



工程文件  制訂 /  變更 通知單

文件編號: DSE-112-036  
ECN#:

文件名稱: 11-22UYOYOC/S530-A2/T *R8* 版次 原1.0 版變更為X版 | 日期 89年12月12日 | 頁數 共9頁

文件制訂/變更內容描敘: (篇幅不足,請以另紙附上。)

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|-------|--------------------------------|-------|-----------------------------------|
| 變更項目: | <input type="checkbox"/> 材料變更  | 處理方式: | <input type="checkbox"/> 舊材料處理方式: |
|       | <input type="checkbox"/> 製程變更  |       | <input type="checkbox"/> WIP:     |
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|       | <input type="checkbox"/> 規格變更  |       |                                   |

11-22UYOYOC/S530-A2/TR8

文件制定/變更理由: (請詳細說明。)

\*ECN編號由文件中心提供。

DEC 19 2000

制定人	制訂部門主管	品保審核	生技審核	製造審核	工程審核	生產	生技	生管	品保	OEM	海外	採購
		<i>劉英平</i>	-----	-----		RD	恆光	外包	業務	苑裡	總辦室	-----
						1						





EVERLIGHT ELECTRONICS CO.,LTD.

# DATA SHEET

PART NO. : 11-22UYOUYOC/S530-A2/TR8

DATE : 2000.12.12

DEPARTMENT : R&D 1

REVISION : 1.0

<b>RECEIVED</b>			
<input checked="" type="checkbox"/> MASS PRODUCTION			
<input type="checkbox"/> PRELIMINARY			
<input type="checkbox"/> CUSTOMER DESIGN			
DEVICE NUMBER : DSE-112-036			
PAGE : 9			
CUSTOMER	DESIGNER	CHECKER	APPROVER

REV.	DESCRIPTION	RELEASE DATE

OFFICE : NO. 25,Lane 76,Sec.3, Chung Yang Rd., Tucheng 236, Taipei, Taiwan, R.O.C.  
 TEL. : 886-2-2267-2000,2267-9936  
 FAX : 886-2-2267-6244,22676189,22676306  
<http://www.everlight.com>



EVERLIGHT ELECTRONICS CO.,LTD.

PART NO.: 11-22UYOUYOC/S530-A2/TR8

Device Number : DSE-112-036 REV. 1.0

Chip LEDs with Bi-Color(Multi-Color)

ECN : \_\_\_\_\_ Page: 1/9

■ Features :

- Package in 8mm tape on 7" diameter reel.
- Compatible with automatic placement equipment.
- Compatibles with infrared and vapor phase reflow solder process.
- Multi-color type.

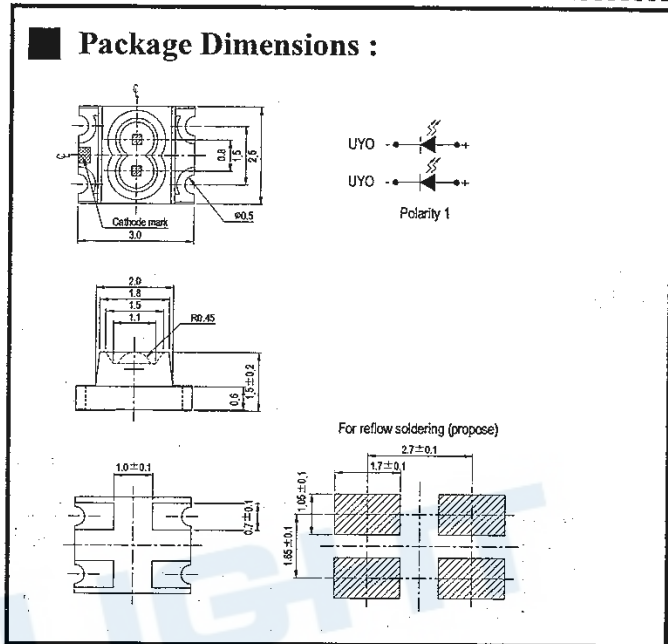
■ Descriptions :

- The 11-22 SMD Taping is much smaller than lead frame type components, thus enable smaller board size, higher packing density, reduced storage space and finally smaller equipment to be obtained.
- Besides, Lightweight makes them ideal for miniature applications, etc.

■ Applications :

- Automotive: backlighting in dashboard and switch.
- Telecommunication: indicator and backlighting in telephone and fax.
- Flat backlight for LCD, switch and symbol.
- General use.

■ Package Dimensions :



■ Notes :

Tolerances Unless Dimension  $\pm 0.1\text{mm}$   
 Angle  $\pm 0.5^\circ$  Unit = mm

PART NO.	Chip		Lens Color
	Material	Emitted Color	
11-22UYOUYOC/S530-A2/TR8	UYO:	AlGaInP Super Yellow Orange	Water Clear
	UYO:	AlGaInP Super Yellow Orange	

OFFICE: NO. 25, Lane 76, Sec.3, Chung Yang Rd., Tucheng 236, Taipei, Taiwan, R.O.C.  
 TEL.: 886-2-2267-2000, 2267-9936  
 FAX: 886-2-2267-6244, 2267-6189, 2267-6306  
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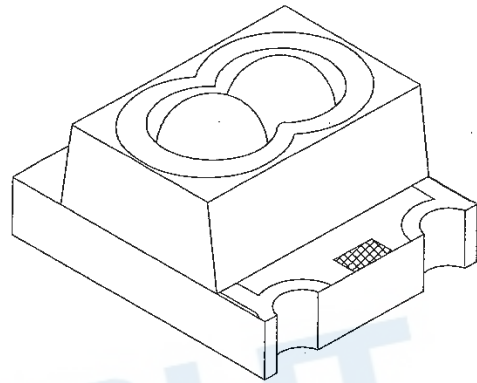
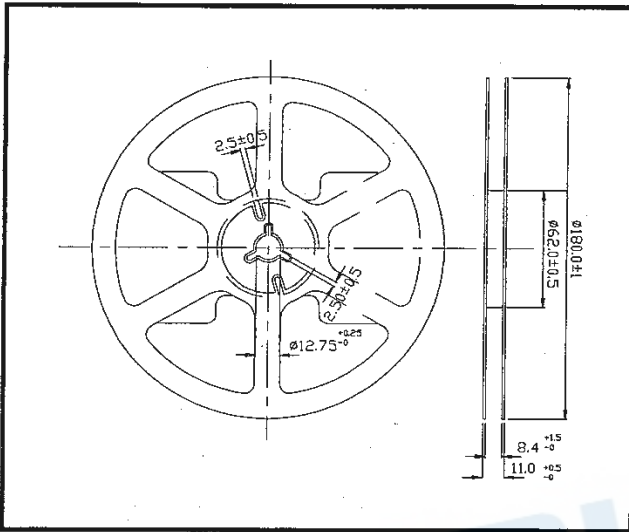
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PART NO.: 11-22UYOUYOC/S530-A2/TR8  
Chip LEDs with Bi-Color(Multi-Color)

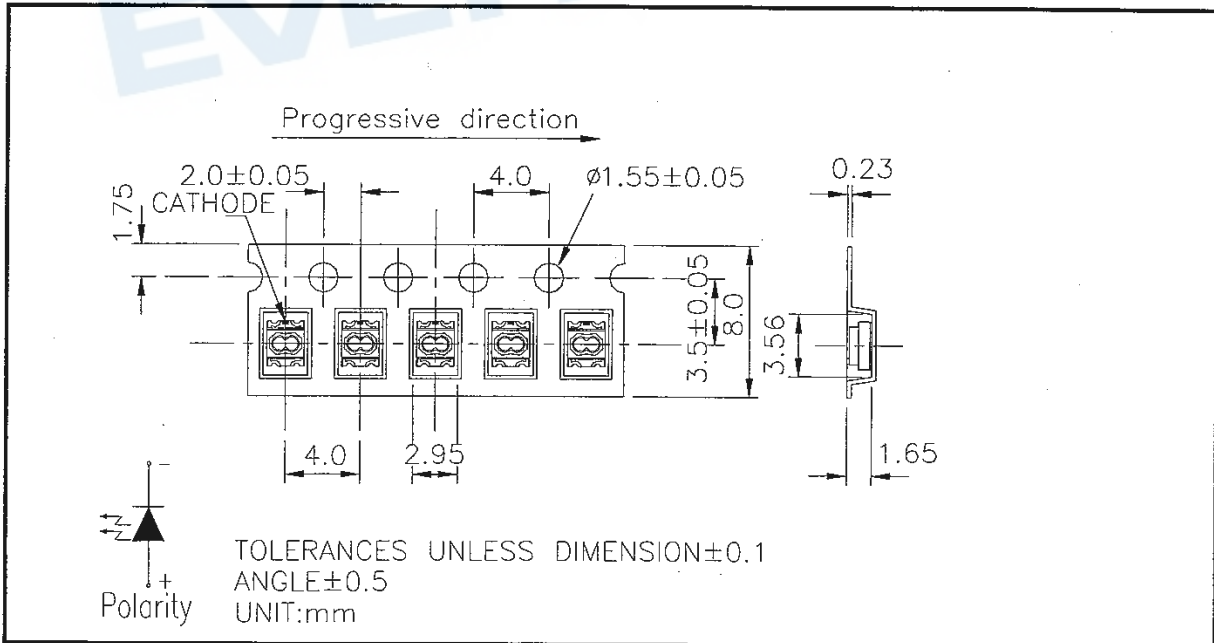
Device Number : DSE-112-036 REV. 1.0

ECN : Page: 2/9

Package Dimensions :



Loaded quantity per reel 2000 pcs/reel :





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PART NO.: 11-22UYOUYOC/S530-A2/TR8

Device Number : DSE-112-036 REV. 1.0

*Chip LEDs with Bi-Color(Multi-Color)*

ECN : \_\_\_\_\_ Page: 3/9

■ Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Rating	Unit
Reverse Voltage	V <sub>R</sub>	5	V
Forward Current	I <sub>F</sub>	UYO: 25 UYO:25	mA
Operating Temperature	Topr	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +90	°C
Soldering Temperature	Tsol	260 (for 5 second)	°C
Power Dissipation	Pd	UYO: 60 UYO: 60	mW
Peak Forward Current(Duty 1/10 @ 1KHZ)	I <sub>F</sub> (Peak)	UYO: 160 UYO: 160	mA



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Device Number : DSE-112-036 REV. 1.0

Chip LEDs with Bi-Color(Multi-Color)

ECN : \_\_\_\_\_ Page: 4/9

■ Electronic Optical Characteristics :

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I <sub>v</sub> UYO:	----	3	----	mcd	I <sub>F</sub> =2mA
	UYO:	----	3	----		
	UYO:	21	51	----		I <sub>F</sub> =20mA
	UYO:	21	51	----		
Viewing Angle	2θ 1/2	----	60	----	deg	I <sub>F</sub> =20mA
Peak Wavelength	λ <sub>p</sub> UYO:	----	611	----	nm	I <sub>F</sub> =20mA
	UYO:	----	611	----		
Dominant Wavelength	λ <sub>d</sub> UYO:	----	605	----	nm	I <sub>F</sub> =20mA
	UYO:	----	605	----		
Spectrum Radiation Bandwidth	Δλ UYO:	----	17	----	nm	I <sub>F</sub> =20mA
	UYO:	----	17	----		
Forward Voltage	V <sub>F</sub> UYO:	----	2.0	2.4	V	I <sub>F</sub> =20mA
	UYO:	----	2.0	2.4		
Reverse Current	I <sub>R</sub>	----	----	10	μA	V <sub>R</sub> =5V



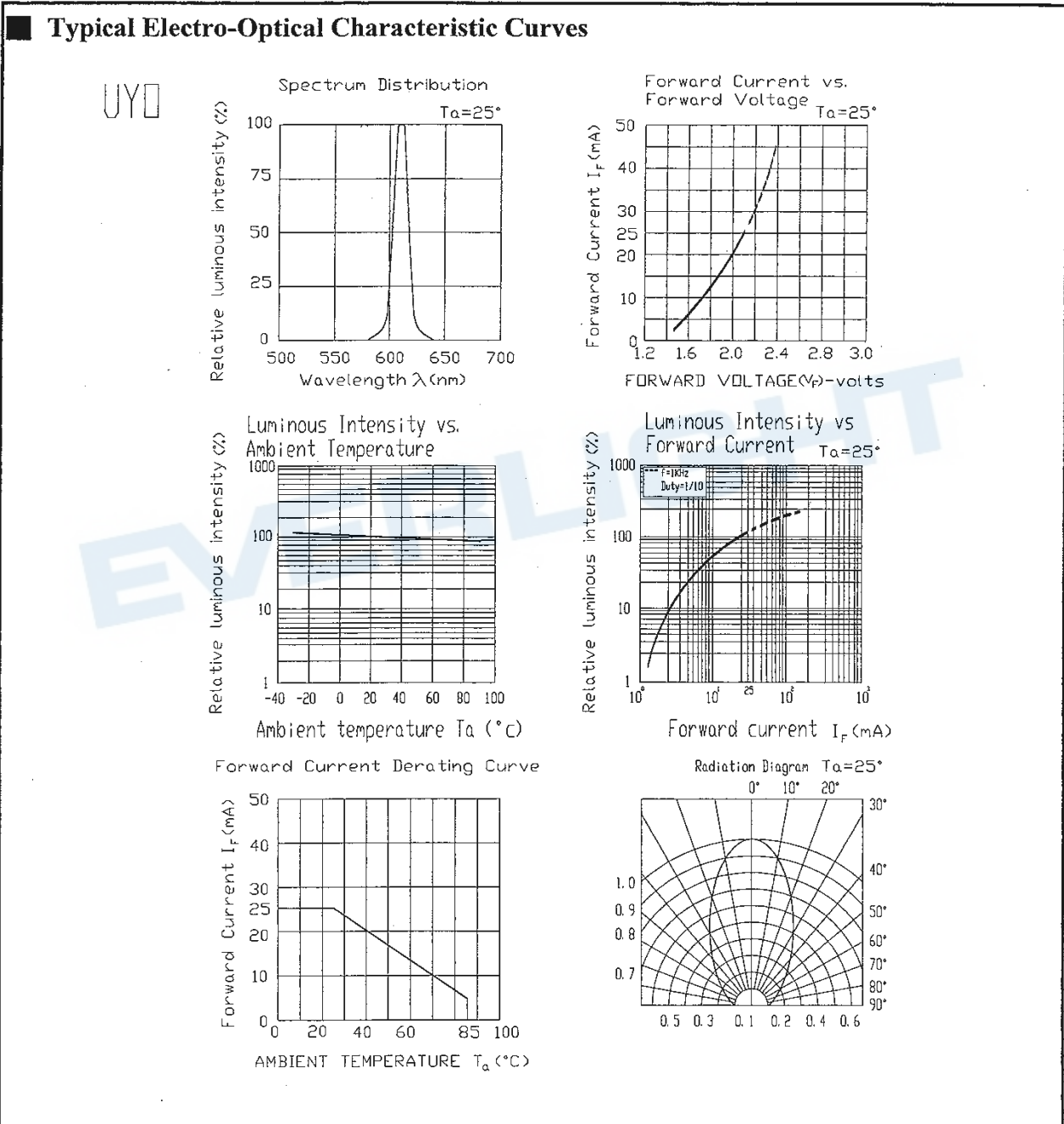
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PART NO.: 11-22UYOUYOC/S530-A2/TR8

Device Number : DSE-112-036 REV. 1.0

Chip LEDs with Bi-Color(Multi-Color)

ECN : Page: 5/9





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PART NO.: 11-22UYOUUYOC/S530-A2/TR8

Device Number : DSE-112-036 REV. 1.0

*Chip LEDs with Bi-Color(Multi-Color)*

ECN : \_\_\_\_\_ Page: 6/9

■ 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 CYCLES	76 PCS	0/1
3	Thermal Shock	H : +100°C 5min. § 10 sec. L : -10°C 5min.	50 CYCLES	76 PCS	0/1
4	High Temperature Storage	TEMP.: 100°C	1000 HR.	76 PCS	0/1
5	Low Temperature Storage	TEMP. : -55°C	1000 HR.	76 PCS	0/1
6	DC Operating Life	I <sub>F</sub> = 20 m A	1000 HR.	76 PCS	0/1
7	High Temperature / High Humidity	85°C/RH85%	1000 HR.	76 PCS	0/1





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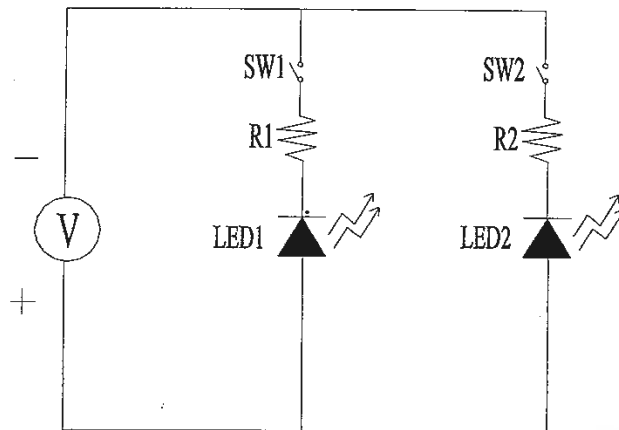
PART NO.: 11-22UYOUYOC/S530-A2/TR8

Device Number : DSE-112-036 REV. 1.0

*Chip LEDs with Bi-Color(Multi-Color)*

ECN : \_\_\_\_\_ Page: 7/9

### ■ Test Circuit



### ■ Precautions For Use

#### 1. Over-current-proof

Customer must apply resistors for protection , otherwise slight voltage shift will cause big current change ( Burn out will happen ).

#### 2. Storage time

2.1 The operation of temperature and RH are :  $5^{\circ}\text{C}\sim 35^{\circ}\text{C}$  , RH60%.

2.2 Once the package is opened, the products should be used within a week.

Otherwise, they should be keeping in a damp proof box with desiccant agent.

Considering the tape life , we suggest our customers to use our products within a year(from production date).

2.3 If opened more than one week in an atmosphere  $5^{\circ}\text{C}\sim 35^{\circ}\text{C}$  , RH60% , they should be treated at  $60^{\circ}\text{C}\pm 5^{\circ}\text{C}$  for 15hrs.

2.4 When you discover that the desiccant in the package has a pink color (Normal = blue), you should treat them in the same conditions as 2.3.



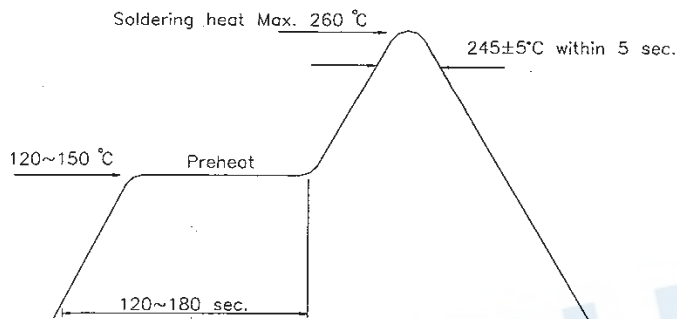
PART NO.: 11-22UYOUYOC/S530-A2/TR8 Device Number : DSE-112-036 REV. 1.0

*Chip LEDs with Bi-Color(Multi-Color)*

ECN : \_\_\_\_\_ Page: 8/9

■ **Soldering heat reliability ( DIP )**

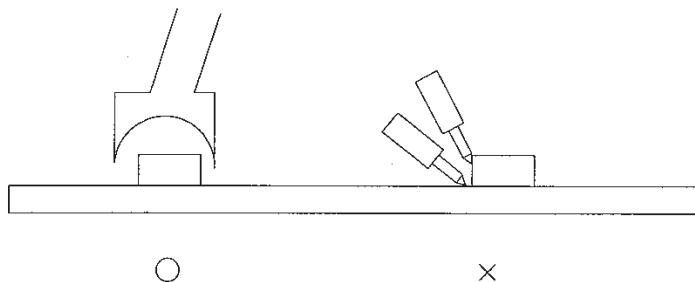
Please refer to the following figure :



■ **Soldering Iron**

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

1. Customer must finish rework within 5 sec. under  $260^{\circ}\text{C}$ .
2. Copper foil can not be touched by the head of iron..
3. Twin-head type is preferred.





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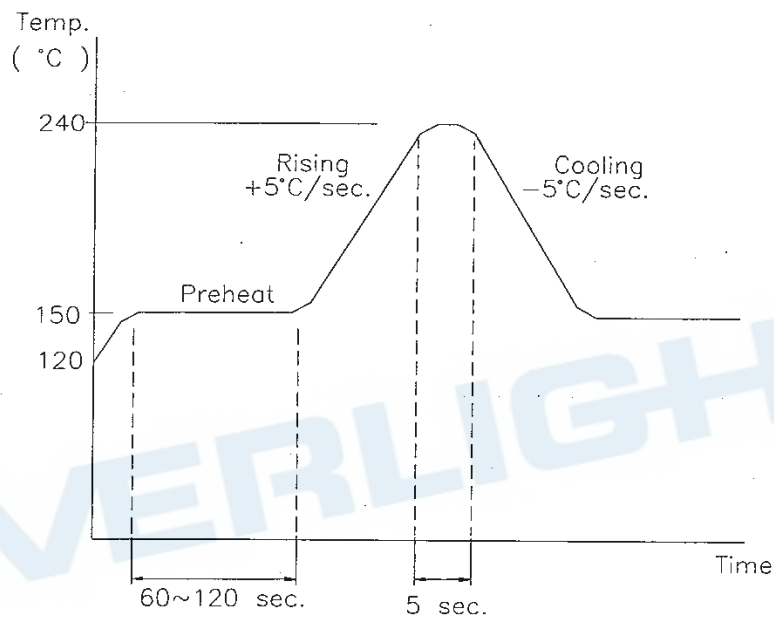
PART NO.: 11-22UYOUYOC/S530-A2/TR8

Device Number : DSE-112-036 REV: 1.0

*Chip LEDs with Bi-Color(Multi-Color)*

ECN : \_\_\_\_\_ Page: 9/9

■ Reflow Temp./Time :



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