



**Technical Data Sheet**  
**2.3" 5\*8 Dot Matrix Displays**

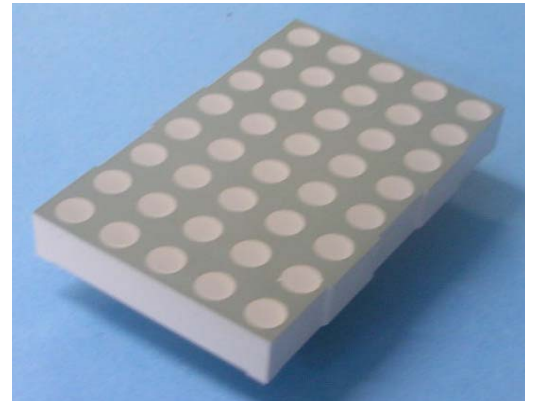
**ELM-2081SURWA/S530-A2**

■ **Features :**

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

■ **Descriptions :**

- The ELM-2081 series is a large emitting area(5.0mm diameter)LED sources configured in a 40 dots 5\*8 matrix array.
- These devices are made with red dots and red surface.



■ **Applications :**

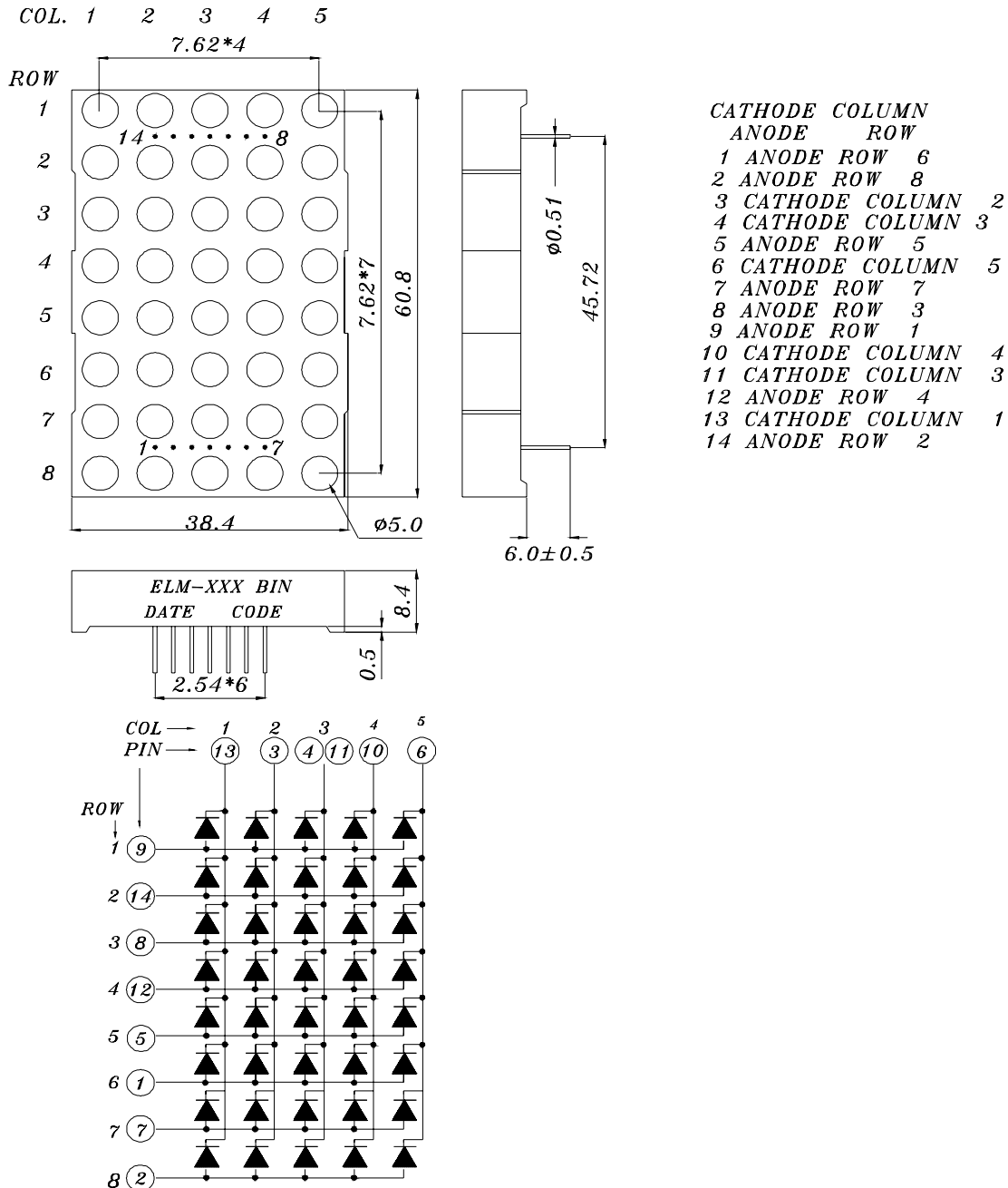
- Instrument panels
- Digital read out display

PART NO.	Chip	
	Material	Emitted Color
ELM-2081SURWA/S530-A2	AlGaInP	Hyper Red

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### ELM-2081SURWA/S530-A2

#### 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.

**Technical Data Sheet  
2.3" 5\*8 Dot Matrix Displays****ELM-2081SURWA/S530-A2****■ 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>	25	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
Electrostatic Discharge	ESD	2000	V
Power Dissipation	P <sub>d</sub>	60	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>	----	4.0	----	mcd	I <sub>F</sub> =2mA
		7.8	17.6	----	mcd	I <sub>F</sub> =10mA
Peak Wavelength	λ <sub>p</sub>	----	632	----	nm	I <sub>F</sub> =20mA
Dominant Wavelength	λ <sub>d</sub>	----	624	----	nm	I <sub>F</sub> =20mA
Spectrum Radiation Bandwidth	Δλ	----	20	----	nm	I <sub>F</sub> =20mA
Forward Voltage	V <sub>F</sub>	----	2.0	2.4	V	I <sub>F</sub> =20mA
Reverse Current	I <sub>R</sub>	----	----	100	μA	V <sub>R</sub> =5V

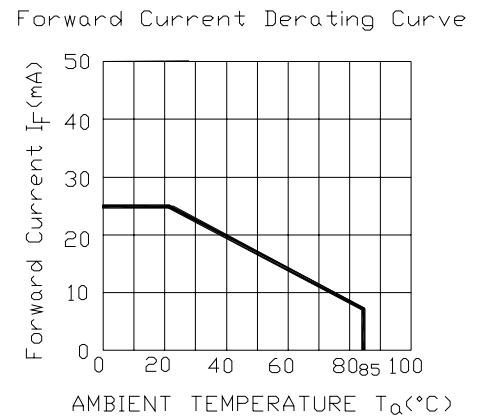
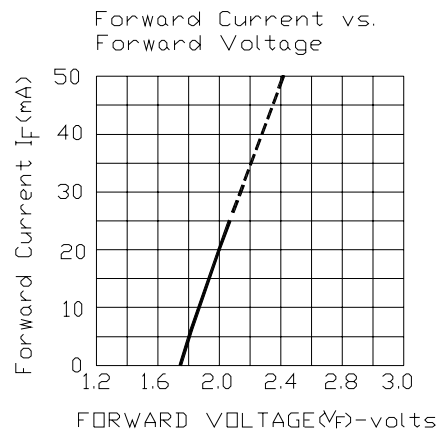
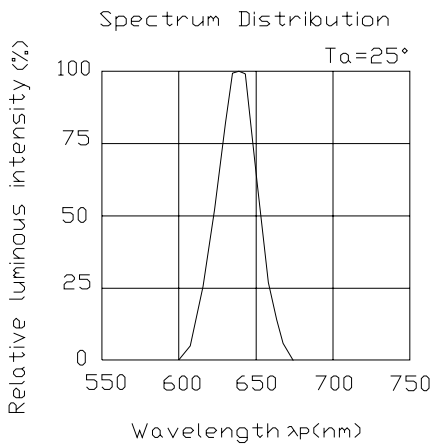


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■ Typical Electro-Optical Characteristic Curves:

(SUR)



**Technical Data Sheet  
2.3" 5\*8 Dot Matrix Displays****ELM-2081SURWA/S530-A2****■ 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