



# EVERLIGHT ELECTRONICS CO.,LTD.

Device Number : DDM-102-024 REV: 1.0

1.0" 5\*7 Multicolor Dot Matrix Displays

MODEL NO : ELM-1002EGWA ECN :          Page: 1/5

## ■ Features :

- Large emitting dot 0.2" diameter.
- Low power/high brightness.

## ■ Applications:

- Instrument panels
- Digital read out display

## ■ Descriptions :

- The ELM-1002 series are a large emitting area (3.0mm diameter) LED sources configured in a 70 dots 5\*7 matrix array.
- These devices are made with white dots and gray surface.

PART NO		CHIP		C.C. or C.A.
		Material	Emitted Color	
ELM-1002EGWA	E	GaAsP/GaP	Orange	C.A.
	G	GaP	Green	

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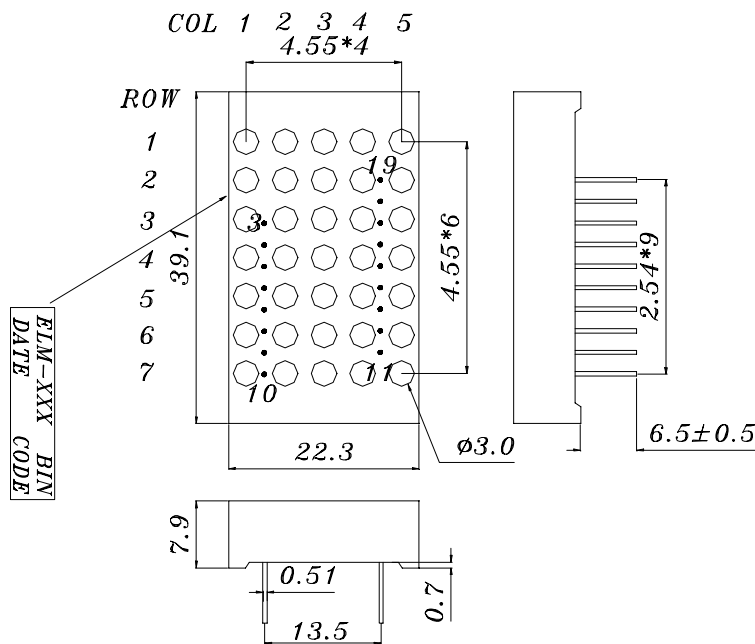
<http://www.everlight.com>



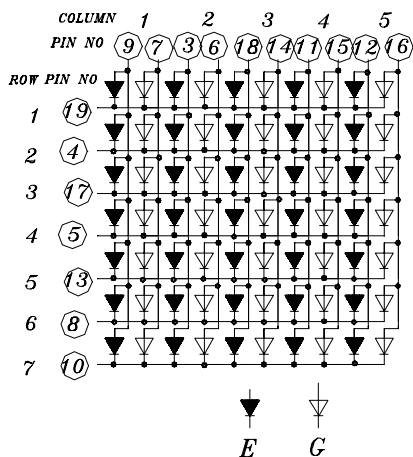
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MODEL NO : ELM-1002EGWA ECN :          Page: 2/5

### ■ Package Dimensions:



**COMMON CATHODE COLUMN**  
1 NO PIN  
2 NO PIN  
3 ANODE COLUMN 2 (E)  
4 CATHODE COLUMN 2  
5 CATHODE COLUMN 4  
6 ANODE COLUMN 2 (G)  
7 ANODE COLUMN 1 (G)  
8 CATHODE COLUMN 6  
9 ANODE COLUMN 1(E)  
10 CATHODE COLUMN 7  
11 ANODE COLUMN 4 (E)  
12 ANODE COLUMN 5 (E)  
13 CATHODE COLUMN 5  
14 ANODE COLUMN 3 (G)  
15 ANODE COLUMN 4 (G)  
16 ANODE COLUMN 5 (G)  
17 CATHODE COLUMN 3  
18 ANODE COLUMN 3 (E)  
19 CATHODE COLUMN 1  
20 NO PIN



### ■ 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	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	Iv	E	2.0	3.2	----	mcd	If=10mA
		G	2.8	4.0	----		
Peak Wavelength	$\lambda_p$	E	----	635	----	nm	If=20mA
		G	----	565	----		
Dominant Wavelength	$\lambda_d$	E	----	625	----	nm	If=20mA
		G	----	570	----		
Spectrum Radiation Bandwidth	$\Delta\lambda$	E	----	45	----	nm	If=20mA
		G	----	30	----		
Forward Voltage	Vf	E	1.7	2.0	2.6	V	If=20mA
		G	1.7	2.1	2.4		
Reverse Current	Ir		----	----	10	$\mu A$	Vr=5V



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MODEL NO : ELM-1002EGWA      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°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

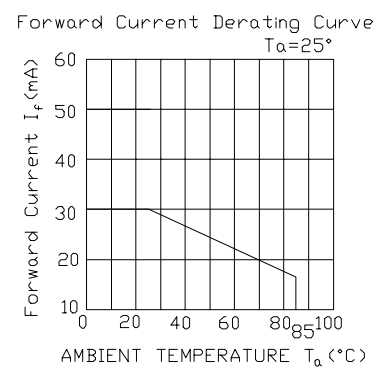
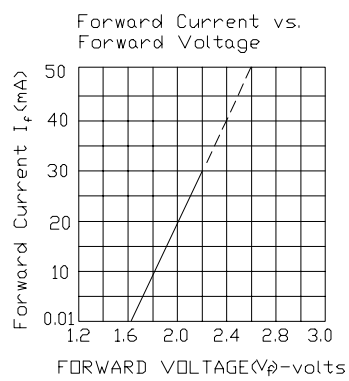
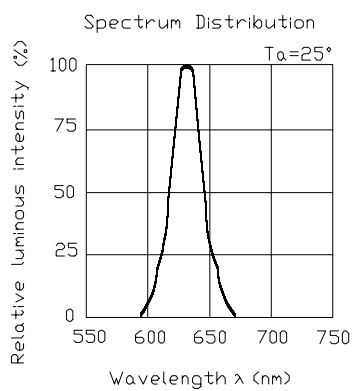


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MODEL NO: ELM-1002EGWA ECN :          Page: 5/5

### Typical Electro-Optical Characteristic Curves:

E



G

