



EVERLIGHT ELECTRONICS CO.,LTD.

Device Number : DDM-211-011 REV: 1.0

2.3" 5*8 LED Lamp Dot Matrix Displays

MODEL NO : ELLM-2181WB/SURC/S400 ECN : Page: 1/5

■ Features :

- Large emitting dot 0.264"diameter.
- Low power/high brightness.

■ Applications:

- Instrument panels
- Digital read out display

■ Description :

- The LM-2181 series are a large emitting area(6.7mm diameter)Lamp sources configured in a 40 dots 5*8 matrix array.
- These device is made with water clear dots and black surface.

PART NO	CHIP		C.C. or C.A.
	Material	Emitted Color	
ELLM-2181WB/SURC/S400	AlGaInP	Hyper Red	C.C.

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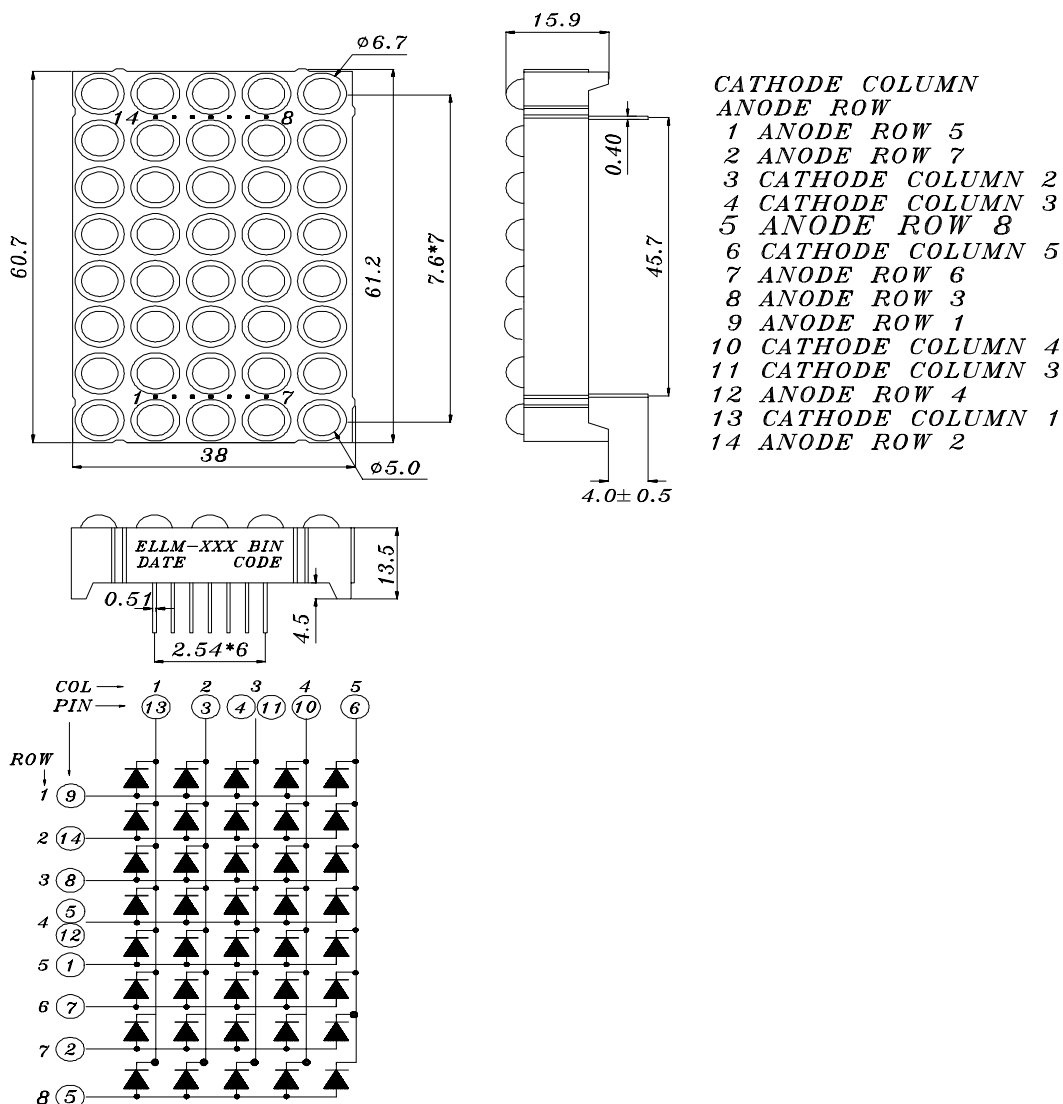
<http://www.everlight.com>



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■ Package Dimension:



■ NOTES:

- 1.All dimensions are 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 _r	5	V
Forward Current	I _f	50	mA
Operating Temperature	T _{opr}	-40 to +85	°C
Storage Temperature	T _{stg}	-40to+100	°C
Soldering Temperature	T _{sol}	260 ± 5	°C
Electrostaic Discharge	ESD	2000	V
Power Dissipation	P _d	120	mW
Peak Forward Current(Duty 1/10 @ 1KHZ)	I _f (Peak)	200	mA

■ Electronic optical characteristics :

Parameter	Symbol	MIN.	TYP.	MAX.	Unit	Condition
Luminous Intensity	I _v	----	118.8	----	mcd	If=2mA
		1240	1980			If=20mA
Peak Wavelength	λ _p	----	632	----	nm	If=20mA
Dominant Wavelength	λ _d	----	624	----	nm	If=20mA
Spectrum Radiation Bandwidth	△λ	----	20	----	nm	If=20mA
Forward Voltage	V _f	----	2.0	2.4	V	If=20mA
Reverse Current	I _r	----	----	10	μA	V _r =5V



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■ 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 = 20 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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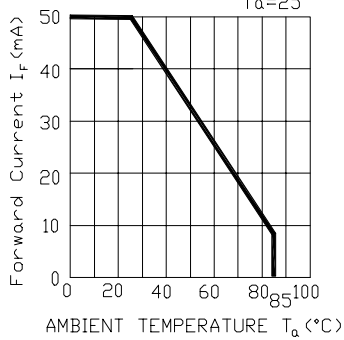


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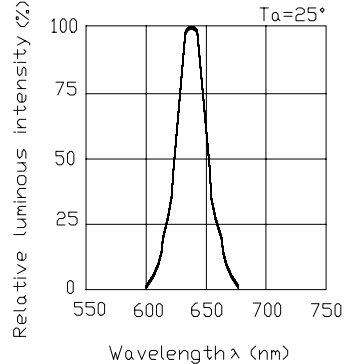
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Typical Electro-Optical Characteristic Curves:

Forward Current Derating Curve
 $T_a=25^\circ$



Spectrum Distribution
 $T_a=25^\circ$



Forward Current vs.
Forward Voltage

