



Technical Data Sheet 2.3" 8*8 Dot Matrix Displays

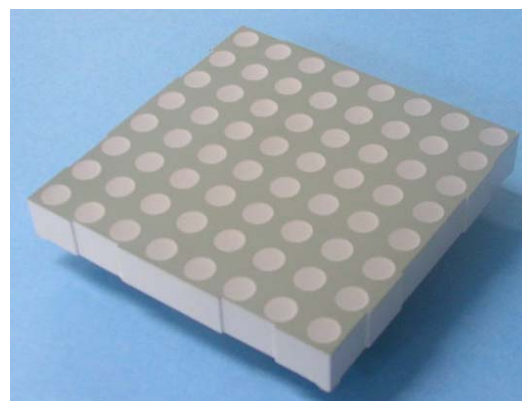
ELM-2881SURWA/S530-A2

■ Features :

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

■ Descriptions :

- The ELM-2881 series is a large emitting area(5.0mm diameter)LED sources configured in a 64 dots 8*8 matrix array.
- These devices are made with white dots and gray surface.



■ Applications :

- Instrument panels
- Digital read out display

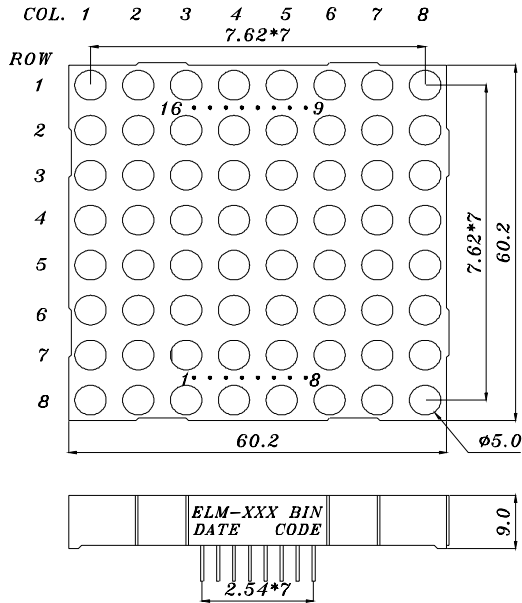
| PART NO. | Chip | |
|-----------------------|----------|---------------|
| | Material | Emitted Color |
| ELM-2881SURWA/S530-A2 | AlGaInP | Hyper Red |



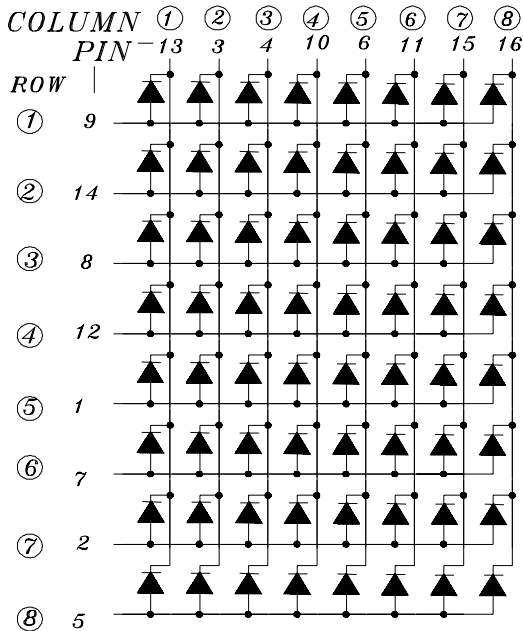
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Package Dimensions



| | |
|-----------------------|-------------------------|
| <i>CATHODE COLUMN</i> | |
| <i>ANODE ROW</i> | |
| 1 | <i>ANODE ROW 5</i> |
| 2 | <i>ANODE ROW 7</i> |
| 3 | <i>CATHODE COLUMN 2</i> |
| 4 | <i>CATHODE COLUMN 3</i> |
| 5 | <i>ANODE ROW 8</i> |
| 6 | <i>CATHODE COLUMN 5</i> |
| 7 | <i>ANODE ROW 6</i> |
| 8 | <i>ANODE ROW 3</i> |
| 9 | <i>ANODE ROW 1</i> |
| 10 | <i>CATHODE COLUMN 4</i> |
| 11 | <i>CATHODE COLUMN 6</i> |
| 12 | <i>ANODE ROW 4</i> |
| 13 | <i>CATHODE COLUMN 1</i> |
| 14 | <i>ANODE ROW 2</i> |
| 15 | <i>CATHODE COLUMN 7</i> |
| 16 | <i>CATHODE COLUMN 8</i> |



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 _R | 5 | V |
| Forward Current | I _F | 25 | mA |
| Operating Temperature | T _{opr} | -40 to +85 | °C |
| Storage Temperature | T _{stg} | -40 to +100 | °C |
| Soldering Temperature | T _{sol} | 260 ± 5 | °C |
| Electrostatic Discharge | ESD | 2000 | V |
| Power Dissipation | P _d | 60 | mW |
| Peak Forward Current(Duty 1/10 @ 1KHz) | I _{F(Peak)} | 160 | mA |

■ Electronic optical characteristics :

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Condition |
|------------------------------|----------------|------|------|------|------|----------------------|
| Luminous Intensity | I _v | ---- | 2.0 | ---- | mcd | I _F =2mA |
| | | 4.0 | 8.9 | ---- | mcd | I _F =10mA |
| Peak Wavelength | λ _p | ---- | 632 | ---- | nm | I _F =20mA |
| Dominant Wavelength | λ _d | ---- | 624 | ---- | nm | I _F =20mA |
| Spectrum Radiation Bandwidth | Δλ | ---- | 20 | ---- | nm | I _F =20mA |
| Forward Voltage | V _F | ---- | 2.0 | 2.4 | V | I _F =20mA |
| Reverse Current | I _R | ---- | ---- | 100 | μA | V _R =5V |

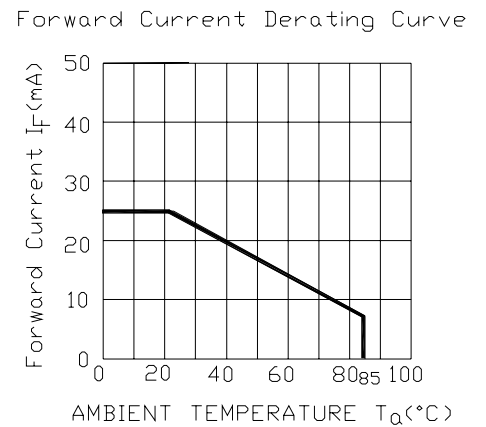
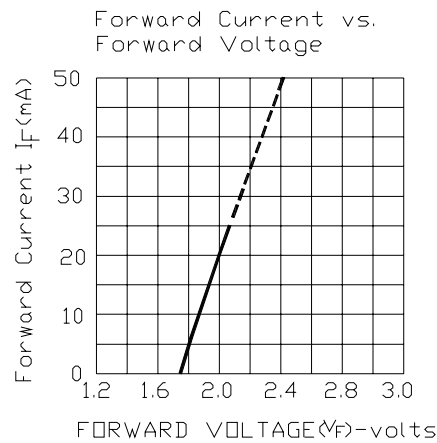
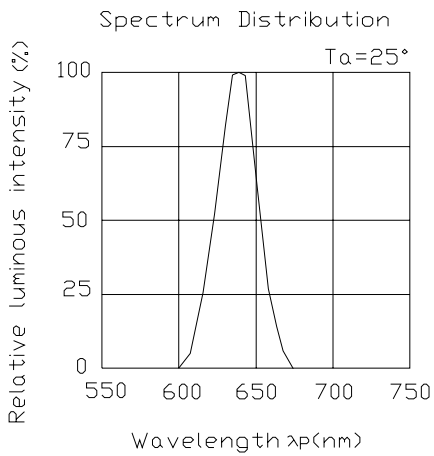


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■ Typical Electro-Optical Characteristic Curves:

(SUR)





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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 |