

# **Technical Data Sheet High Performance with Reflector LEDs**

#### 94-22UYC/S530-XX/S2

#### Features:

- White package.
- Dual-chip, wide-angle, low-profile LEDs .
- Excellent chip to chip consistency
- Super Intensity
- High performance
- Pb-free
- The product itself will remain within RoHS compliant version.



#### **Applications:**

- Automotive: backlighting in dashboard and switch.
- Telecommunication: indicator and backlighting in telephone and fax.
- Indicator and backlight for audio and video equipment.
- Indicator and backlight for battery driven equipment.
- Display Screen Illumination on Portable Handheld Devices
- Indicator and backlight in office equipment.
- General use.

#### **Device Selection Guide**

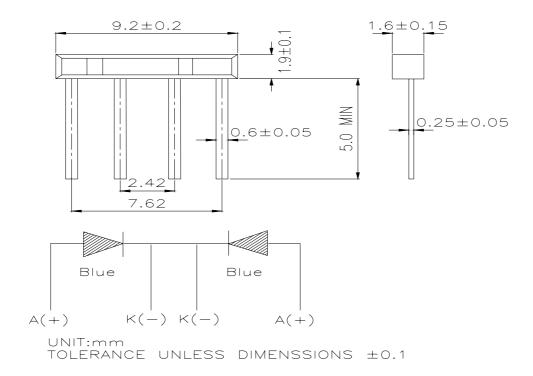
	Chip	Lens Color	
Material	Emitted Color	Lens Color	
AlGaInP	Brilliant Yellow	Water Clear	

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Device No.: DSE-942-079 Prepared date: 21-Sep-2005 Prepared by: Ray Yuan



# **Package Dimensions**



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

Parameter	Symbol	Rating	Unit	
Reverse Voltage	VR	5	V	
Forward Current	IF	25	mA	
Operating Temperature	Topr	-40 ~ +85	$^{\circ}$	
Storage Temperature	Tstg	-40~ +100	$^{\circ}\! \mathbb{C}$	
Electrostatic Discharge(HBM)	ESD	2000	V	
Power Dissipation	Pd	60	mW	
Peak Forward Current(Duty 1/10 @ 1KHz)	$I_{FP}$	60	mA	
Soldering Temperature	Tabl	Reflow Soldering: 260 °C for 10 sec.		
	Tsol	Hand Soldering: 350 °C for 3 sec.		

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

Parameter	Symbol	*Chip Rank	Min.	Тур.	Max.	Unit	Condition	
Luminous intensity*1	$I_{ m V}$	A2	59	77		mcd		
		A3	95	106			*2	
		A4	124	140			$I_F=20mA$	
		A5	155	170				
Viewing Angle	2 \theta 1/2			130		deg	I <sub>F</sub> =20mA	
Peak Wavelength	λр			591		nm	I <sub>F</sub> =20mA	
Dominant Wavelength	λd			589		nm	I <sub>F</sub> =20mA	
Spectrum Radiation Bandwidth	Δλ			15		nm	I <sub>F</sub> =20mA	
Forward Voltage	$V_{F}$			4.0	4.8	V	*2 I <sub>F</sub> =20mA	
Reverse Current	$I_R$				10	$\mu$ A	$V_R=5V$	

<sup>\* 94-22</sup>UYC/S530-<u>XX/S2</u>



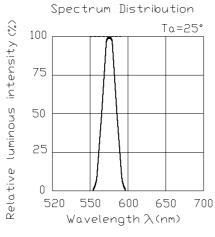
<sup>\*1</sup> When two LED dies are operated simultaneously.

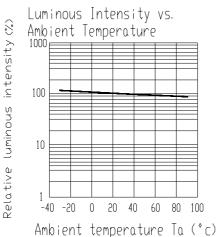
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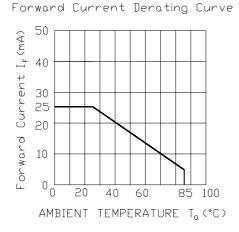
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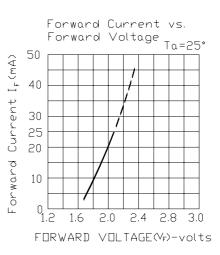
<sup>\*2</sup> For each die.

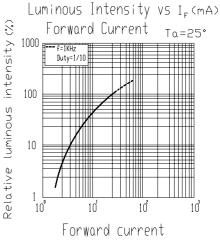
#### **Typical Electro-Optical Characteristics Curves**

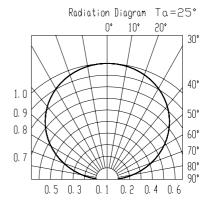














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## 94-22UYC/S530-XX/S2

## Label explanation

**CAT: Luminous Intensity Rank** 

**HUE: Dom. Wavelength Rank** 

**REF: Forward Voltage Rank** 



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#### **Reliability Test Items And Conditions**

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

Confidence level: 90 % LTPD: 10 %

No.	Items	Test Condition	Test Hours/Cycles	Sample Size	Ac/Re
1	Solder Heat	Temp : 260°C ±5°C	10sec.	22 Pcs	0/1
2	Temperature Cycle	$H: +100^{\circ}\mathbb{C}$ 15min. $\int$ 5 min. $L: -40^{\circ}\mathbb{C}$ 15min.	300 Cycles	22 Pcs.	0/1
3	Thermal Shock	H:+100°C 5min. ∫ 10 sec. L:-10°C 5min.	300 Cycles	22 Pcs.	0/1
4	High Temperature Storage	Temp. : 100°C	1000 Hrs.	22 Pcs.	0/1
5	Low Temperature Storage	Temp. : -40°℃	1000 Hrs.	22 Pcs.	0/1
6	DC Operating Life	IF = 20 mA	1000 Hrs.	22 Pcs.	0/1
7	High Temperature / High Humidity	85°C/R.H85%	1000 Hrs.	22 Pcs.	0/1

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#### **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
- 2.1 Do not open moisture proof bag before the products are ready to use.
- 2.2 Before opening the package, the LEDs should be kept at 30°C or less and 90%RH or less.
- 2.3 After opening the package: The LED's floor life is 1 year under 30 deg C or less and 60% RH or less. If unused LEDs remain, it should be stored in moisture proof packages.
- 2.4 If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions. Baking treatment:  $60\pm5^{\circ}$ C for 24 hours.

#### 3. Soldering Iron

Each terminal is to go to the tip of soldering iron temperature less than 350°C for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of the hand solder.

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