



EVERLIGHT ELECTRONICS CO.,LTD.

DATA SHEET

PART NO. : ELM-1002-NSURWA/S530-A3

DATE : 2008/8/25

DEPARTMENT : CHR1

REVISION : 1

RECEIVED			
<input checked="" type="checkbox"/> MASS PRODUCTION			
<input type="checkbox"/> PRELIMINARY			
<input type="checkbox"/> CUSTOMER DESIGN			
DEVICE NUMBER : CDDM-100-018			
PAGE : 6			
CUSTOMER	DESIGNER	CHECKER	APPROVER

REV.	DESCRIPTION	RELEASE DATE

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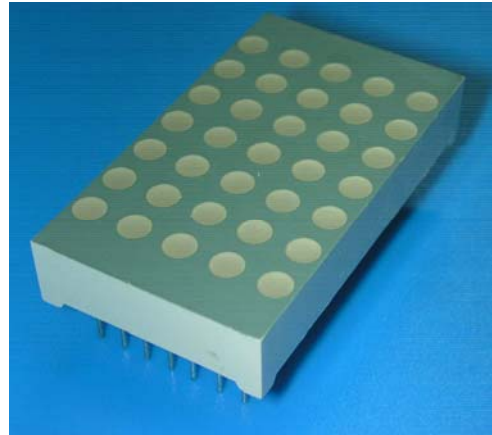


Technical Data Sheet
1.2" 5*7 Dot Matrix Displays

ELM-1002-NSURWA/S530-A3

■ Features :

- Large emitting dot 0.12" diameter.
- Low power consumption.
- Categorized for luminous intensity.
- Pb free
- The product itself will remain within RoHS compliant version



■ Descriptions :

- The ELM-1002 series is a large emitting area(3.0mm diameter)LED sources configured in a 35 dots 5*7 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-1002-NSURWA/S530-A3	AlGaInP	Brilliant Red

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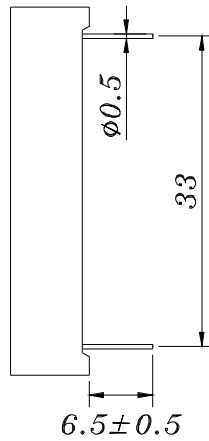
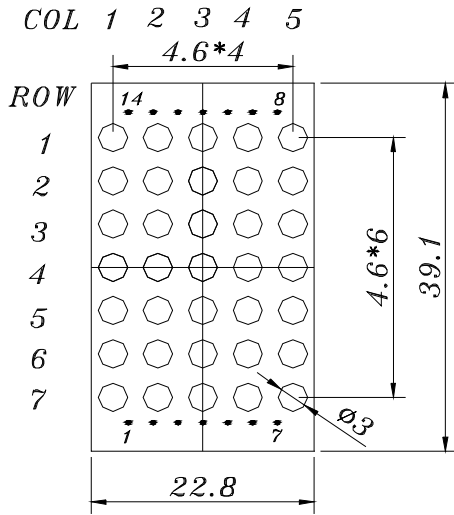
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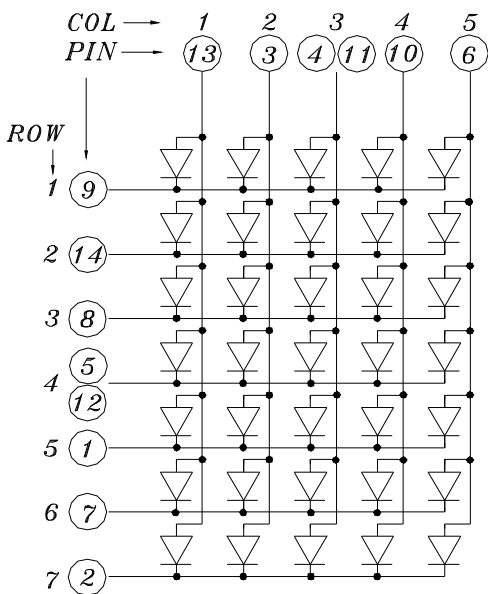
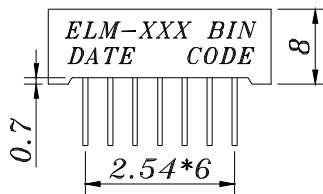
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Package Dimensions



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



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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

Note: *Soldering time ≤ 5 seconds.

■ Electronic optical characteristics :

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	Iv	----	3.5	----	mcd	IF=2mA
		7.8	15.0	----	mcd	IF=10mA
Peak Wavelength	λ p	----	632	----	mcd	IF=2mA
Dominant Wavelength	λ d	----	624	----	nm	IF=20mA
Spectrum Radiation Bandwidth	△ λ	----	20	----	nm	IF=20mA
Forward Voltage	VF	----	2.0	2.4	V	IF=20mA
Reverse Current	IR	----	----	100	μ A	VR=5V

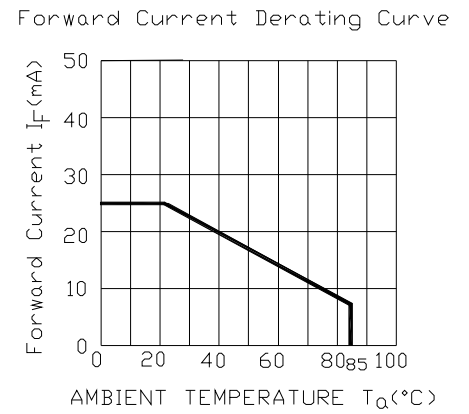
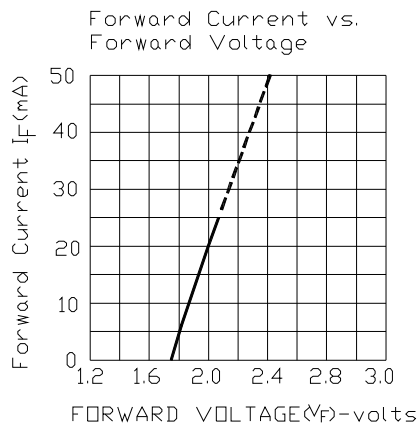
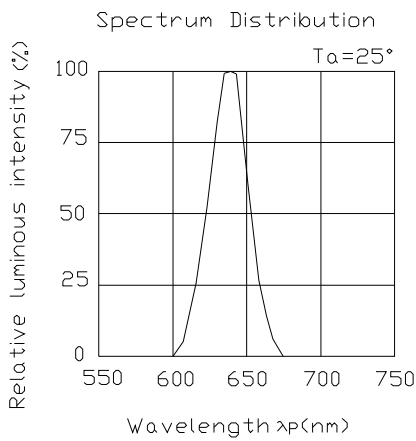


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■ Typical Electro-Optical Characteristic Curves:

(SUR)





Technical Data Sheet

1.2" 5*7 Dot Matrix Displays

ELM-1002-NSURWA/S530-A3**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 \int 5 min L : -55°C 30min	50 CYCLE	76 PCS		0/1
3	Thermal Shock	H : +100°C 5min \int 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

