



# EVERLIGHT ELECTRONICS CO.,LTD.

Device Number : CDDM-188-014 REV: 1

1.22" 8\*8 Dot Matrix Displays

PART NO. : ELM-1883SURSYGCB/S219 ECN :            Page: 1/5

## ■ Features :

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

## ■ Applications:

- Instrument panels
- Digital read out display

## ■ Descriptions :

- The ELM-1883 series is a large emitting area(3.0mm diameter)LED sources configured in a 64 dots 8\*8 matrix array.
- These devices are made with water dots and black surface.

PART NO.	Chip	
	Material	Emitted Color
ELM-1883SURSYGCB/S219	AlGaInP (SUR)	Hyper Red
	AlGaInP (SYG)	Super Yellow Green

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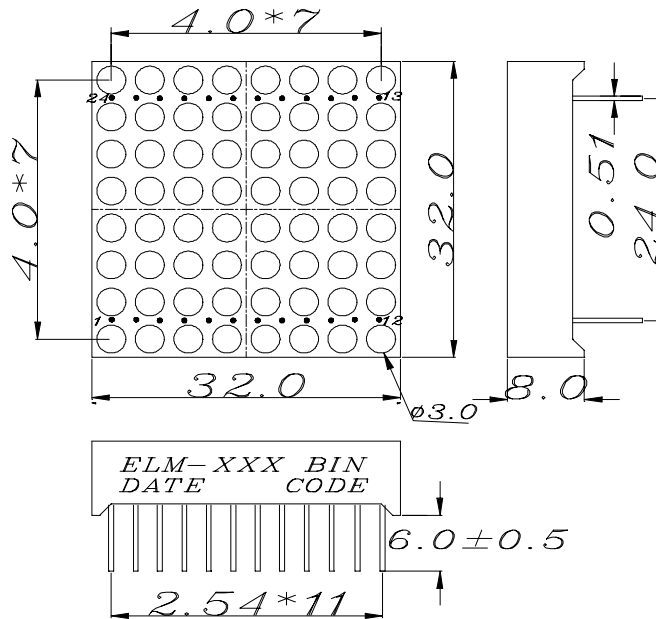
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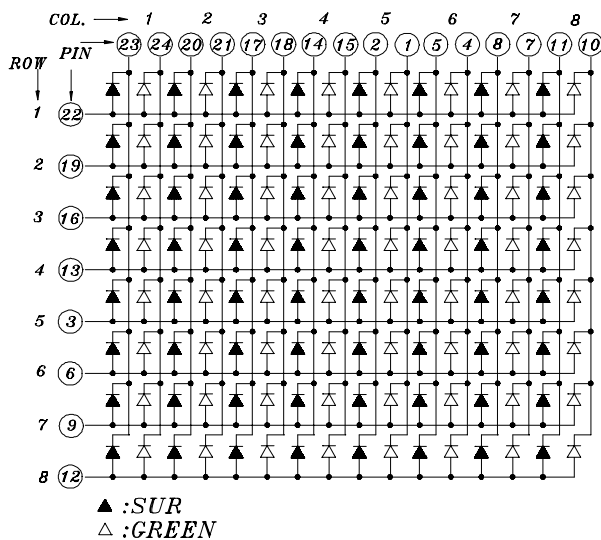
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## Package Dimensions:



COLUMN CATHODE  
ROW ANODE  
1 COLUMN CATHODE 5(SYG)  
2 COLUMN CATHODE 5(SUR)  
3 ROW ANODE 5  
4 COLUMN CATHODE 6(SYG)  
5 COLUMN CATHODE 6(SUR)  
6 ROW ANODE 6  
7 COLUMN CATHODE 7(SYG)  
8 COLUMN CATHODE 7(SUR)  
9 ROW ANODE 7  
10 COLUMN CATHODE 8(SYG)  
11 COLUMN CATHODE 8(SUR)  
12 ROW ANODE 8  
13 ROW ANODE 4  
14 COLUMN CATHODE 4(SUR)  
15 COLUMN CATHODE 4(SYG)  
16 ROW ANODE 3  
17 COLUMN CATHODE 3(SUR)  
18 COLUMN CATHODE 3(SYG)  
19 ROW ANODE 2  
20 COLUMN CATHODE 2(SUR)  
21 COLUMN CATHODE 2(SYG)  
22 ROW ANODE 1  
23 COLUMN CATHODE 1(SUR)  
24 COLUMN CATHODE 1(SYG)  
SUR=RED SYG=GREEN



## 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	25	mA
Operating Temperature	Topr	-40 to +85	°C
Storage Temperature	Tstg	-40 to +100	°C
Soldering Temperature	Tsol	260 ± 5	°C
Electrostatic Discharge	ESD	2000	V
Power Dissipation	Pd	60	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(SUR)	3.0	4.0			IF=2mA
	Iv(SYG)	2.20	0.30	----	mcd	IF=2mA
Luminous Intensity	Iv(SUR)	15.00	20.00	----	mcd	IF=10mA
	Iv(SYG)	11.00	15.00	----	mcd	IF=10mA
Peak Wavelength	λ p(SUR)	----	632		nm	IF=20mA
	λ p(SYG)	----	575	----	nm	IF=20mA
Dominant Wavelength	λ d(SUR)	----	624	----	nm	IF=20mA
	λ d(SYG)	----	573	----	nm	IF=20mA
Spectrum Radiation Bandwidth	△ λ	----	20	----	nm	IF=20mA
Forward Voltage	VF	----	2.0	2.4	V	IF=20mA
Reverse Current	IR	----	----	10	μ A	VR=5V



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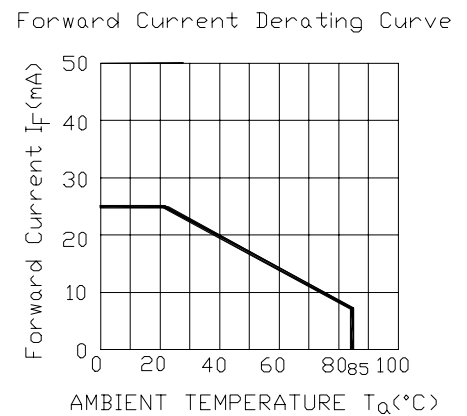
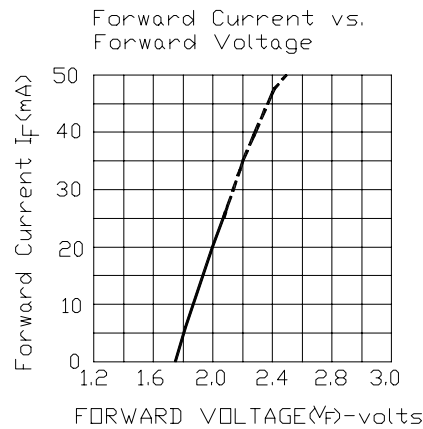
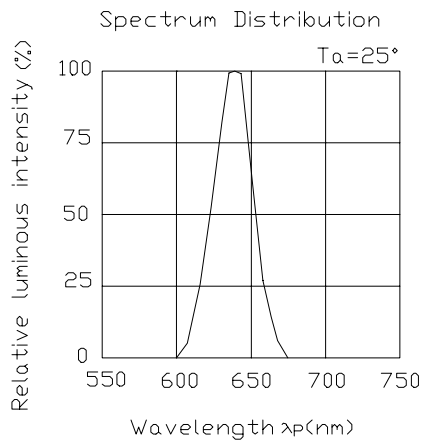
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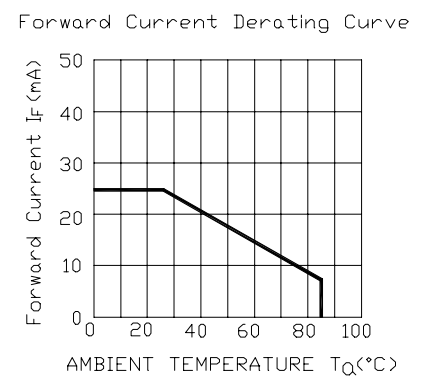
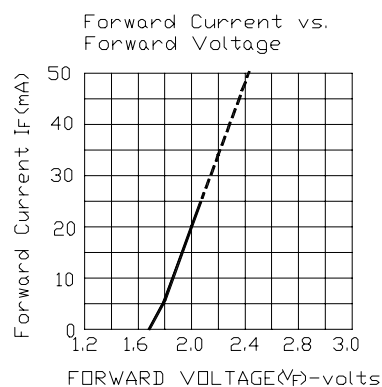
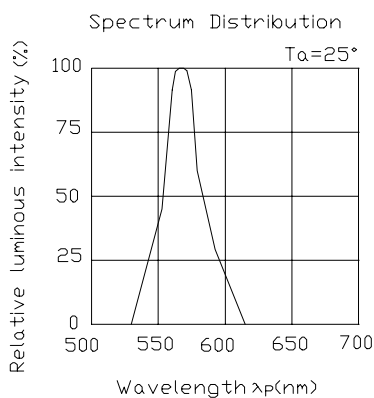
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## Typical Electro-Optical Characteristic Curves:

(SUR)



CHIP Material:AlGaInP  
Emitted Color:Super 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