



# 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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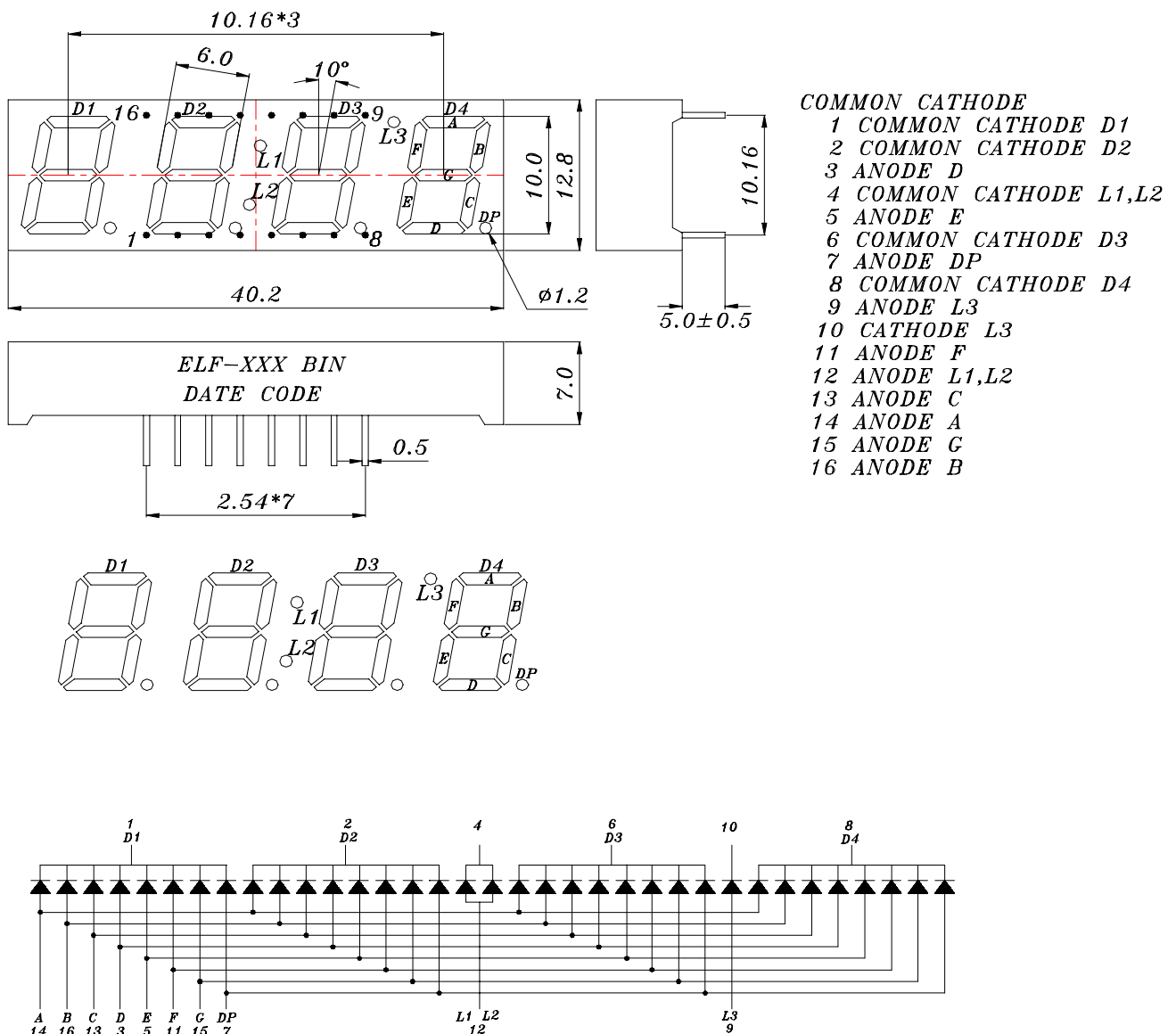
T00236



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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℃ :

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	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		△ λ	----	30	----	nm	IF=20mA
Forward Voltage		VF	1.7	2.1	2.4	V	IF=20mA
Reverse Current		IR	----	----	10	μ A	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:

