# imall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832 Email & Skype: info@chipsmall.com Web: www.chipsmall.com Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



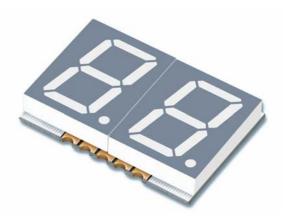


## Technical Data Sheet 0.51'' Dual Digit SMD Displays

#### Features

- Packaged in tape and reel for SMT manufacturing.
- Design flexibility(common cathode or anode).
- Categorized for luminous intensity.
- The thickness is thinness than tradition display.
- Pb free
- The product itself will remain with RoHS compliant version.

## ELSD-506SYGWA/S530-E2



#### Descriptions

• The SMD type is much smaller than tradition type components, thus enable smaller board size, higher packing density, reduced storage space and finally smaller equipment to be obtained.

#### Applications

- Suitable for indoor use.
- Audio system.
- Set top box.
- Game machine.
- Channel indicator of TV.

#### **Device Selection Guide**

Chip		Face Color
Material	<b>Emitted Color</b>	
AlGaInP	Brilliant Yellow Green	Gray

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Device No.: CDGD-506-004



#### Land Pattern(Recommend) 24.5 12.25 12.25 10.16 ø1.5 -2.20 5.08 Ø1.60 2.65 17.5 0.05-0.05 <u>> 10−R0.7</u> 12.25 REF -2.54 PCB < CONNECTION DIAGRM INTE CATHODE G CATHODE DP CATHODE A CATHODE F 1234567 ANDDE D2 ANDUE DE D E C B ANODE D1 CATHODE CATHODE / 8 9 10

## **Package Dimensions**

#### Notes:

- All dimensions are in millimeters, tolerance is 0.25mm unless otherwise noted.
- Above specification may be changed without notice. Supplier will reserve authority on material change for above specification.

#### Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Units
Forward Current	$I_F$	25	mA
Pulse Forward Current <sup>*1</sup>	I <sub>FP</sub>	60	mA
Operating Temperature	T <sub>opr</sub>	-40 ~ +85	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +85	°C
Soldering Temperature <sup>*2</sup>	T <sub>sol</sub>	260	°C
Electrostatic Discharge	ESD	2000	V
Power Dissipation	P <sub>d</sub>	100	mW
Reverse Voltage	Vr	5	V

**Notes:** \*1:I<sub>FP</sub> Conditions--Pulse Width  $\leq$  10msec and Duty  $\leq$  1/10.

\*2:Soldering time  $\leq$  5 seconds.

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Prepared date:2005/12/22

Rev. : 2Page: 2 of 8 Prepared by: Angel Zhang



Parameter		Symbol	Min.	Тур.	Max.	Units	Condition
Forward V	oltage	$V_{\mathrm{F}}$		2.1	2.4	V	I <sub>F</sub> =10mA
Reverse Cu	ırrent	I <sub>R</sub>			10	$\mu$ A	V <sub>R</sub> =5V
Luminous Intensity	Per segment	I <sub>V</sub>	5.6	9.5		mcd	I <sub>F</sub> =10mA
	Per decimal point		2.0	4.3			
Peak Wavelenght		λp		575		nm	I <sub>F</sub> =10mA
Dominant Wavelenght		λd		573		nm	I <sub>F</sub> =10mA
Spectrum Radiation Bandwidth		$ riangle \lambda$		20		nm	I <sub>F</sub> =10mA

## Electro-Optical Characteristics (Ta=25°C)

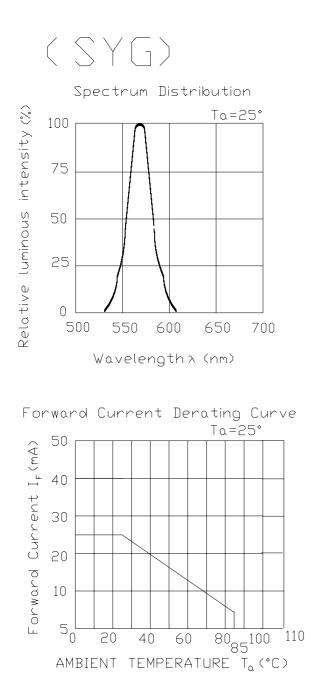
## **Chromaticity Coordinates Specifications for Bin Grading (Unit: mcd)**

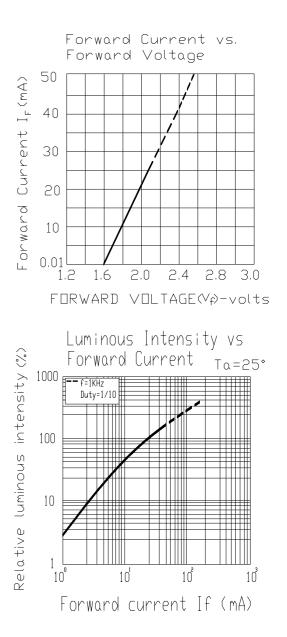
Rank	Min.	Max.	Rank	Min.	Max.
Р	5.6	8.9	S	15.0	24.0
Q	7.8	12.5	Т	21.0	34.0
R	11.0	17.6			

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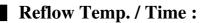
## **Typical Electro-Optical Characteristics Curves**

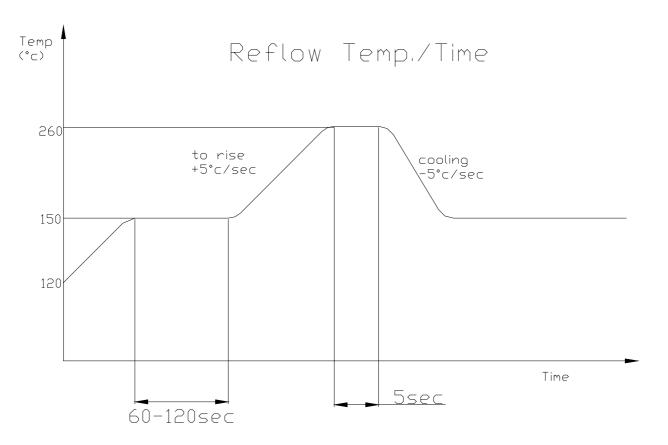




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#### **Soldering Iron :**

Basic spec is  $\leq 5$  sec when 260°C. If temperature is higher, time should be shorter (+10°C  $\rightarrow$  -1sec). Power dissipation of iron should be smaller than 15 W, and temperature should be controllable. Surface temperature of the device should be under 230 °C.

#### **Rework :**

- 1. Customer must finish rework within 5 sec under  $260^{\circ}$ C.
- 2. The head of iron can not touch copper foil.

Everlight Electronics Co., Ltd. Device No.: CDGD-506-004

http://www.everlight.com Prepared date:2005/12/22 Rev. : 2 Page: 5 of 8 Prepared by: Angel Zhang



#### **Reliability test items and conditions:**

The reliability of products shall be satisfied with items listed below. Confidence level : 97%

LTPD: 3%

NO	Item	Test	Test	Sample	Failure Judgment	Ac/Re
		Conditions	Hours/Cycle	Size	Criteria	
1	Reflow	<b>TEMP:26</b> 0°C±5°C	5 SEC	76 PCS		0/1
		<b>H</b> ∶+100°C 15min				
2	Temperature	∫ 5min	300 CYCLES	76 PCS		0/1
	Cycle	L:-40°C 15min				
		H∶+100°C 5min				
3	Thermal	§ 10 sec	300 CYCLES	76 PCS		0/1
	Shock	L∶-10°C 5min				
	High				Iv≦Ivt*0.5	
4	Temperature	TEMP:100°C	1000 HRS	76PCS	or Vf≧U	0/1
	Storage				or	
	Low				Vf≦L	
5	Temperature	TEMP:-40°C	1000 HRS	76 PCS		0/1
	Storage				-	
6	DC Operating	TEMP:25°C	1000 HRS	76 PCS		0/1
	Life	If = 10mA				
	High					
7	Temperature /	85°C / 85% RH	1000 HRS	76 PCS		0/1
	High					
	Humidity					

Note : Ivt : The test Iv value of the chip before the reliablility test

- 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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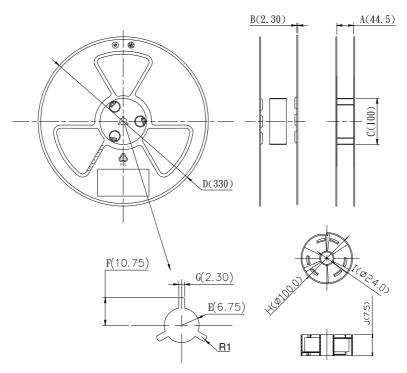
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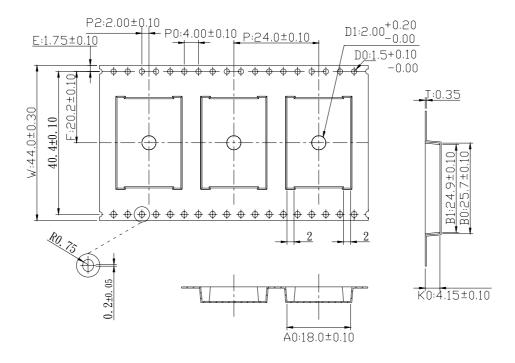
Rev. : 2 Page: 6 of 8 Prepared by: Angel Zhang



### **Package Dimensions**



### **Taping Dimensions**



Everlight Electronics Co., Ltd. Device No.: CDGD-506-004 http://www.everlight.com Prepared date:2005/12/22 Rev. : 2 Page: 7 of 8 Prepared by: Angel Zhang



#### **Packing Quantity Specification**

500PCS/Roll , 4Rolls/Box

#### Label Form Specification



## ELSD-506SYGWA/S530-E2

CPN: Customer's Production Number P/N : Production Number QTY: Packing Quantity CAT: Ranks HUE: Peak Wavelength REF: Reference LOT No: Lot Number DC: Year and weekly

#### 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'sconsent.

EVERLIGHT ELECTRONICS CO., LTD. Office: No 25, Lane 76, Sec 3, Chung Yang Rd, Tucheng, Taipei 236, Taiwan, R.O.C

Tel: 886-2-2267-2000, 2267-9936 Fax: 886-2267-6244, 2267-6189, 2267-6306 http://www.everlight.com

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