



EVERLIGHT ELECTRONICS CO.,LTD.

# DATA SHEET

PART NO. : ELM-2881SURWA/S530-A3

DATE : 2004/12/23

DEPARTMENT : CHRD1

REVISION : 1

<b>RECEIVED</b>			
<input checked="" type="checkbox"/> <b>MASS PRODUCTION</b>			
<input type="checkbox"/> <b>PRELIMINARY</b>			
<input type="checkbox"/> <b>CUSTOMER DESIGN</b>			
<b>DEVICE NUMBER :</b> CDDM-288-031			
<b>PAGE :</b> 6			
<b>CUSTOMER</b>	<b>DESIGNER</b>	<b>CHECKER</b>	<b>APPROVER</b>

REV.	DESCRIPTION	RELEASE DATE

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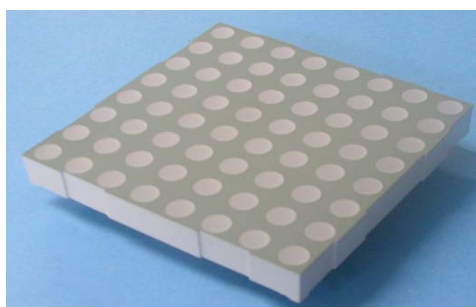
## Technical Data Sheet

### 2.3" 8\*8 Dot Matrix Displays

#### ELM-2881SURWA/S530-A3

##### ■ Features :

- Large emitting dot 0.2" diameter.
- Low power/high brightness.
- Pb free
- The product itself will remain within RoHS compliant version



##### ■ 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 :

- Audio equipment
- Instrument panels
- Digital read out display

PART NO.	Chip	
	Material	Emitted Color
ELM-2881SURWA/S530-A3	AlGaInP	Hyper Red

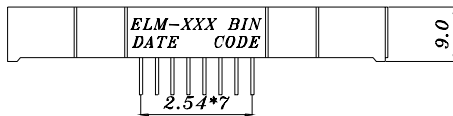
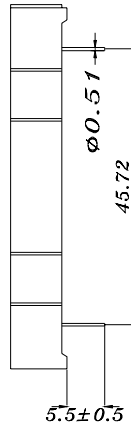
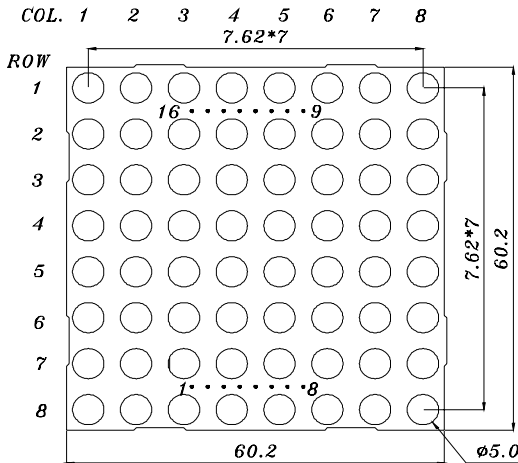
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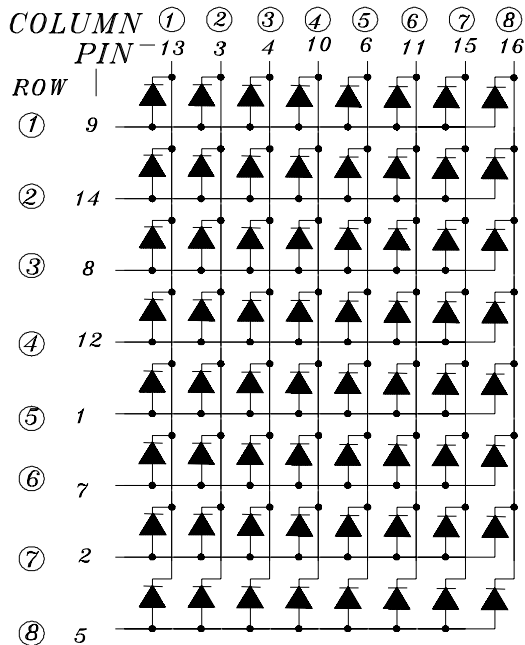
Technical Data Sheet  
2.3" 8\*8 Dot Matrix Displays

ELM-2881SURWA/S530-A3

Package Dimensions



CATHODE COLUMN	
ANODE ROW	
1	ANODE ROW 5
2	ANODE ROW 7
3	CATHODE COLUMN 2
4	CATHODE COLUMN 3
5	ANODE ROW 8
6	CATHODE COLUMN 5
7	ANODE ROW 6
8	ANODE ROW 3
9	ANODE ROW 1
10	CATHODE COLUMN 4
11	CATHODE COLUMN 6
12	ANODE ROW 4
13	CATHODE COLUMN 1
14	ANODE ROW 2
15	CATHODE COLUMN 7
16	CATHODE COLUMN 8



- 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" 8\*8 Dot Matrix Displays

### ELM-2881SURWA/S530-A3

■ 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)	60	mA

Note: \*Soldering time ≤ 5 seconds.

■ Electronic optical characteristics :

Parameter		Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	Per segment	I <sub>v</sub>	----	4.0	----	mcd	I <sub>F</sub> =2mA
			7.8	21.0	----	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		△λ	----	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

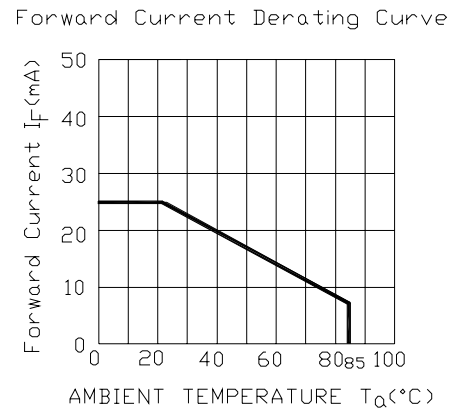
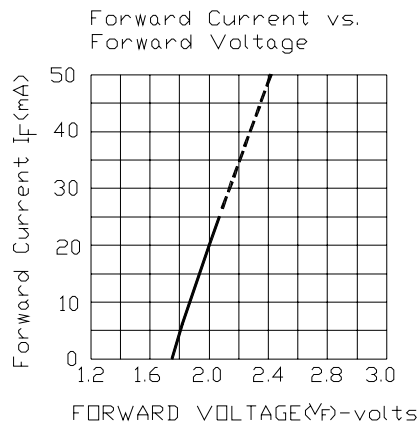
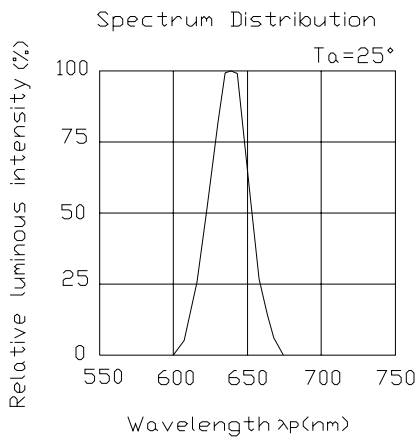


Technical Data Sheet  
2.3" 8\*8 Dot Matrix Displays

ELM-2881SURWA/S530-A3

■ Typical Electro-Optical Characteristic Curves:

(SUR)





## Technical Data Sheet

### 2.3" 8\*8 Dot Matrix Displays

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#### Reliability test items and conditions:

The reliability of products shall be satisfied with items listed below.

Confidence level : 97%

LTPD : 3%

NO	Item	Test Conditions	Test Hours/Cycle	Sample Size	Failure Judgment Criteria	Ac/Re
1	Solder Heat	TEMP : 260°C ± 5 °C	5 SEC	76 PCS	$I_v \leq I_{vt} * 0.5$ or $V_f \geq U$ or $V_f \leq L$	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

Note :  $I_{vt}$  : The test  $I_v$  value of the chip before the reliability test

$I_v$  : The test value of the chip that has completed the reliability test

U : Upper Specification Limit

L : Lower Specification Limit



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## Technical Data Sheet

### 2.3" 8\*8 Dot Matrix Displays

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#### ■ Packing Quantity Specification

1.8PCS/tube, 14 tubes/box

2.4Boxes/Carton

#### Label Form Specification



CPN: Customer's Production Number

P/N : Production Number

QTY: Packing Quantity

CAT: Ranks

HUE: Dominant Wavelength

REF: Reference

LOT No: Lot Number

MADE IN CHINA: Production Place

#### Notes :

1. Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.
2. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
3. These specification sheets include materials protected under copyright of EVERLIGHT corporation. Please don't reproduce or cause anyone to reproduce them without EVERLIGHT's consent.

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