



# EVERLIGHT ELECTRONICS CO.,LTD.

Device Number : DDF-512-005 REV: 1.1

0.56" Quadruple Digit Displays

PART NO. : ELF-512GWB/P1/S2 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-512 series is a large 14.22 mm (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.

PART NO.	Chip	
	Material	Emitted Color
ELF-512GWB/P1/S2	GaP	Green

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

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

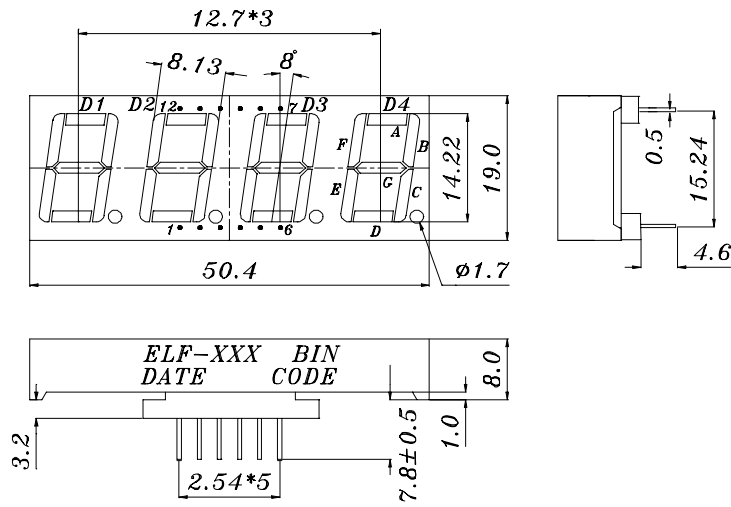
FAX : 886-2-2267-6244,22676189,22676306

<http://www.everlight.com>

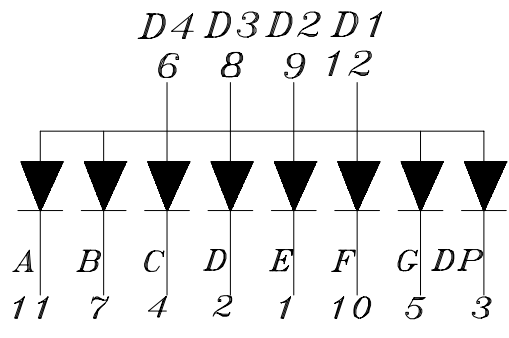


0.56" Quadruple Digit Displays

■ Package Dimensions:



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



# EVERLIGHT ELECTRONICS CO.,LTD.

Device Number : DDF-512-005 REV: 1.1

0.56" Quadruple Digit Displays

PART NO. : ELF-512GWB/P1/S2 ECN :          Page: 3/5

■ 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	2.0	3.2	----	mcd	IF=10mA
	Per decimal point		0.6	1.0	----		
Peak Wavelength		$\lambda_p$	----	565	----	nm	IF=20mA
Dominant Wavelength		$\lambda_d$	----	570	----	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	$\mu A$	VR=5V



0.56" Quadruple Digit Displays

PART NO. : ELF-512GWB/P1/S2

ECN :                     

Page: 4/5

■ Typical Electro-Optical Characteristic Curves:

GHIP Material:Gap  
Emitted Color:Yellow Green

Spectrum Distribution  
 $T_a=25^\circ$

Wavelength $\lambda_p$ (nm)	Relative luminous intensity (%)
500	0
550	25
560	100
570	75
600	25
650	0
700	0

Forward Current vs. Forward Voltage

FORWARD VOLTAGE $V_p$ (volts)	Forward Current $I_f$ (mA)
1.8	0
2.0	15
2.2	30
2.4	45
2.5	50

Forward Current Derating Curve

AMBIENT TEMPERATURE $T_q$ (°C)	Forward Current $I_f$ (mA)
0	30
25	30
50	20
75	10
85	0



# EVERLIGHT ELECTRONICS CO.,LTD.

Device Number : DDF-512-005 REV: 1.1

0.56" Quadruple Digit Displays

PART NO. : ELF-512GWB/P1/S2 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°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

--	--	--	--	--	--