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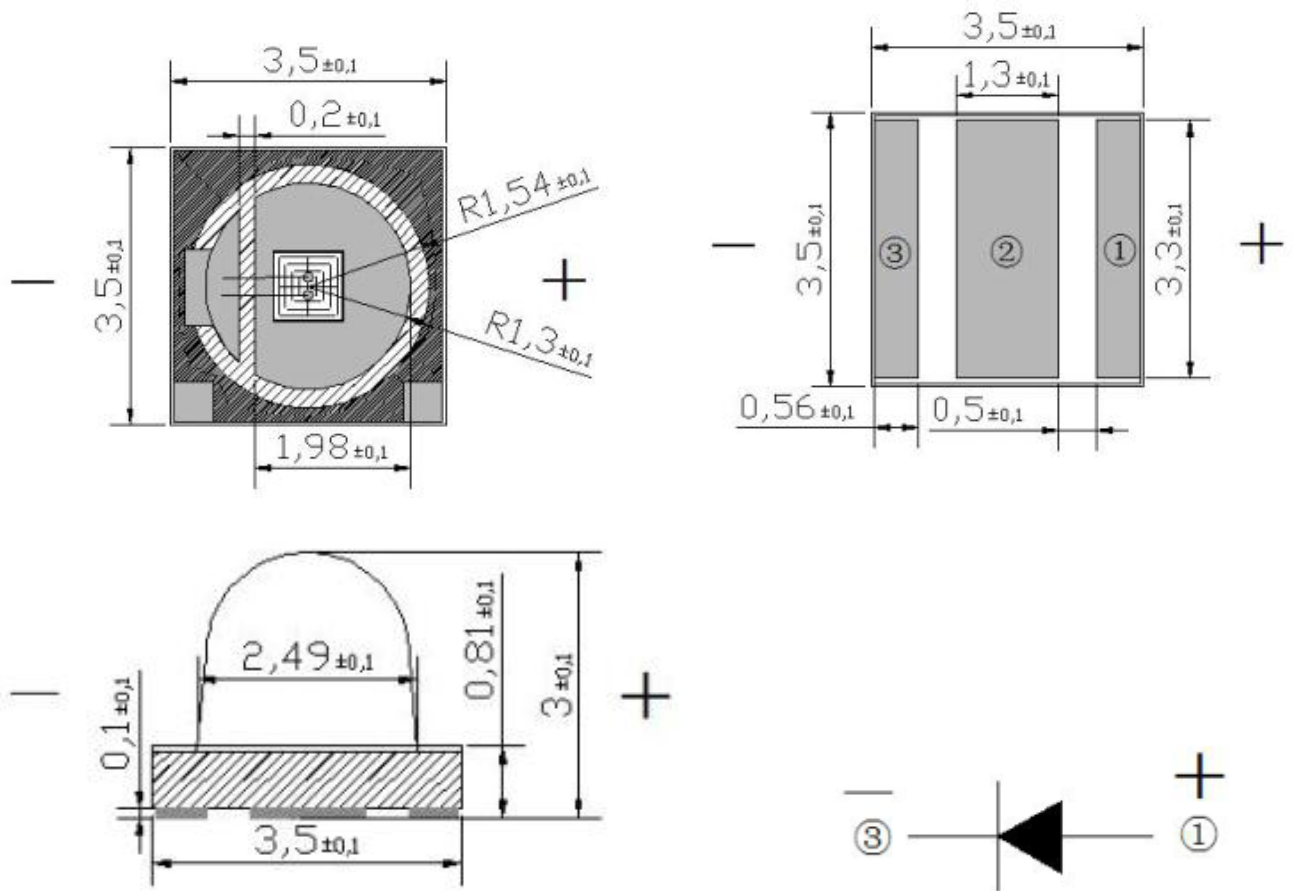
Http://www.marktechopto.com

SPECIFICATION

PART NO. : MTSM8385FG-IR

3.5 x 3.5mm SMD TYPE





Notes:

1. All dimensions are in mm.
2. The specifications, characteristics and technical data described in the datasheet are subject to change without notice.
3. Tolerance is ± 0.25 mm unless otherwise noted.

Description

Part No.	LED Chip		Lens Color
	Material	Emitting Color	
MTSM8385FG-IR	AlGaAs	Infrared	Water clear

Absolute Maximum Ratings at Ta=25 °C

Parameter	Symbol	Rating	Unit
Power Dissipation	P _D	2200	mW
Reverse Voltage	V _R	5	V
D.C. Forward Current	I _f	1000	mA
Peak Current(1/10Duty Cycle,0.1ms Pulse Width.)	I _f (Peak)	2000	mA
Operating Temperature Range	T _{opr.}	-40 to +85	°C
Storage Temperature Range	T _{stg.}	-40 to +100	°C
Electric Static Discharge	ESD	2000@90%	V
Soldering Temperature	T _{slid.}	Max.260<10 sec	

Electrical and Optical Characteristics:

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Luminous Power	P _o	I _f =1000mA	420	650	950	mW
Luminous intensity	I _e	I _f =1000mA	300	540	750	mW/sr
Forward Voltage	V _f	I _f =1000mA	1.4	1.7	2.2	V
Peak Wavelength	λ _p	I _f =1000mA	840	855	870	nm
Dominant Wavelength	λ _d	I _f =1000mA		---		nm
Reverse Current	I _r	V _r =5V	-	-	10	μA
Viewing Angle	2 θ 1/2	I _f =1000mA	--	60	--	deg

Notes: 1.Tolerance of Luminous Intensity is ±15%

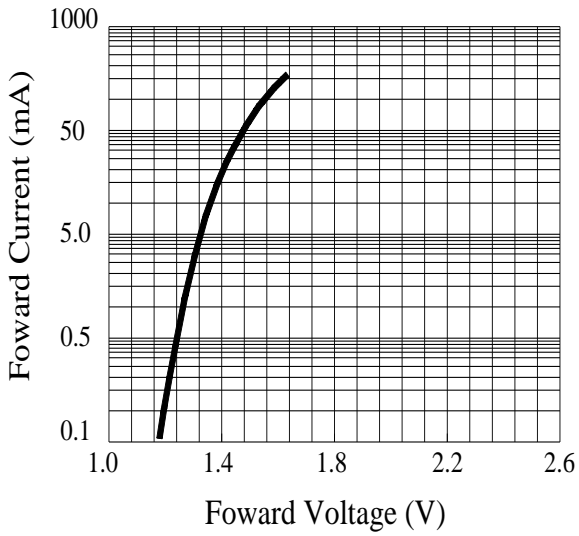
2.Tolerance of Forward Voltage is ±0.1V

3. Tolerance of Correlated Colour Temperature is ±5%

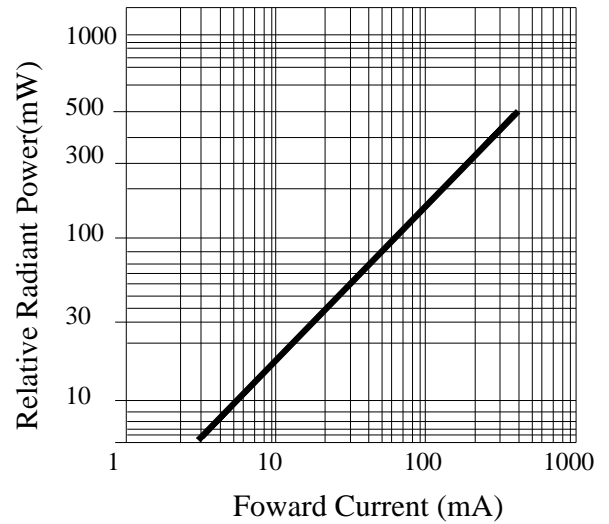
4.Tolerance of Color Rendering Index is ±2

Typical Electrical/Optical Characteristic Curves

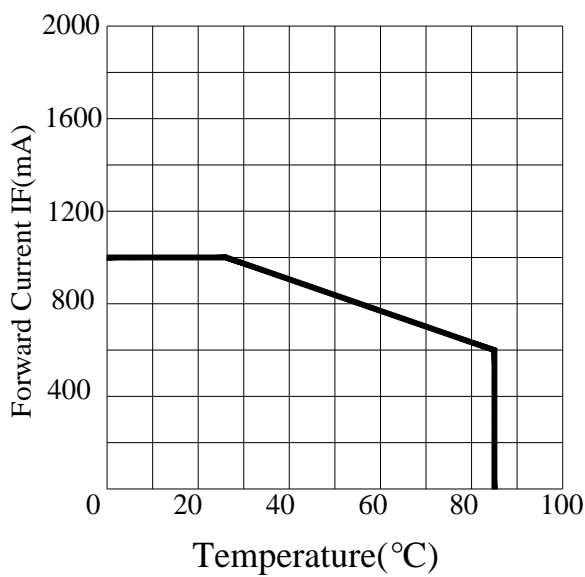
(25°C Ambient Temperature Unless Otherwise Noted)



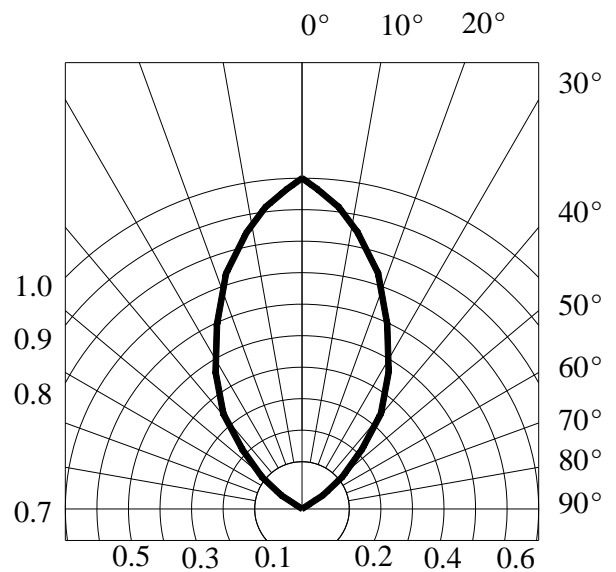
Forward Current VS. Applied Voltage



Forward Current VS. Luminous Intensity

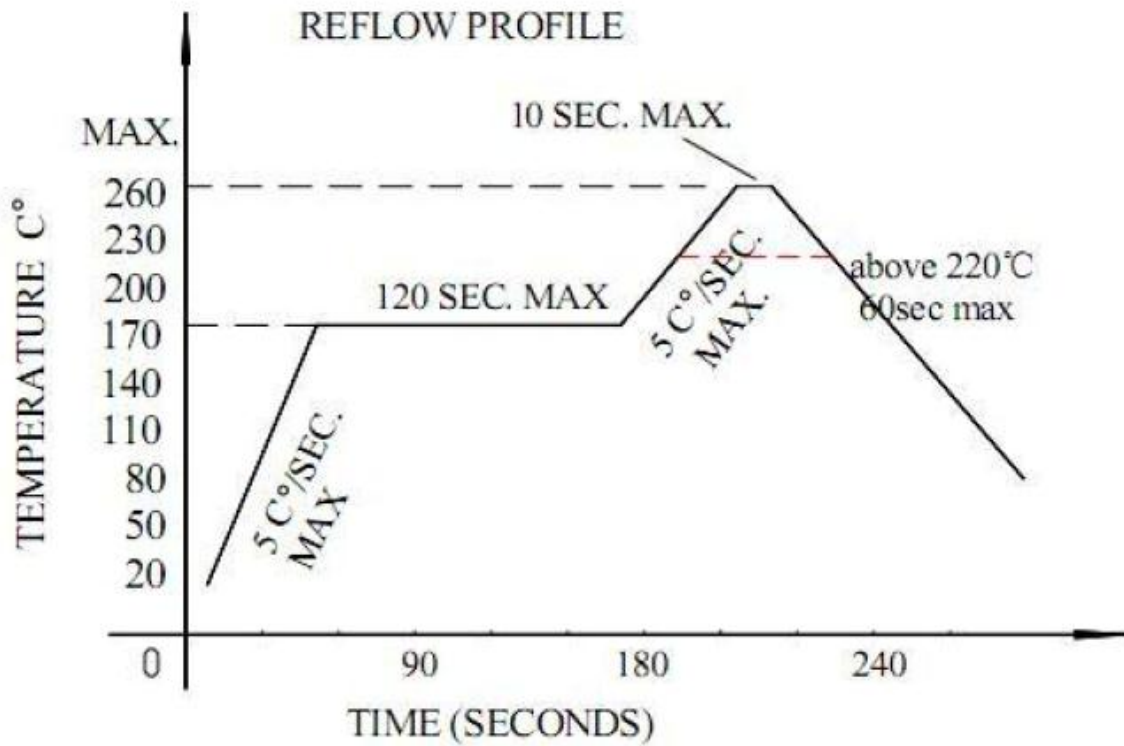


Ambient Temperature VS. Forward Current



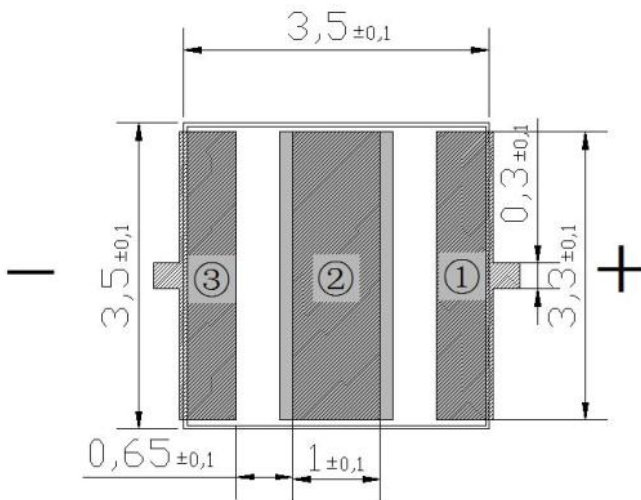
Radiation Diagram

Reflow Temp/Time:



[Recommended soldering pad design]

Use the following conditions shown in the figure.



Sulfur-sensitive

- **There is silver-plated metal part on the inner/outer side of the outer package. If exposed to the condition with corrosive gas, the silver plating surface may go bad, which will affect soldering strength and optical properties. Therefore, after opening it must be kept in a sealed container, etc.**
- **Materials contain sulfur component (gasket, adhesive, etc.) may have bad effects on the surface of the coating, so please do not use such materials in the product.**
- **In cardboard boxes and rubber, even in the atmosphere may contain minute amount of corrosive gases; In addition, the resin material may also contain halogen which has a bad effect on the surface of the coating.**
- **Even if the soldering installation and product assembly finished, by the effect of corrosive gas generated by relative materials of LED and external injected, the coating surface may go bad, so it is necessary to design the product taking into account the above factors.**
- **If requires, it is best to use a silicone washer, but be aware that low molecular silicone may cause the product poor contact.**
- **Keep the product in location where has less temperature change, because moisture condensation would be generated under a condition of strong temperature change.**

DISCLAIMER

- 1. Our department reserves the right(s) on the adjustment of product material mix for the specification.**
- 2. The product meets our department published specification for a period of twelve (12) months from date of shipment.**
- 3. The graphs shown in this datasheet are representing typical data only and do not show guaranteed values.**
- 4. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. Our department assumes no responsibility for any damage resulting from the use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.**
- 5. These specification sheets include materials protected under copyright of our department. Reproduction in any form is prohibited without obtaining our department's prior consent.**
- 6. This product is not intended to be used for military, aircraft, automotive, medical, life sustaining or life saving applications or any other application which can result in human injury or death.**