

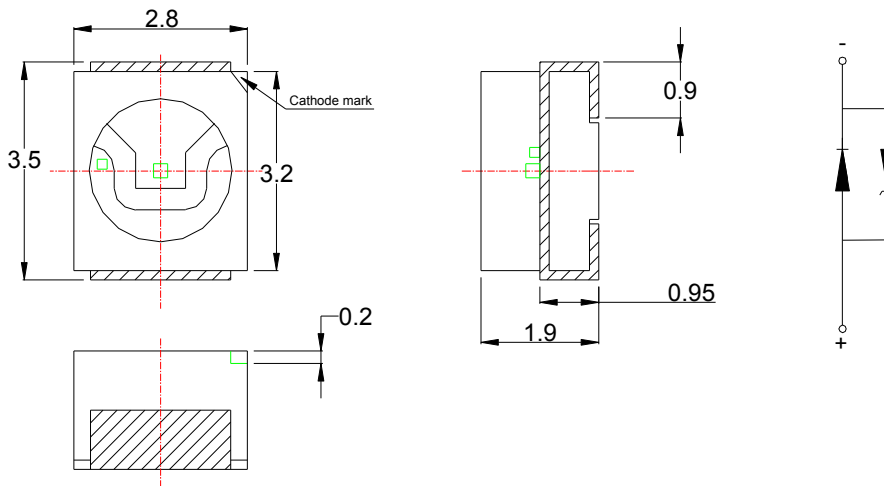


**TO-3228BY-MWH-E**  
**Surface Mount Device LED**

**Features**

- IC compatible.
- Compatible with automatic placement equipment.
- Compatible with infrared and vapor phase Reflow solder process.
- Top View TYPE.
- Package in 8mm tape on 7" diameter reel.
- Lead-Free Package (According to RoHS).

**Package Dimensions**



**Note:**

1. All dimensions are in millimeters.
2. Tolerance is  $\pm 0.1$ mm unless otherwise noted



### Absolute Maximum Ratings at $T_A=25^{\circ}\text{C}$

| Parameter  | Maximum Rating                                    | Unit |
|--|---|------|
| Peak Forward Current<br>(1/10 Duty Cycle, 0.1ms Pulse Width) | 80  | mA   |
| Power Dissipation  | 105   | mW   |
| Continuous Forward Current                                   | 25  | mA   |
| Reverse Voltage  | 5   | V    |
| Operating Temperature Range                                  | -55 $^{\circ}\text{C}$ to +85 $^{\circ}\text{C}$  |      |
| Storage Temperature Range                                    | -55 $^{\circ}\text{C}$ to +105 $^{\circ}\text{C}$ |      |
| IR Reflow Soldering Profile For Lead Free Soldering          | 260 $^{\circ}\text{C}$                            |      |

### Electrical / Optical Characteristics at $T_A=25^{\circ}\text{C}$

| Parameter                | Symbol          | Min. | Typ. | Max. | Unit          | Test Condition    |
|--------------------------|-----------------|------|------|------|---------------|-------------------|
| Luminous Intensity       | $I_v$           | 917  |      | 2015 | mcd           | $I_F=20\text{mA}$ |
| Viewing Angle            | $2\theta_{1/2}$ |      | 120  |      | deg           | $I_F=20\text{mA}$ |
| Forward Voltage          | $V_F$           |      | 3.3  |      | V             | $I_F=20\text{mA}$ |
| Reverse Current          | $I_R$           | 100  |      |      | $\mu\text{A}$ | $V_R=5\text{V}$   |
| Chromaticity Coordinates | X               |      | 0.30 |      |               | $I_F=20\text{mA}$ |
| Chromaticity Coordinates | Y               |      | 0.29 |      |               | $I_F=20\text{mA}$ |

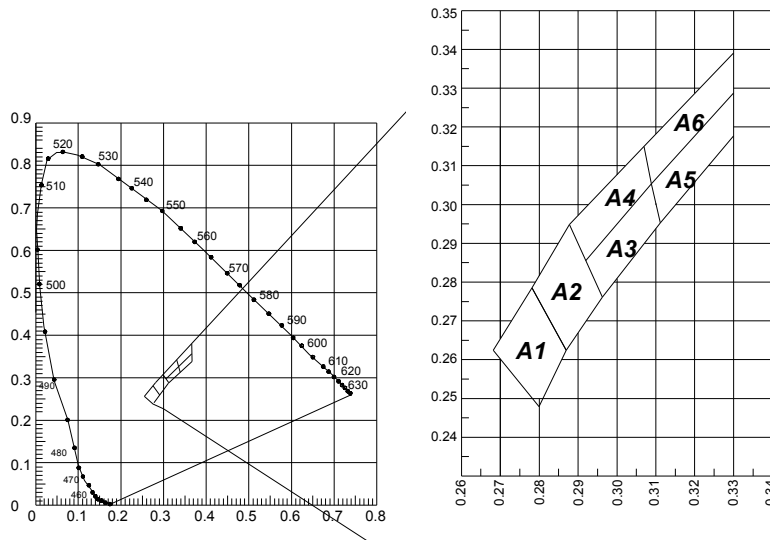
### BIN CODE LIST

| Luminous Intensity Unit: mcd@20mA |      |      |
|-----------------------------------|------|------|
| Bin Code                          | Min  | Max  |
| H1                                | 917  | 1192 |
| H2                                | 1192 | 1550 |
| H3                                | 1550 | 2015 |

Tolerance on each Intensity Bin is  $\pm 15\%$



**Chromaticity Diagram**



**Color Bins**

| A1 |       |       |       |       |
|----|-------|-------|-------|-------|
| X  | 0.280 | 0.268 | 0.278 | 0.288 |
| Y  | 0.248 | 0.262 | 0.279 | 0.262 |

| A2 |       |       |       |       |
|----|-------|-------|-------|-------|
| X  | 0.288 | 0.278 | 0.287 | 0.296 |
| Y  | 0.262 | 0.279 | 0.295 | 0.276 |

| A3 |       |       |       |       |
|----|-------|-------|-------|-------|
| X  | 0.296 | 0.292 | 0.309 | 0.311 |
| Y  | 0.276 | 0.286 | 0.305 | 0.294 |

| A4 |       |       |       |       |
|----|-------|-------|-------|-------|
| X  | 0.292 | 0.287 | 0.307 | 0.309 |
| Y  | 0.286 | 0.295 | 0.315 | 0.305 |

| A5 |       |       |       |       |
|----|-------|-------|-------|-------|
| X  | 0.311 | 0.309 | 0.330 | 0.330 |
| Y  | 0.294 | 0.305 | 0.329 | 0.318 |

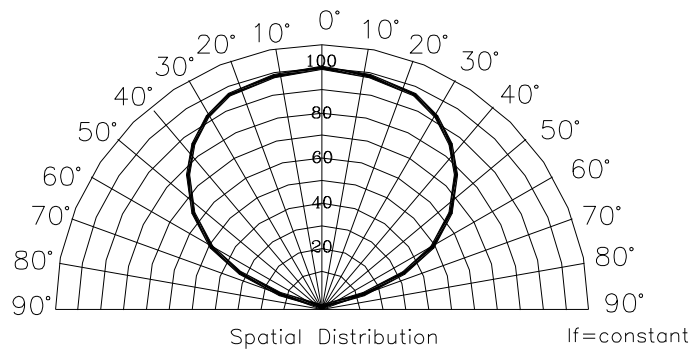
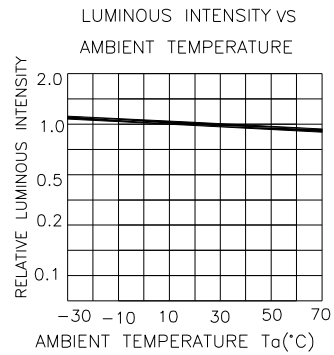
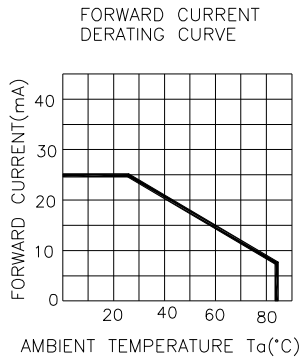
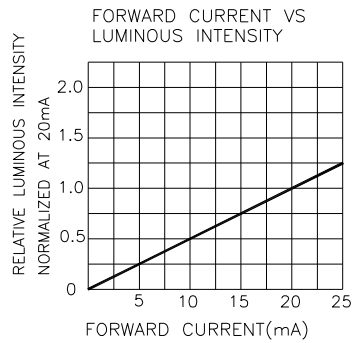
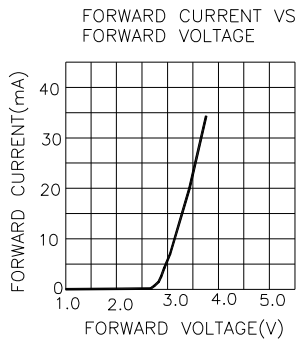
| A6 |       |       |       |       |
|----|-------|-------|-------|-------|
| X  | 0.309 | 0.307 | 0.330 | 0.330 |
| Y  | 0.305 | 0.315 | 0.339 | 0.329 |

- ※ Color Coordinates Measurement allowance is  $\pm 0.01$ .
- ※ One delivery will include up to six consecutive color bins and three luminous intensity bins of the products.

The quantity-ratio of the bins is decided by OASIS.



## Typical Electrical / Optical Characteristics Curves



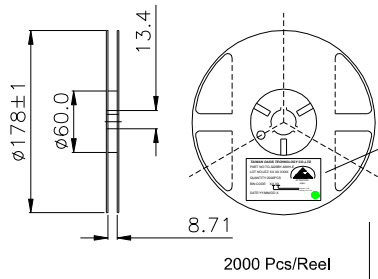
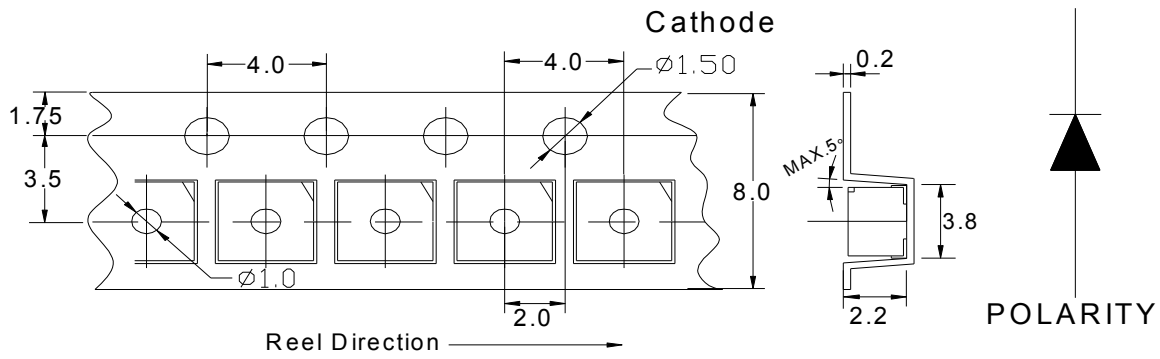


# TAIWAN OASIS

Http://www.taiwanoasis.com.tw

## Technical Data

Package Dimensions of Tape and Reel (Units: mm)



TAIWAN OASIS TECHNOLOGY CO.,LTD  
 PART NO:TO-3228BY-MWH-E  
 LOT NO:LEZXX XX XXXX  
 QUANTITY:2000PCS  
 BIN CODE: XX XX  
 DATE:YY/MM/DD X

ATTENTION: static

Brightness Code  
 Emitting Color Code

RoHS

