



EVERLIGHT ELECTRONICS CO.,LTD.

# DATA SHEET

PART NO. : 494-10SURT/S530-A3

DATE : 2002/4/4

DEPARTMENT : CHR&D1

REVISION : 1

|                                                     |                                                                                            |                                                                                            |                                                                                              |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| <b>RECEIVED</b>                                     |                                                                                            |                                                                                            |                                                                                              |
| <input checked="" type="checkbox"/> MASS PRODUCTION |                                                                                            |                                                                                            |                                                                                              |
| <input type="checkbox"/> PRELIMINARY                |                                                                                            |                                                                                            |                                                                                              |
| <input type="checkbox"/> CUSTOMER DESIGN            |                                                                                            |                                                                                            |                                                                                              |
| DEVICE NUMBER : CDLE-049-032                        |                                                                                            |                                                                                            |                                                                                              |
| PAGE : 4                                            |                                                                                            |                                                                                            |                                                                                              |
| CUSTOMER                                            | DESIGNER                                                                                   | CHECKER                                                                                    | APPROVER                                                                                     |
|                                                     | <br>何家軍 | <br>張根華 | <br>張根華 |

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|      |             |              |
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| REV. | DESCRIPTION | RELEASE DATE |

Office : 7C Building, Lian Hua Port Industrial District, Lian Hua Shan

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TEL. : (020)84860913,84860914

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[http : //www.everlight.com](http://www.everlight.com)



# EVERLIGHT ELECTRONICS CO.,LTD.

Device Number : CDLE-049-032

REV.: 1

3.0mm Very Wide Angle Type LED Lamps

PART NO. : 494-10SURT/S530-A3

ECN:                     

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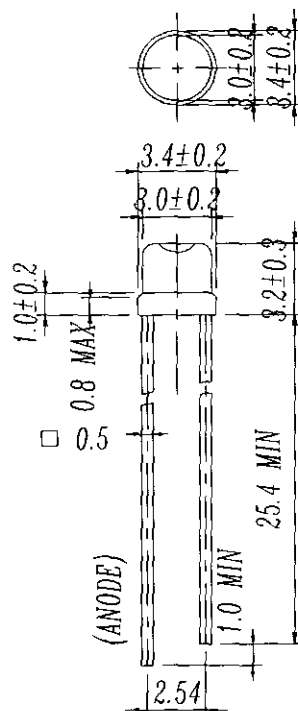
## ■ Features :

- Choice of various viewing angles
- Available on tape and reel.
- Reliable and robust

## ■ Descriptions :

- The series is specially designed for applications requiring higher brightness
- The led lamps are available with different colors, intensities,

## ■ Package Dimensions:



## ■ Applications :

- TV set
- Monitor
- Telephone
- Computer

## ■ Notes :

1. All dimensions are in millimeters.
2. An epoxy meniscus may extend about  $1.5\text{mm}(0.059")$  down to the lead.
3. Tolerances unless Dimension  $\pm 0.25\text{mm}$ .

| PART NO.           | Chip     |               | Lens Color |
|--------------------|----------|---------------|------------|
|                    | Material | Emitted Color |            |
| 494-10SURT/S530-A3 | AlGaInP  | Hyper Red     | Red Trans  |

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## ■ Absolute Maximum Ratings at Ta = 25°C

| Parameter                              | Symbol               | Rating      | Unit |
|----------------------------------------|----------------------|-------------|------|
| Forward Current                        | I <sub>F</sub>       | 25          | mA   |
| Operating Temperature                  | T <sub>opr</sub>     | -40 to +85  | °C   |
| Storage Temperature                    | T <sub>stg</sub>     | -40 to +100 | °C   |
| Soldering Temperature                  | T <sub>sol</sub>     | 260 ± 5     | °C   |
| Electrostatic Discharge                | ESD                  | 2000        | V    |
| Power Dissipation                      | P <sub>d</sub>       | 60          | mW   |
| Peak Forward Current(Duty 1/10 @ 1KHz) | I <sub>F(Peak)</sub> | 160         | mA   |
| Reverse Voltage                        | V <sub>R</sub>       | 5           | V    |

## ■ Electronic Optical Characteristics :

| Parameter                    | Symbol         | Min. | Typ. | Max. | Unit | Condition              |
|------------------------------|----------------|------|------|------|------|------------------------|
| Luminous Intensity           | I <sub>v</sub> | 16   | 32   | /    | mcd  | I <sub>F</sub> = 20 mA |
| Viewing Angle                | 2θ 1/2         | /    | 100  | /    | deg  | I <sub>F</sub> = 20 mA |
| Peak Wavelength              | λ <sub>p</sub> | /    | 632  | /    | nm   | I <sub>F</sub> = 20 mA |
| Dominant Wavelength          | λ <sub>d</sub> | /    | 624  | /    | nm   | I <sub>F</sub> = 20 mA |
| Spectrum Radiation Bandwidth | △λ             | /    | 20   | /    | nm   | I <sub>F</sub> = 20 mA |
| Forward Voltage              | V <sub>F</sub> | /    | 2.0  | 2.4  | V    | I <sub>F</sub> = 20 mA |
| Reverse Current              | I <sub>R</sub> | /    | /    | 50   | μA   | V <sub>R</sub> = 5 V   |



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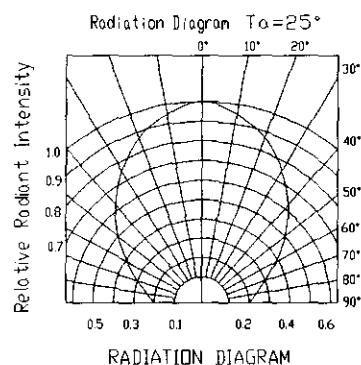
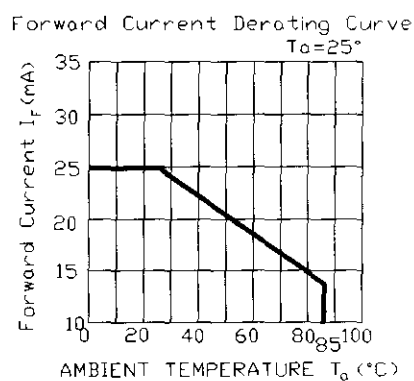
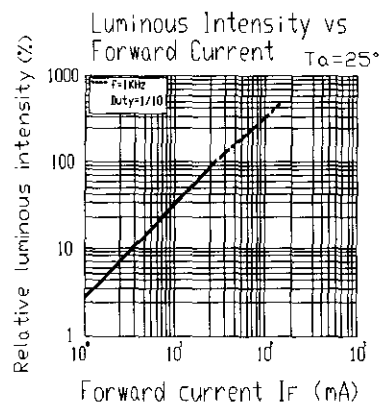
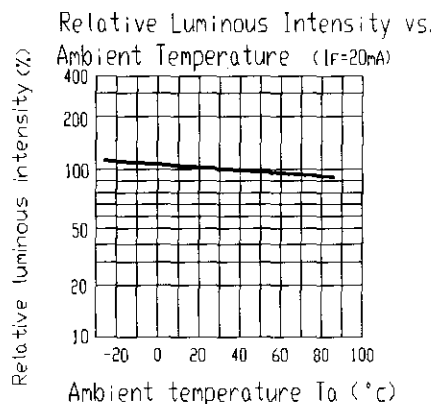
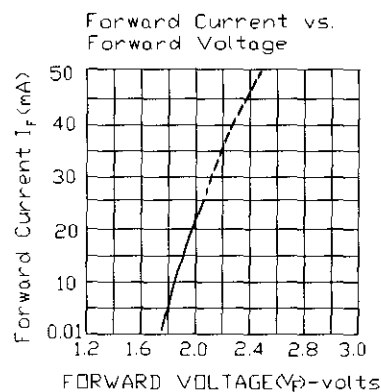
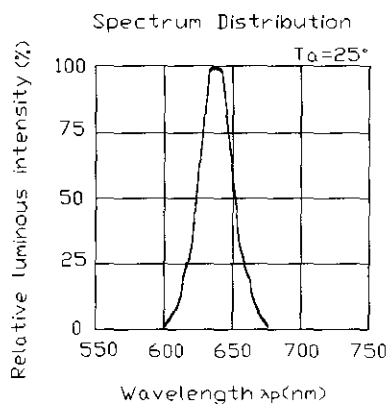
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## ■ Typical Electro-Optical Characteristic Curves:

(SUR)





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## ■ Reliability test items and conditions:

| NO | Item                             | Test Conditions                               | Test Hours/Cycle |        | Ac/Re |
|----|----------------------------------|-----------------------------------------------|------------------|--------|-------|
| 1  | Solder Heat                      | TEMP : 260°C ± 5 °C                           | 5 SEC            | 76 PCS | 0/1   |
| 2  | Temperature Cycle                | H : +85°C 30min<br>└ 5 min<br>L : -55°C 30min | 50 CYCLES        | 76 PCS | 0/1   |
| 3  | Thermal Shock                    | H : +100°C 5min<br>└ 10 sec<br>L : -10°C 5min | 50 CYCLES        | 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                | TEMP : 25°C<br>If = 20mA                      | 1000 HRS         | 76 PCS | 0/1   |
| 7  | High Temperature / High Humidity | 85°C / 85% RH                                 | 1000 HRS         | 76 PCS | 0/1   |