



EVERLIGHT ELECTRONICS CO.,LTD.

Device Number : DDS-431-029 REV: 1.0

0.39" Single Digit Displays

MODEL NO : ELS-431EWB 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-431 series is a large 10.0mm (0.39")high seven segment display design for viewing distances up to 7 meters.
- These displays provide excellent reliability in bright ambient light .
- These device is made with white segments and black surface.

PART NO	CHIP		C.C. or C.A.
	Material	Emitted Color	
ELS-431EWB	GaAsP/GaP	Orange	C.C.

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>



REV: 1.0

MODEL NO : ELS-431EWB

Page:

2/5

Technical drawing of a diamond-shaped optical component. The main view shows a diamond shape with a top width of 6.2 and a top angle of 10°. The diamond is divided into eight regions labeled A through H. Dimensions include a vertical length of 10.0, a total vertical length of 12.9, a horizontal width of 9.85, and a circular feature with a diameter of $\phi 1.5$. A data label is attached to the left side, containing the text: ELS-XXX BIN, DATE, and CODE. A side view shows a profile with a width of 6.0 ± 0.5, a height of 7.0, and a thickness of 0.25. A detail view shows a cross-section of the diamond with a width of 7.62 and a height of 0.9. A label 2.54*4 is shown on the right side.

1 *ANODE* *G*

2 *ANODE F*

3 COMMON CATHODE

4 *ANODE E*

5 *ANODE D*

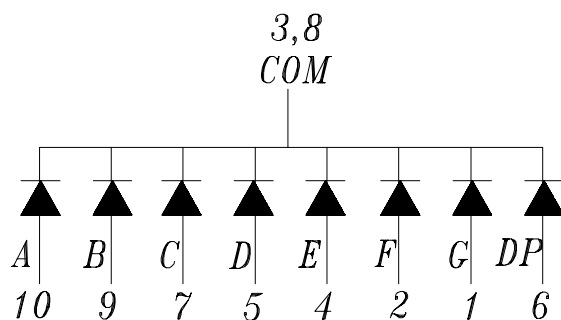
6 ANODE DP

7 *ANODE C*

8 COMMON CATHODE

9 *ANODE B*

10 *ANODE A*



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 : DDS-431-029 REV: 1.0

0.39" Single Digit Displays

MODEL NO : ELS-431EWB 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	1.05	3.0	----	mcd	If=10mA
	Per decimal point		0.45	1.05	----	mcd	If=10mA
Peak Wavelength		λ_p	----	635	----	nm	If=20mA
Dominant Wavelength		λ_d	----	625	----	nm	If=20mA
Spectrum Radiation Bandwidth		$\Delta \lambda$	----	45	----	nm	If=20mA
Forward Voltage		Vf	1.7	2.0	2.4	V	If=20mA
Reverse Current		Ir	----	----	10	μA	Vr=5V



EVERLIGHT ELECTRONICS CO.,LTD.

Device Number : DDS-431-029 REV: 1.0

0.39" Single Digit Displays

MODEL NO : ELS-431EWB ECN : Page: 4/5

■ Reliability test item and condition:					
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



EVERLIGHT ELECTRONICS CO.,LTD.

Device Number :

DDS-431-029

REV:

1.0

0.39" Single Digit Displays

MODEL NO: ELS-431EWB

ECN :

Page:

5/5

Typical Electro-Optical Characteristic Curves:

