

F-TOS-F3193AMR-N-1-HF

SMD Display LED

Part Number	Chip		Face Color	Segment Color
	Material	Source Color		
F-TOS-F3193AMR-N-1-HF	AlGaInP	Ultra-red	Gray	White

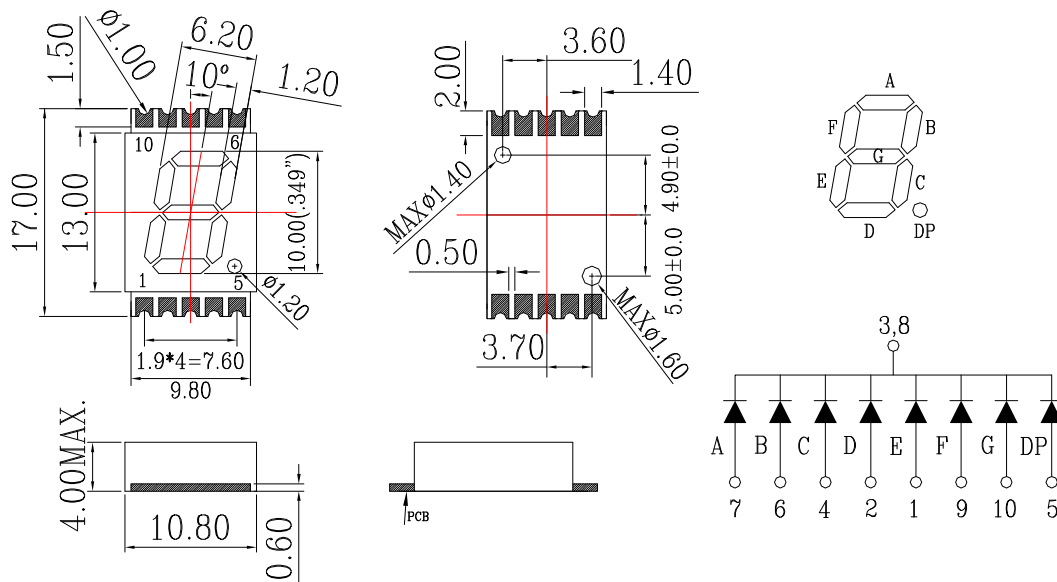
Features

- (0.39") 10.00mm digit height
- Common cathode
- I.C. compatible
- Low power consumption
- RoHS compliant
- Moisture sensitivity level:2a

Applications

- Audio equipment
- Instrument panels
- Digital read out display

Package Dimensions & Internal Circuit Diagram



Notes:

1. All dimensions are in millimeters, tolerance: ± 0.25 ; Angle: $\pm 0.1^\circ$ unless otherwise noted.
2. Specifications are subject to change without notice.

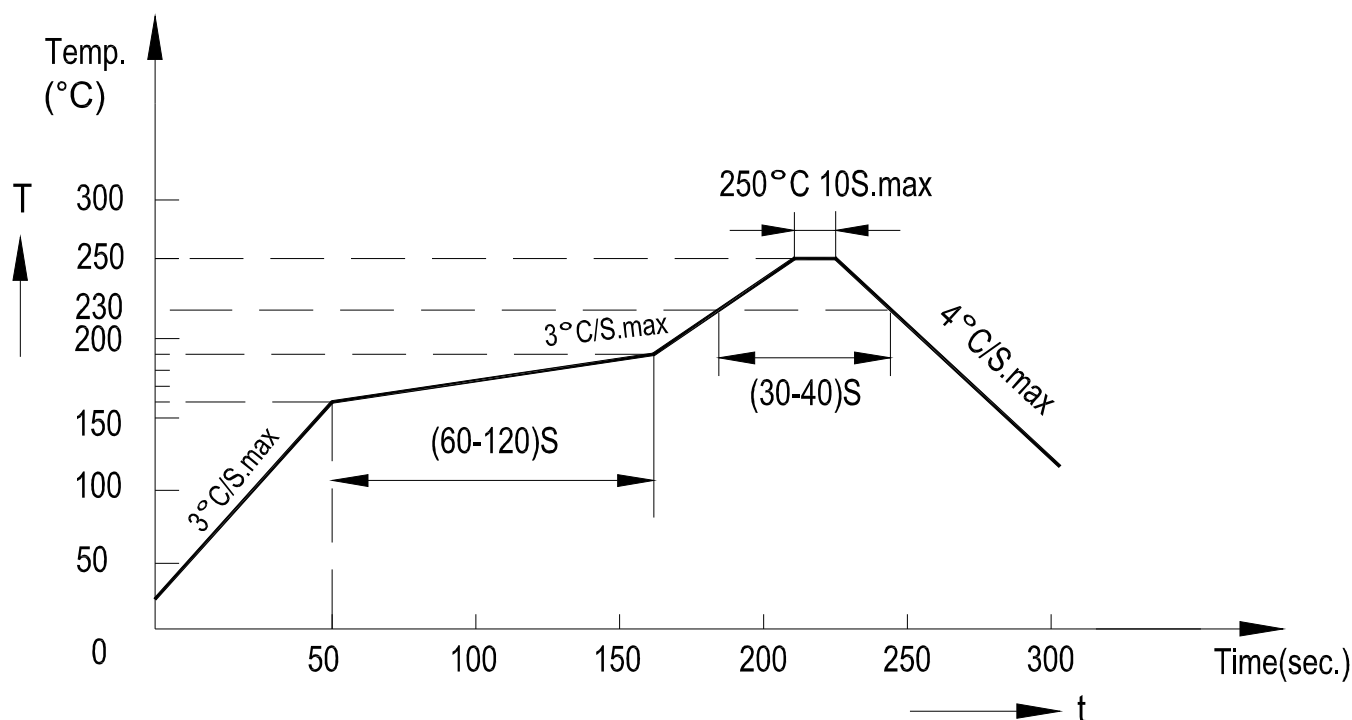
Absolute Maximum Rating @ Ta=25°C

Parameter	Maximum Rating	Unit
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	80	mA
Power Dissipation	75	mW
Continuous Forward Current	20	mA
Recommend Operating Current	12	mA
Reverse Voltage	5	V
Operating Temperature Range	-25°C to +85°C	
Storage Temperature Range	-30°C to +85°C	
Lead-Free Solder Temperature	250°C for 10 Sec	

Electrical / Optical Characteristic @ Ta=25°C

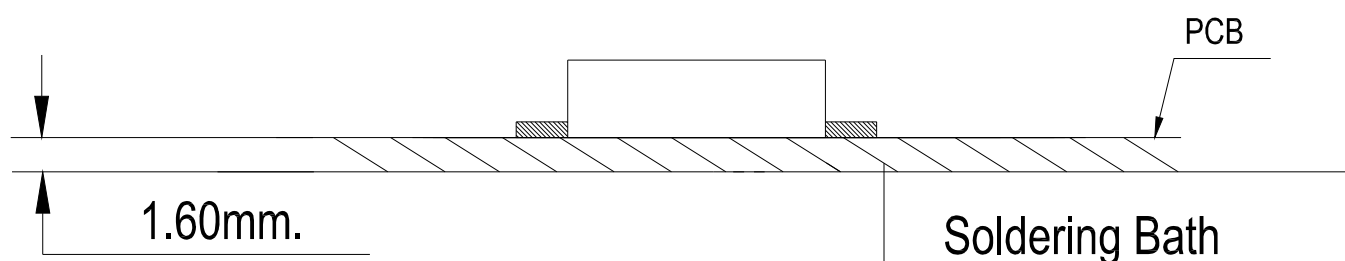
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition	Grade
Dominant Wavelength	λ_d	625	630	635	nm	$I_F=20\text{mA}$	
Spectral Line Half-Width	$\Delta\lambda$		15		nm	$I_F=20\text{mA}$	
Forward Voltage	V_F	1.8	2.0	2.3	V	$I_F=20\text{mA}$	
Reverse Current	I_R			10	μA	$V_R=5\text{V}$	
Luminous Intensity Matching Rate	$I_v\text{-m}$			2.0:1		$I_F=20\text{mA}$	

Soldering Profile

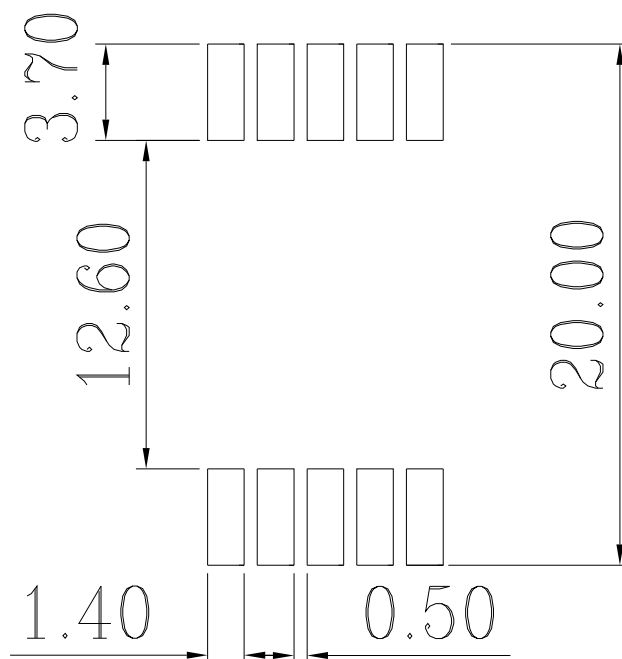


Number of reflow process shall be 2 times or less

1. Manual soldering temperature : Max 320°C for 3 Sec.
2. Can be second manual soldering, but must be cooling before second manual soldering, In order to guarantee the soldered area is to be smoothly covered with soldering, can delay the soldering time, but not to exceed 20s every pad, because if that, the pad will be damaged.
3. The minimum distance of display seating plan to soldering bath is 1.6mm.
4. Don't cause stress to the epoxy resin while it is exposed to high temperature.



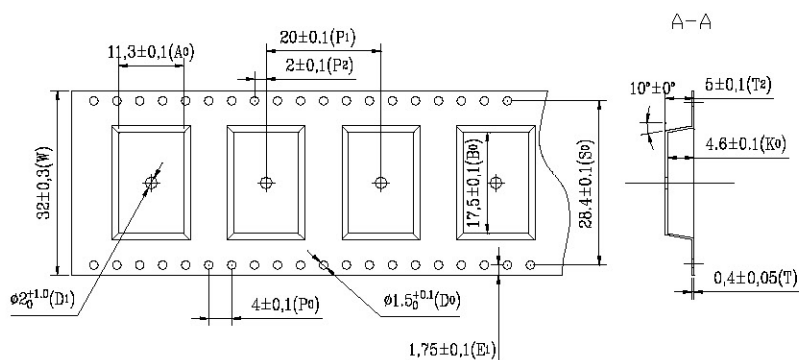
Recommended Soldering Pattern and Storage Condition



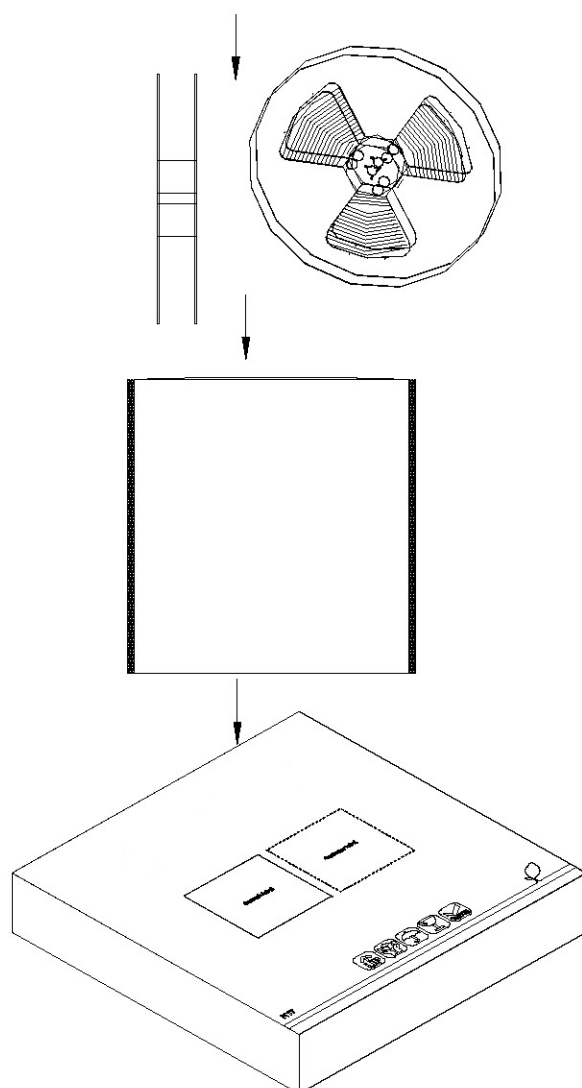
1. This part is a moisture sensitive device, According to JEDEC level 4.
2. The storage condition of packed: $\leq 40^{\circ}$ / 90%RH, 12 months or $\leq 10\%$ RH.
3. The storage condition of unpacked: $\leq 30^{\circ}$ / 60%RH, 72 Hrs or $\leq 10\%$ RH.

This part can endure ultrasonic cleaning, the solvent hydrocarbon is suitable but isopropyl-alcohol base is not.

Package Description



700 Pcs/ Roll



700 Pcs/ Box