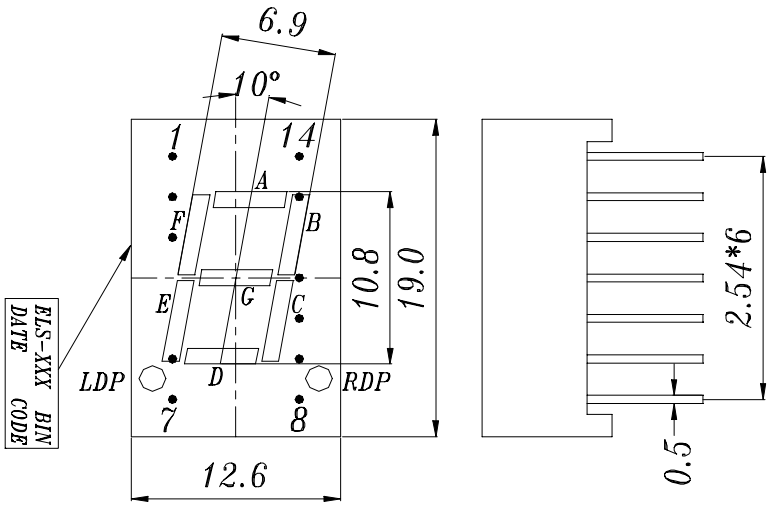
PART NO.	Chip	
	Material	Emitted Color
ELS-422EWA	GaAsP/GaP	Orange

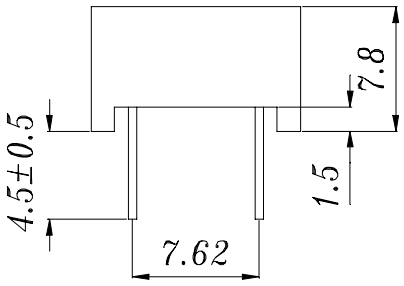
OFFICE : NO. 25,Lane 76,Sec.3, Chung Yang Rd., Tucheng 236, Taipei, Taiwan, R.O.C.
TEL : 886-2-2267-2000,2267-9936
FAX : 886-2-2267-6244,22676189,22676306
http://www.everlight.com

0.43" Single Digit Displays

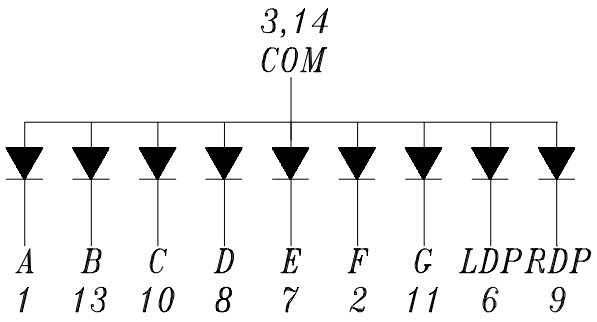
PART NO. : ELS-422EWA ECN : Page: 2/5

■ Package Dimensions:





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



■ 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.

0.43" Single Digit Displays

PART NO. : ELS-422EWA ECN : Page: 3/5

■ Absolute maximum ratings at Ta = 25℃ :

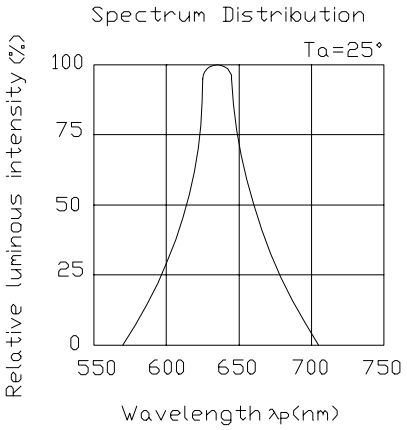
Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	5	V
Forward Current	I_F	30	mA
Operating Temperature	Topr	-40 to +85	℃
Storage Temperature	Tstg	-40 to +100	℃
Soldering Temperature	Tsol	260 ± 5	℃
Power Dissipation	Pd	100	mW
Peak Forward Current(Duty 1/10 @ 1KHZ)	I_F(Peak)	160	mA

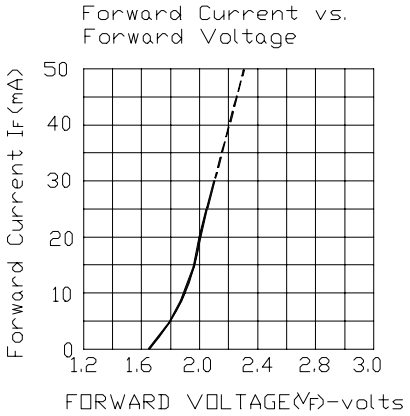
■ Electronic optical characteristics :

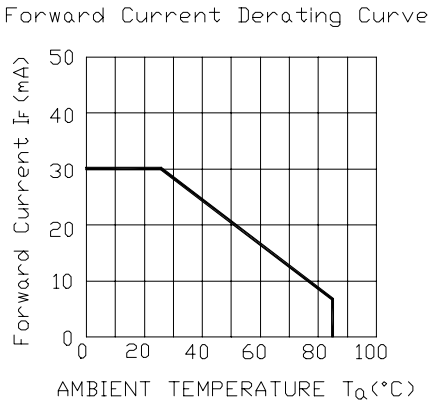
Parameter		Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	Per segment	Iv	1.1	1.70	----	mcd	I_F=10mA
	Per decimal point		0.30	0.5	----		
Peak Wavelength		λp	----	635	----	nm	I_F=20mA
Dominant Wavelength		λd	----	625	----	nm	I_F=20mA
Spectrum Radiation Bandwidth		△λ	----	45	----	nm	I_F=20mA
Forward Voltage		V_F	1.5	2.0	2.4	V	I_F=20mA
Reverse Current		I_R	----	----	10	μA	V_R=5V

Typical Electro-Optical Characteristic Curves:

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







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PART NO. : ELS-422EWA ECN : Page: 5/5

■ 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