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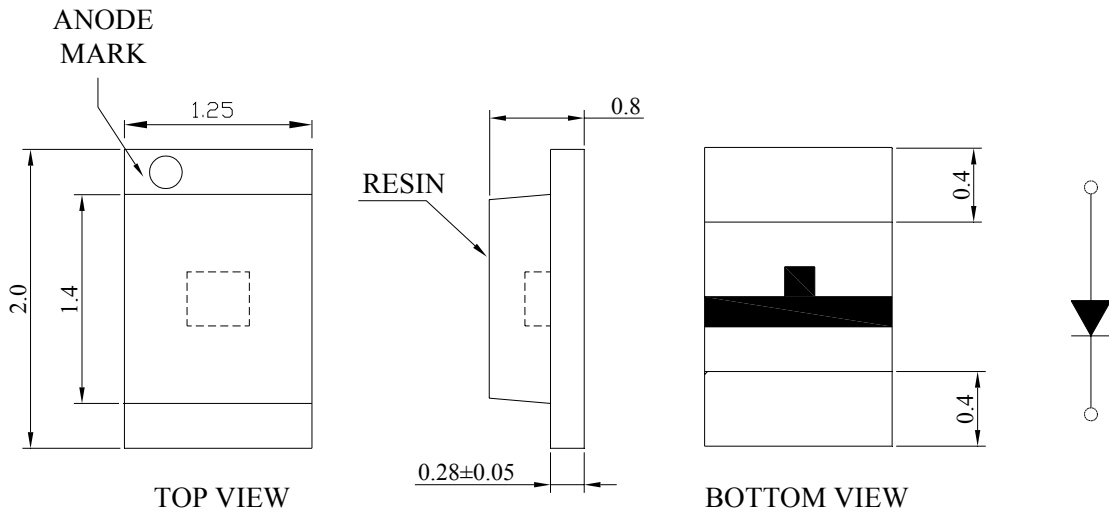
# SPECIFICATION

*PART NO. : MTSM8500-UR-A*

0805 SMD CHIP LED



**Package Dimensions**



**Notes:**

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

**Description**

Part No.	LED Chip		Lens Color
	Material	Emitting Color	
MTSM8500-UR-A	AlGaInP/GaP	Hyper Red	Water Clear

**Absolute Maximum Ratings at Ta=25 °C**

Parameter	Symbol	Rating	Unit
Power Dissipation	PD	75	mW
Reverse Voltage	VR	5	V
D.C. Forward Current	If	30	mA
Peak Current(1/10Duty Cycle,0.1ms Pulse Width.)	If(Peak)	80	mA
Operating Temperature Range	Topr.	-30 to +80	°C
Storage Temperature Range	Tstg.	-40 to +85	°C
Soldering Temperature.	Tsol.	Reflow Soldering:260°C for 10 sec.	

**Electrical and Optical Characteristics:**

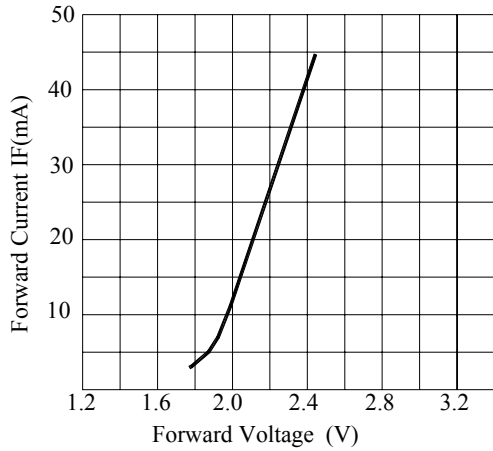
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Luminous Intensity	Iv	If=20mA	165	300		mcd
Forward Voltage	Vf	If=20mA		2.1	2.5	V
Peak Wavelength	$\lambda_P$	If=20mA		632		nm
Dominant Wavelength	$\lambda_D$	If=20mA		625		nm
Reverse Current	Ir	VR=5V			100	$\mu A$
Viewing Angle	$2\theta$ 1/2	If=20mA		130		deg
Spectrum Line Halfwidth	$\Delta\lambda$	If=20mA		20		nm

Notes:1.The datas tested by IS tester.

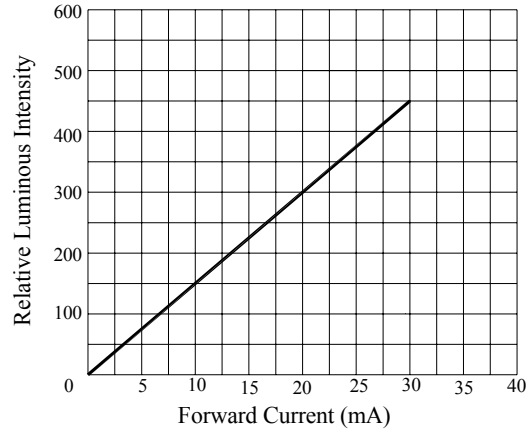
2. Customer's special requirements are alsowelcome.

**Typical Electrical/Optical Characteristic Curves**

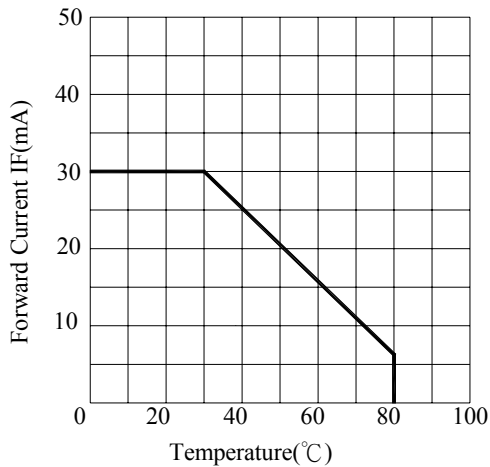
**(25°C Ambient Temperature Unless Otherwise Noted)**



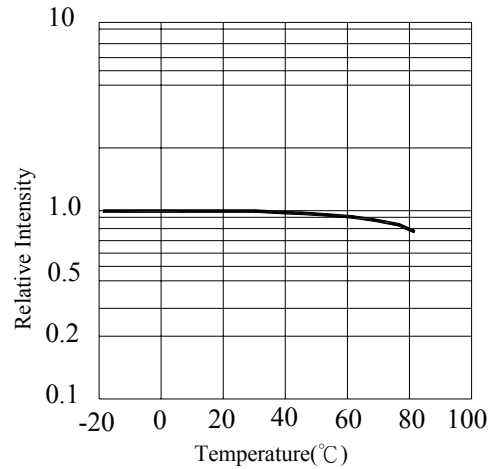
FORWARD CURRENT VS. APPLIED VOLTAGE



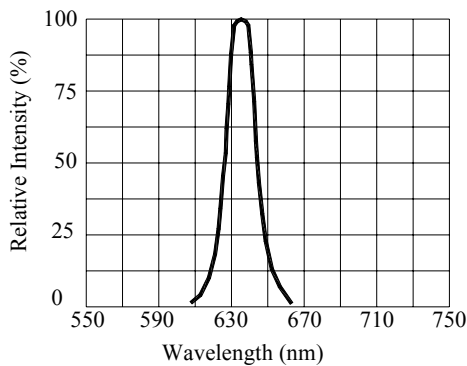
RELATIVE INTENSITY VS. FORWARD CURRENT



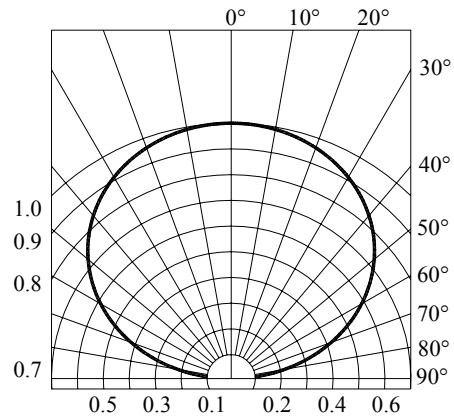
FORWARD CURRENT VS. AMBIENT TEMPERATURE



RELATIVE INTENSITY VS. AMBIENT TEMPERATURE



RELATIVE INTENSITY VS. WAVELENGTH



**Radiation Diagram**

## Precautions in Use:

### Storage

Recommend storage environment

Temperature : 5°C ~ 30°C (41°F ~ 86°F)

Humidity : 60% RH Max.

Use within 7 days after opening of sealed vapor/ESD barrier bags.

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±5°C for 24 hours.

Fold the opened bag firmly and keep in dry environment.

### Soldering

#### Reflow Soldering

Recommend use of upper and lower heater type reflow furnace.

260°C Max for up to 10 seconds, one time only.

Pre-heat is 150°C Max for up to 2 minutes Max.

In case of screen-printing, keep metal mask thickness between 0.2mm and 0.3mm.

### Cleaning

Surface condition of this device may change when organic solvents such as trichloroethylene or acetone were applied.

Avoid using organic solvent.

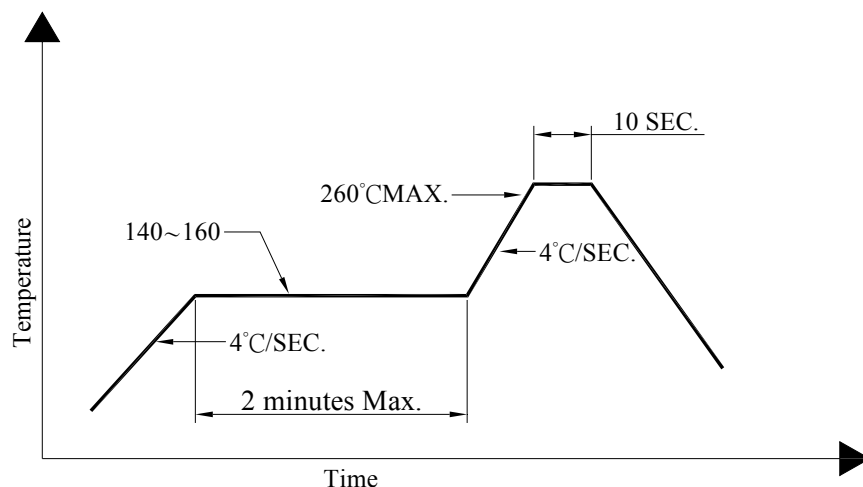
Recommend ultrasonic method 300W Max.

### Packaging

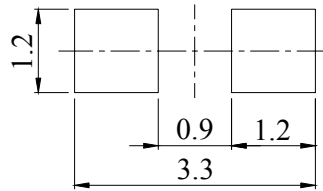
EIA-481A standard package.

In 8mm tape on 4000 pcs diameter reels sealed in vapor/ESD barrier bags.

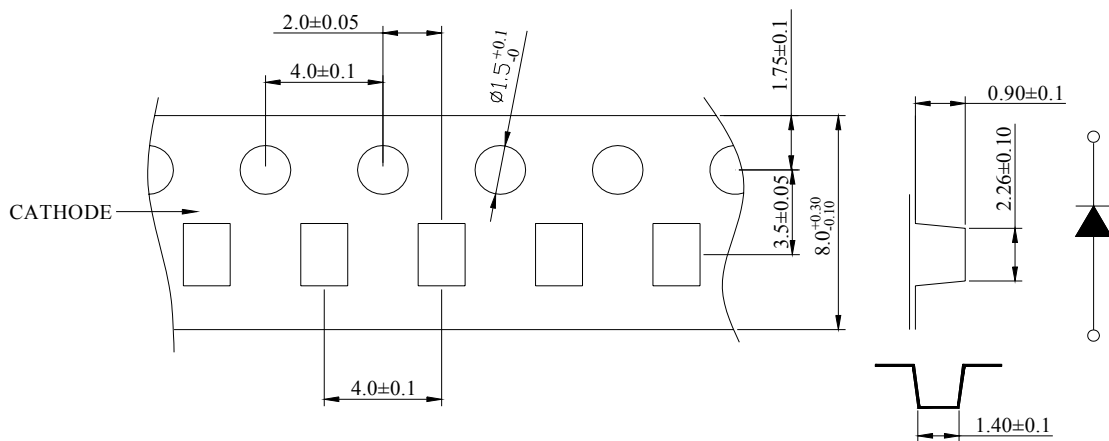
## Reflow Temp/Time:



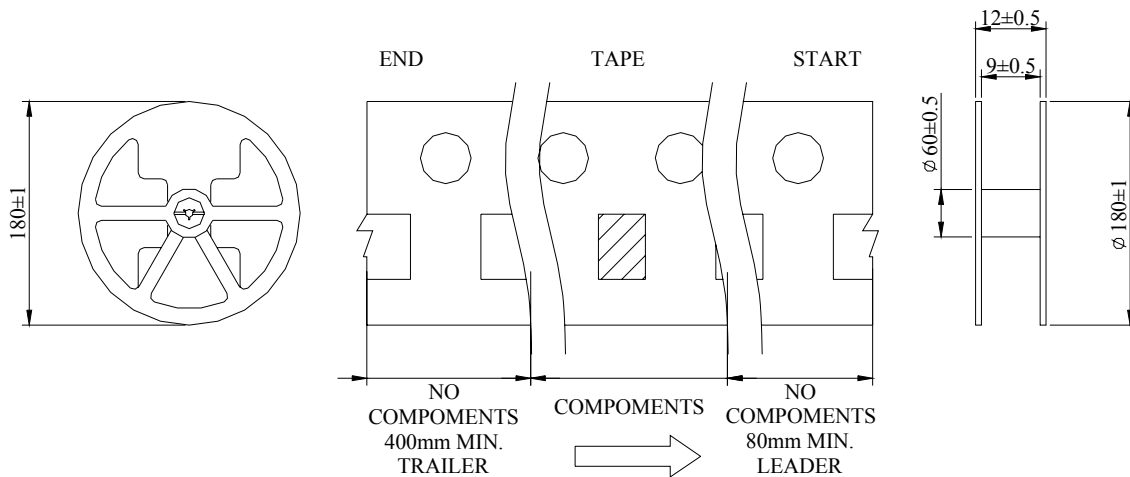
**Reflow Soldering Pad Dimensions**



**Dimensions for Tape**



**Dimensions for Reel**



**Notes:**

1. All dimensions are in mm, tolerance is  $\pm 2.0$  mm unless otherwise noted.
2. Specifications are subject to change without notice.