SMT505-23

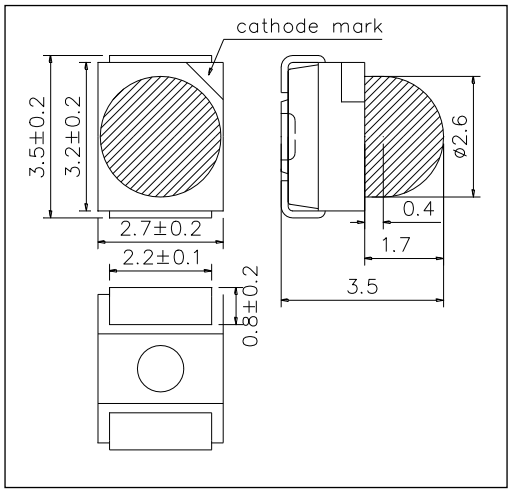
High Performance Cyan Color TOP LED with Lens

SMT505-23 consists of an InGaN LED mounted on the lead frame as TOP LED package with a plastic ball lens and 3200mcd of Brightness driving at 20mA.
It emits a spectral band of radiation at 505nm.

<Specifications>

1. Product Name: TOP LED
2. Type Number: SMT505-23
3. Chip:
   - Chip Material: InGaN
   - Peak Wavelength: 505nm
4. Package
   - Lead Frame Die: Silver Plated
   - Package Resin: PPA Resin
   - Lens: Epoxy Resin
   - Diameter: Φ2.6mm

Outer Dimension (Unit:mm)



Absolute Maximum Ratings				
Item	Symbol	Maximum Rated Value	Unit	Ambient Temp.
Power Dissipation	PD	185	mW	Ta=25℃
Forward Current	IF	50	mA	Ta=25℃
Reverse Voltage	VR	5	V	Ta=25℃
Junction Temperature	Tj	100	℃	
Thermal Resistance	Rthja	150	K/W	
Operating Temperature	TOPR	-40 ~ +80	℃	
Storage Temperature	TSTG	-40 ~ +80	℃	
Soldering Temperature*	TSOL	255	℃	

* Soldering condition must be completed within 3 second at 240℃.

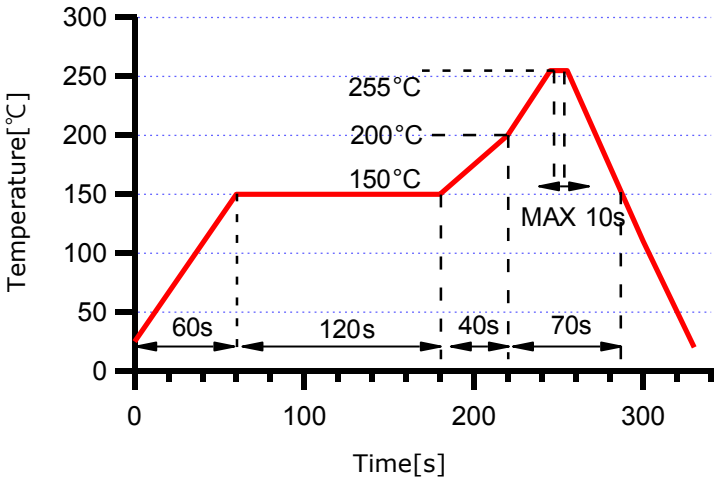
Electro-Optical Characteristics [Ta=25℃]						
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	VF	IF=20mA		3.3	3.8	V
Reverse Current	IR	VR=5V			10	uA
Radiated Power*	PO	IF=20mA		10		mW
Brightness**	IV	IF=20mA		3200		mcd
Radiant Intensity	IE	IF=20mA		9		mW/sr
Peak Wavelength	λP	IF=20mA	495	505	515	nm
Half Width	Δλ	IF=20mA		35		nm
Wavelenght(dominant)	λD	IF=20mA		520		nm
Viewing Half Angle	θ1/2	IF=20mA		±15		deg

* Measured by Photodyne #500
** Measured by Tektronix J-16

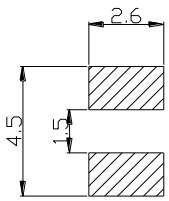
RoHS Compliant

SMD Application

Recommended reflow soldering profile



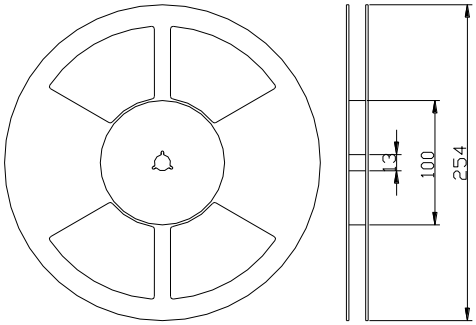
Recommended Land Layout (Unit:mm)

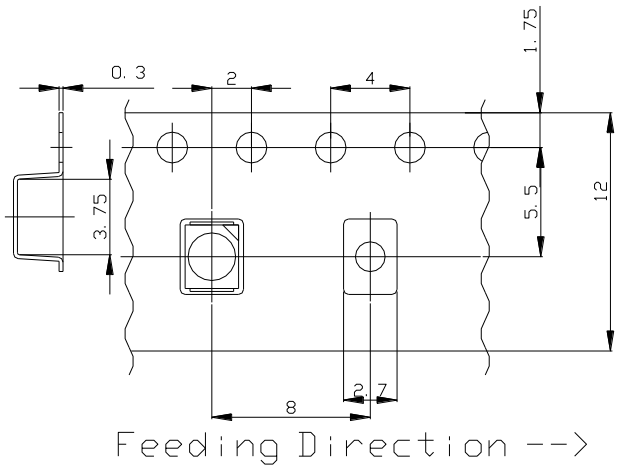


Solder within 4days after opening the aluminum laminated bag and storage the circumstance of less than 30℃ and 50%RH during 4days.

SMD Packing

Tape and Reel Dimensions (Unit:mm)





Wrapping

Mositure barrier bag aluminum laminated film with a desiccant to keep out the moisture absorption during the transportation and storage.

SMD LED STORAGE AND HANDLING PRECAUTIONS

＜Storage Conditions before Opening a Moisture-Barrier Aluminum Bag＞

- Before opening a moisture-barrier aluminum bag, please store it at <30ºC, <60%RH. Please note that the maximum shelf life is 12 months under these conditions.

＜Storage Conditions after Opening a Moisture-Barrier Aluminum Bag＞

- After opening a moisture-barrier aluminum bag, store the aluminum bag and silica gel in a desiccator.
- After opening the bag, please solder the LEDs within 72 hours in a room with 5 - 30ºC, <50%RH.
- Please put any unused, remaining LEDs and silica gel back in the same aluminum bag and then vacuum-seal the bag.
- It is recommended to keep the re-sealed bag in a desiccator at <30%RH.

＜Notes about Re-sealing a Moisture-Barrier Aluminum Bag＞

- When vacuum-sealing an opened aluminum bag, if you find the moisture-indicator of the silica gel has changed to pink from blue (indicating a relative humidity of 30 % or more), please do not use the unused LEDs, the aluminum bag, or the silica gel.

＜Notes about Opening a Re-sealed Moisture-Barrier Aluminum Bag＞

- When opening a vacuumed and re-sealed aluminum bag in order to use the remaining LEDs stored in the bag, if you find that the moisture-indicator of the silica has changed to pink, please do not use the LEDs.

※The 72-hour- long floor life does not include the time while LEDs are stored in the moisture-barrier aluminum bag.
However, we strongly recommend to solder the LEDs as soon as possible after opening the aluminum bag.

The product is manufactured by USHIO Inc. and the spec information is also from USHIO Inc.