

## Technical Data Sheet

### 1.2" 5\*8 Dot Matrix Displays

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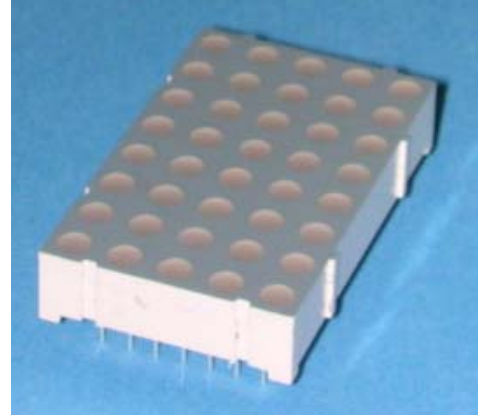
#### ELM-1081EWA

##### ■ Features :

- Large emitting dot 0.12" diameter.
- Low power/high brightness.
- Pb free

##### ■ Descriptions :

- The ELM-1081 series is a large emitting area(3.0mm diameter)LED sources configured in a 40 dots 5\*8 matrix array.
- These devices are made with white dots and gray surface.



##### ■ Applications :

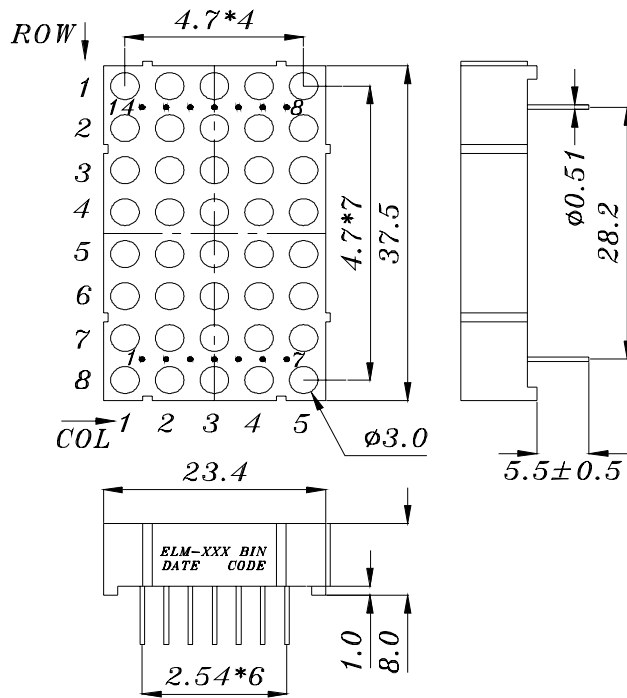
- Instrument panels
- Digital read out display

PART NO.	Chip	
	Material	Emitted Color
ELM-1081EWA	GaAsP/GaP	Orange

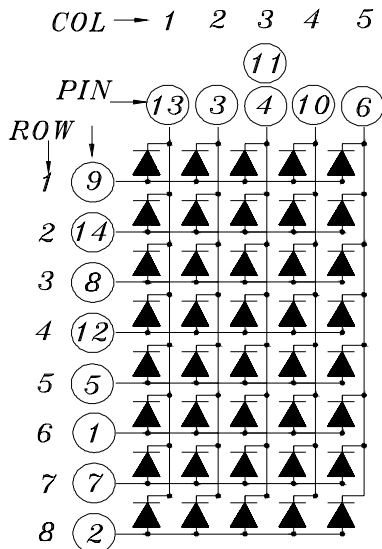
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### ELM-1081EWA

#### Package Dimensions



CATHODE COLUMN	ANODE ROW
1	ANODE ROW 6
2	ANODE ROW 8
3	CATHODE COLUMN 2
4	CATHODE COLUMN 3
5	ANODE ROW 5
6	CATHODE COLUMN 5
7	ANODE ROW 7
8	ANODE ROW 3
9	ANODE ROW 1
10	CATHODE COLUMN 4
11	CATHODE COLUMN 3
12	ANODE ROW 4
13	CATHODE COLUMN 1
14	ANODE ROW 2



**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	V <sub>R</sub>	5	V
Forward Current	I <sub>F</sub>	30	mA
Operating Temperature	T <sub>opr</sub>	-40 to +85	°C
Storage Temperature	T <sub>stg</sub>	-40 to +100	°C
Soldering Temperature	T <sub>sol</sub>	260 ± 5	°C
Power Dissipation	P <sub>d</sub>	100	mW
Peak Forward Current(Duty 1/10 @ 1KHz)	I <sub>F(Peak)</sub>	160	mA

■ Electronic optical characteristics :

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I <sub>v</sub>	1.4	3.2	----	mcd	I <sub>F</sub> =10mA
Peak Wavelength	λ <sub>p</sub>	----	635	----	nm	I <sub>F</sub> =20mA
Dominant Wavelength	λ <sub>d</sub>	----	625	----	nm	I <sub>F</sub> =20mA
Spectrum Radiation Bandwidth	Δλ	----	45	----	nm	I <sub>F</sub> =20mA
Forward Voltage	V <sub>F</sub>	1.7	2.0	2.4	V	I <sub>F</sub> =20mA
Reverse Current	I <sub>R</sub>	----	----	10	μA	V <sub>R</sub> =5V

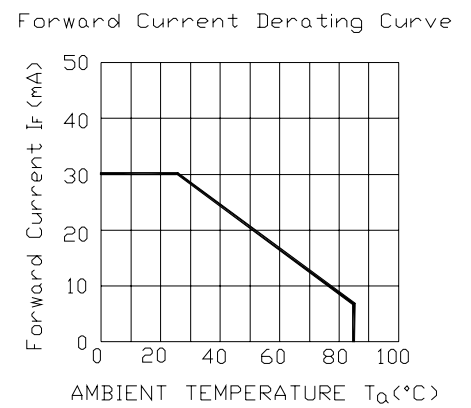
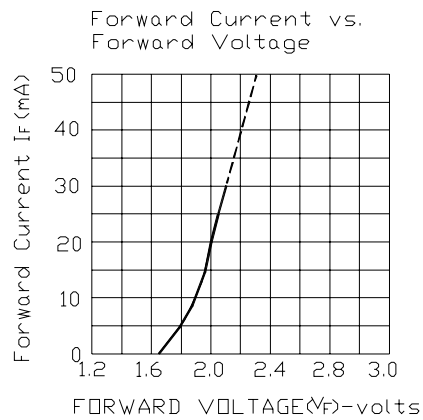
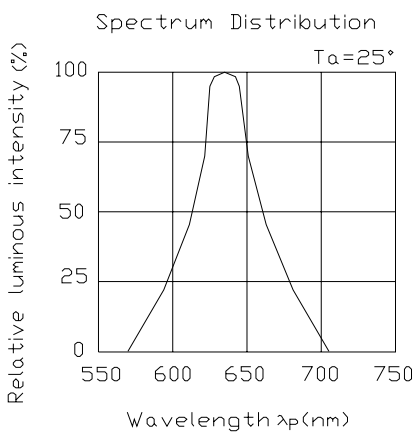


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■ Typical Electro-Optical Characteristic Curves:

CHIP Material:GaAsP/GaP  
Emitted Color:Hi-Eff Red/Orange





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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