



EVERLIGHT ELECTRONICS CO.,LTD.

Technical Data Sheet 0.56" Quadruple Digit Displays

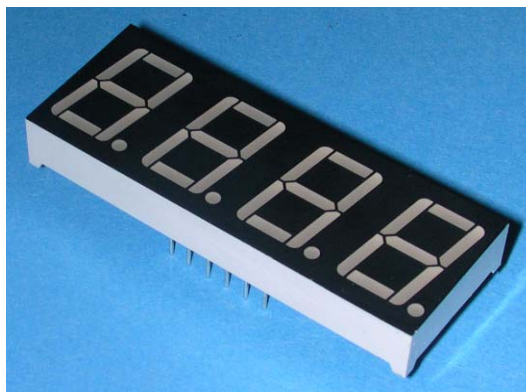
ELF-511GWB

■ Features :

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

■ Descriptions :

- The ELF-511 series is a large 14.22mm (0.56")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
ELF-511GWB	GaP	Green

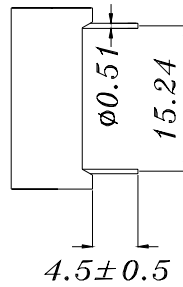
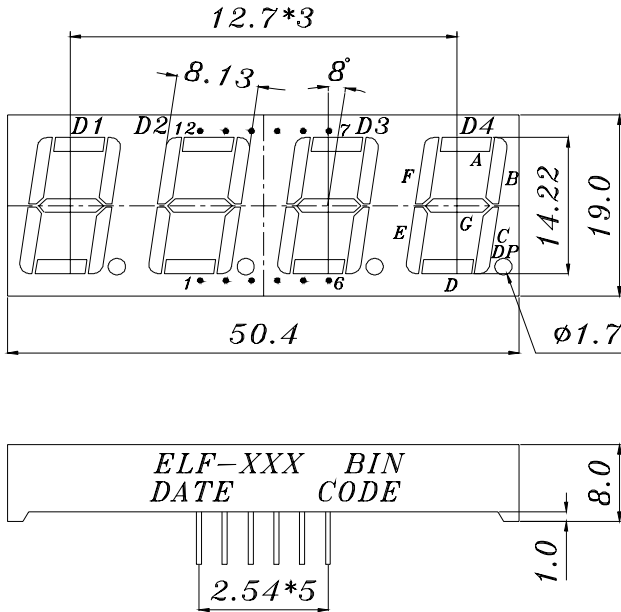


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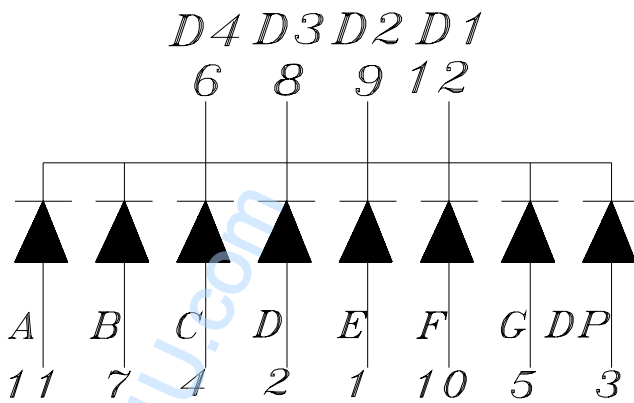
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Package Dimensions



- COMMON CATHODE*
- 1 ANODE E
 - 2 ANODE D
 - 3 ANODE DP
 - 4 ANODE C
 - 5 ANODE G
 - 6 COMMON CATHODE D4
 - 7 ANODE B
 - 8 COMMON CATHODE D3
 - 9 COMMON CATHODE D2
 - 10 ANODE F
 - 11 ANODE A
 - 12 COMMON CATHODE D1



- 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 $T_a = 25^{\circ}\text{C}$:

Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	5	V
Forward Current	I_F	30	mA
Operating Temperature	T_{opr}	-40 to +85	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-40 to +100	$^{\circ}\text{C}$
Soldering Temperature	T_{sol}	260 ± 5	$^{\circ}\text{C}$
Power Dissipation	P_d	100	mW
Peak Forward Current(Duty 1/10 @ 1KHz)	$I_F(\text{Peak})$	160	mA

■ Electronic optical characteristics :

Parameter		Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	Per segment	I_v	1.4	3.0	----	mcd	$I_F=10\text{mA}$
	Per decimal point		0.6	1.0	----	mcd	$I_F=10\text{mA}$
Peak Wavelength		λ_p	----	565	----	nm	$I_F=20\text{mA}$
Dominant Wavelength		λ_d	----	570	----	nm	$I_F=20\text{mA}$
Spectrum Radiation Bandwidth		$\Delta\lambda$	----	30	----	nm	$I_F=20\text{mA}$
Forward Voltage		V_F	1.7	2.1	2.4	V	$I_F=20\text{mA}$
Reverse Current		I_R	----	----	10	μA	$V_R=5\text{V}$



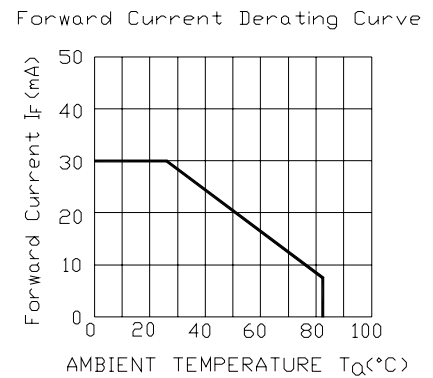
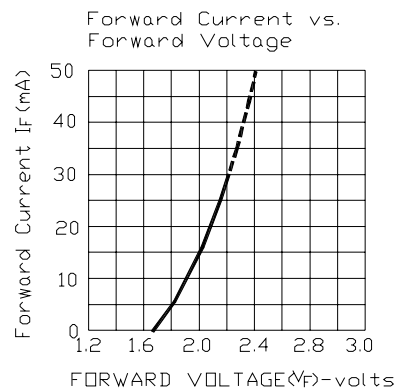
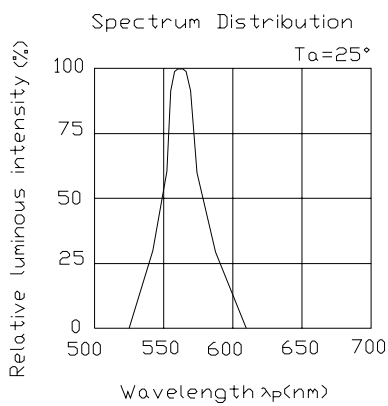
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■ Typical Electro-Optical Characteristic Curves:

GHIP Material:Gap
Emitted Color:Yellow Green




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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