

**PRELIMINARY**

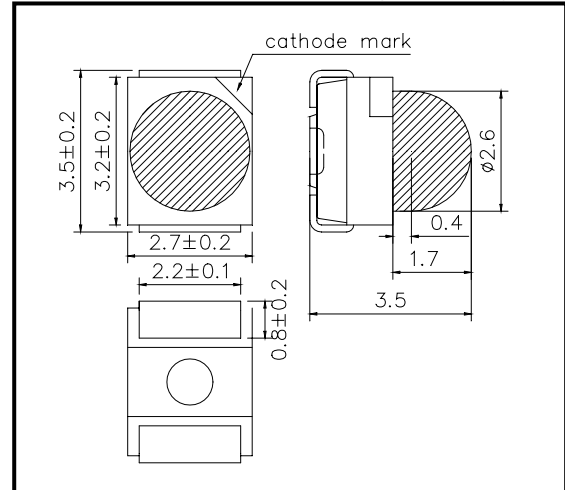
# SMTW47-23

 Lead (Pb) Free Product RoHS compliant  
 High Performance White color TOP LED with Lens

SMTW47-23 consists of an InGaN LED mounted with Yellow Phosphor on the lead frame as TOP LED package with plastic ball lens and emits white color radiation. and is 3000mcd typical of Brightness.

**◆ Specifications**

- |                                      |                       |
|--------------------------------------|-----------------------|
| 1) Product Name                      | TOP LED               |
| 2) Type No.                          | SMTW47                |
| 3) Chip                              |                       |
| (1) Chip Material                    | InGaN                 |
| (2) Peak Wavelength                  | White color (*1) typ. |
| 4) Package                           |                       |
| (1) Lead Frame Die                   | Silver Plated         |
| (2) Package Resin                    | PPA Resin             |
| (3) Lens                             | Epoxy Resin           |
| (4) Diameter                         | Φ2.6mm                |
| (*1): x: 2.3±0.3E-01, y: 2.2±0.3E-01 |                       |

**◆ Outer dimension (Unit: mm)**

**◆ Absolute Maximum Ratings**

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P <sub>D</sub>	120	mW	T <sub>a</sub> =25°C
Forward Current	I <sub>F</sub>	30	mA	T <sub>a</sub> =25°C
Reverse Voltage	V <sub>R</sub>	5	V	T <sub>a</sub> =25°C
Operating Temperature	T <sub>OPR</sub>	-20 ~ +80	°C	
Storage Temperature	T <sub>STG</sub>	-30 ~ +80	°C	
Soldering Temperature	T <sub>SOL</sub>	240	°C	

‡ Soldering condition: Soldering condition must be completed within 3 seconds at 230°C

**◆ Electro-Optical Characteristics [T<sub>a</sub>=25°C]**

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =20mA		3.80	4.30	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =5V			10	μA
Total Radiated Power	P <sub>O</sub>	I <sub>F</sub> =20mA		5.0		mW
Brightness	I <sub>v</sub>	I <sub>F</sub> =20mA		3000		mcd
Peak Wavelength	λ <sub>P</sub>	I <sub>F</sub> =20mA		*1		nm
Half Width	Δλ	I <sub>F</sub> =20mA		-		nm
Viewing Half Angle	θ <sub>1/2</sub>	I <sub>F</sub> =20mA		±15		deg.

‡ \*1; x: 2.3±0.3E-01, y: 2.2±0.3E-01

‡ Total Radiated Power is measured by Photodyne #500

‡ Brightness is measured by Tektronix J-16.