



EVERLIGHT ELECTRONICS CO.,LTD.

Device Number : DDF-415-001 REV: 1.0

0.4" Quadruple Digit Displays

MODEL NO : ELF-415VGWA 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 ELF-415 series is a large 10.0mm (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
ELF-415VGWA	GaP	Green

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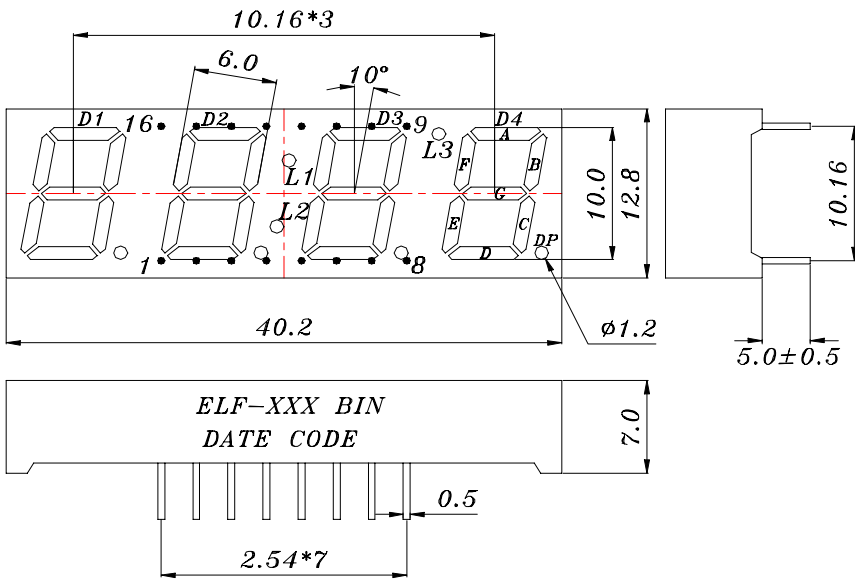
0.4" Quadruple Digit Displays

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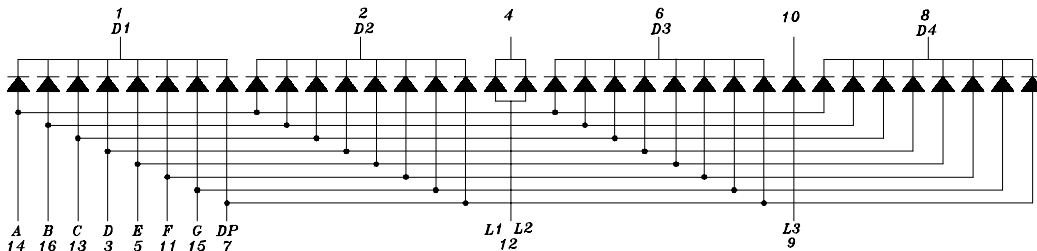
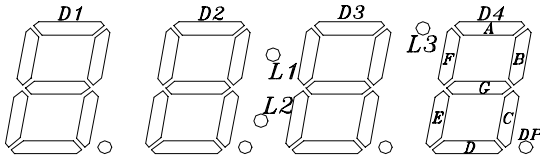
ECN : _____

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Package Dimensions:



- COMMON CATHODE**
- 1 COMMON CATHODE D1
 - 2 COMMON CATHODE D2
 - 3 ANODE D
 - 4 COMMON CATHODE L1,L2
 - 5 ANODE E
 - 6 COMMON CATHODE D3
 - 7 ANODE DP
 - 8 COMMON CATHODE D4
 - 9 ANODE L3
 - 10 CATHODE L3
 - 11 ANODE F
 - 12 ANODE L1,L2
 - 13 ANODE C
 - 14 ANODE A
 - 15 ANODE G
 - 16 ANODE B



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	VR	5	V
Forward Current	IF	30	mA
Operating Temperature	Topr	-40 to +85	°C
Storage Temperature	Tstg	-40 to +100	°C
Soldering Temperature	Tsol	260 ± 5	°C
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	1.05	1.40	----	mcd	IF=10mA
	Per decimal point		0.30	0.70	----		
Peak Wavelength		λ_p	----	570	----	nm	IF=20mA
Dominant Wavelength		λ_d	----	571	----	nm	IF=20mA
Spectrum Radiation Bandwidth		$\Delta \lambda$	----	30	----	nm	IF=20mA
Forward Voltage		VF	1.7	2.1	2.4	V	IF=20mA
Reverse Current		IR	----	----	10	μA	VR=5V



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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



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■ Typical Electro-Optical Characteristic Curves:

