## EVERLIGHT

# EVERLIGHT ELECTRONICS CO.,LTD.

## Technical Data Sheet 0.56" Quadruple Digit Displays

#### Features :

- Industrial standard size.
- Low power consumption.
- Categorized for luminous intensity.
- Pb free
- The product itself will remain within RoHS compliant version
- Descriptions :
- The ELF-511series is a large14.22mm

(0.56") high seven segment display

designed for viewing distances up to

7 meters.

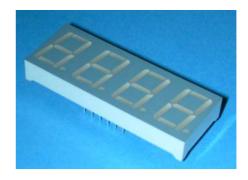
- These displays provide excellent reliability in bright ambient light.
- These devices are made with white segments and gray surface.

#### Applications :

- Audio equipment
- Instrument panels
- Digital read out display

PART NO.	Chip			
PART NO.	Material	Emitted Color		
ELF-511SYGWA/S530-E2	AlGaInP	Brilliant Yellow Green		

### ELF-511SYGWA/S530-E2



EVERLIGHT ELECTRONICS CO.,LTD.
Device Number : CDDF-511-017

http://www.everlight.com Prepared date:2006/10/30 BG0506111 50009717

Rev.: 2 Page: 1 of 6 Prepared by: YanLi Zhong

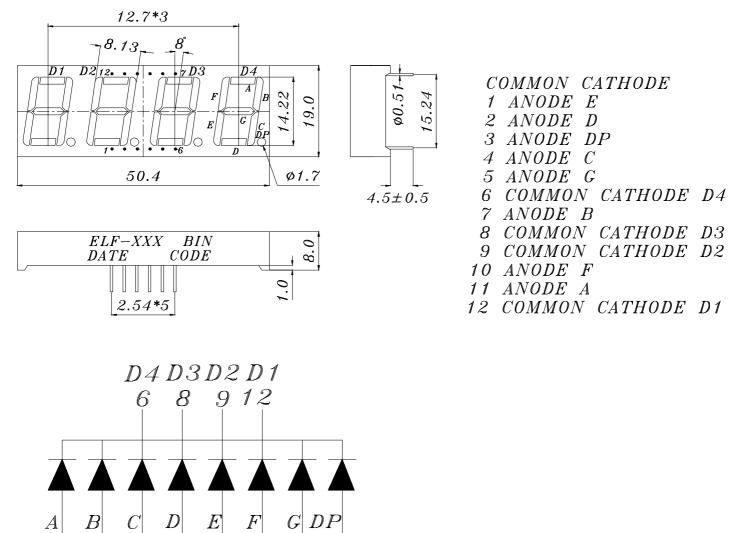


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ELF-511SYGWA/S530-E2

# Technical Data Sheet 0.56" Quadruple Digit Displays

Package Dimensions



Notes: 1.All dimensions are in millimeters, tolerance is 0.25mm unless otherwise noted.

2. Above specification may be changed without notice.

E

D

2

C

F

10

5

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Supplier will reserve authority on material change for above specification.

B

A

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### ELF-511SYGWA/S530-E2

Absolute maximum ratings at  $Ta = 25^{\circ}C$ :

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  $\leq$  5 seconds.

Electronic optical characteristics :

Parameter		Symbol	Min.	Тур.	Max.	Unit	Condition
Luminous Intensity	Per segment	Iv		1.2		mcd	IF=2mA
			4.0	4.5		mcd	IF=10mA
	Per decimal point			0.3		mcd	IF=2mA
			1.0	1.2		mcd	IF=10mA
Peak Wavelength		λp		575		nm	IF=20mA
Dominant Wavelength		λd		573		nm	IF=20mA
Spectrum Radiation Bandwidth		$ riangle \lambda$		20		nm	IF=20mA
Forward Voltage		VF		2.0	2.4	V	IF=20mA
Reverse Current		IR			100	μA	VR=5V

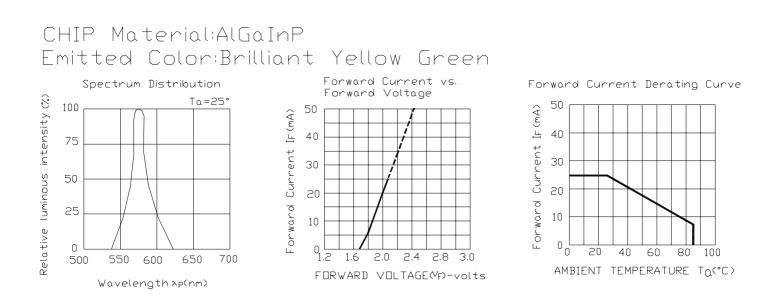


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### ELF-511SYGWA/S530-E2

Typical Electro-Optical Characteristic Curves:



Prepared date:2006/10/30



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### ELF-511SYGWA/S530-E2

#### 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: $260^{\circ}C \pm 5^{\circ}C$	5 SEC	76 PCS		0/1
2	Temperature Cycle	H : +85°C 30min ∫ 5 min L : -55°C 30min	50 CYCLE	76 PCS	$Iv \leq Ivt*0.5$ or Vf \geq U or	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℃	1000 HRS	76 PCS	Vf≦L	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: Ivt: The test Iv value of the chip before the reliablility test

 $\operatorname{Iv}\,$  : The test value of the chip that has completed the reliablility test

- U: Upper Specification Limit
- L: Lower Specification Limit

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## Technical Data Sheet 0.56" Quadruple Digit Displays

### ELF-511SYGWA/S530-E2

#### Packing Quantity Specification

- 1. 10PCS/tube, 54 tubes/box
- 2. 4Boxes/Carton

Label Form Specification

RIGH



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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