WINSTAR Display

OLED SPECIFICATION

Model No:

TSL128128DF191XXXX01

first FC components

Represented by:

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SPECIFICATION Version: 0

CUSTOMER :
MODULE NO. : TSL128128DF191XXXX01

APPROVED BY: (FOR CUSTOMER USE ONLY)	

SALES BY	APPROVED BY	CHECKED BY	PREPARED BY
first FC components			
RELEASE DATE:			

■APPROVAL FOR SPECIFICATIONS ONLY

□APPROVAL FOR SPECIFICATIONS AND SAMPLE

MODEL NO：

RECORDS OF REVISION			DOC. FIRST ISSUE
VERSION	DATE	REVISED PAGE NO.	SUMMARY
0	2022/09/29		First release

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1.General Specification

1.1. Type: capacitive touch panel

1.2. Input mode: finger

1.3. Structure and material:

Structure	Material	Thickness	Remark
Cover lens	Glass	0.7mm	-
Upper circuits	ITO film	0.125mm	-

1.4. Dimension:

Item	Description	Unit
Outline dimension	φ50.50±0.05	mm
View Area	φ31.00±0.15	mm
Active area	φ30.0	mm
Total thickness	1.30±0.15（含泡棉膠）	mm
Length of FPC	30.70	mm

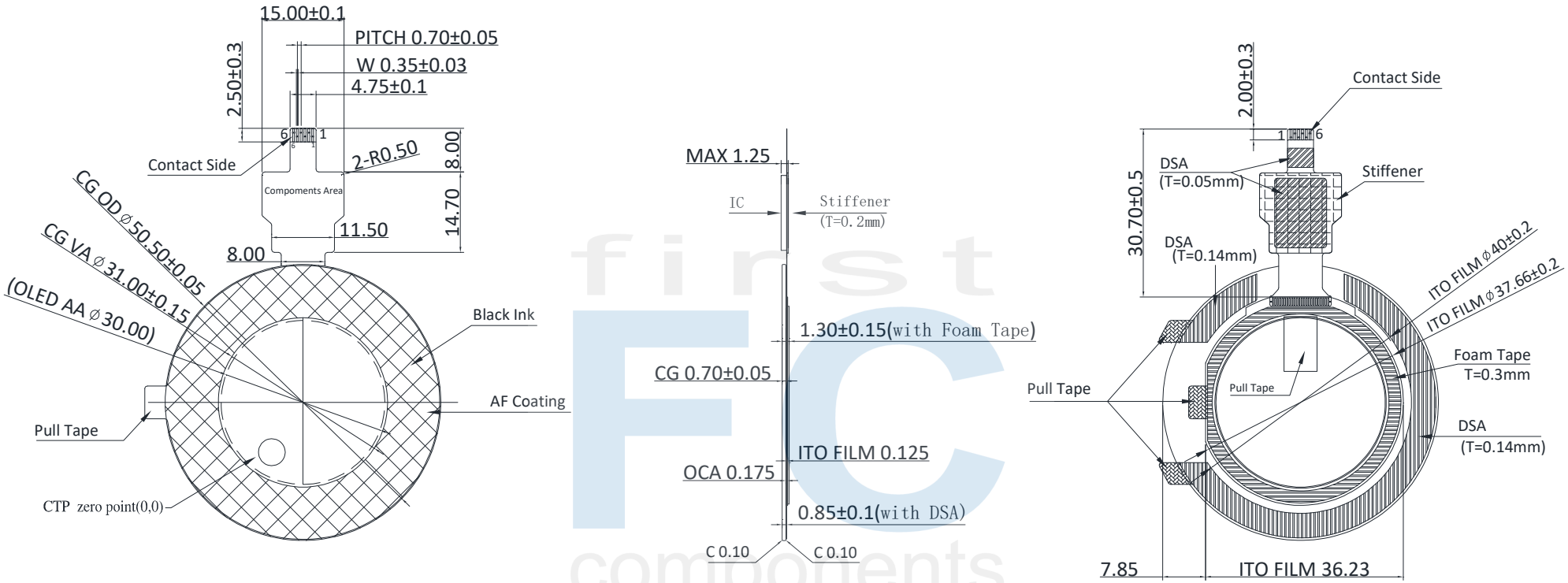
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2.Electrical Characteristics

Item	Specification
IC model	FT3268
Interface	I2C
Surface hardness	≥6H
Supply voltage	DC 2.8V~3.5V
Support touch mode	1 points

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3.Contour Drawing



1	TP IC	FT3268
2	Light Transparency	86%Min
3	Power supply	3.3V
4	Interface	I2C
5	Operating Temperature	-20°C~70°C
6	Storage Temperature	-30°C~80°C

Pin	Definition
1	GND(VSS)
2	SCLK
3	SDA
4	INT
5	VDD
6	GND(VSS)

The non-specified tolerance of dimension is ±0.2mm.

4. Interface Pin Function

Pin No.	Symbol	Description
1	GND(VSS)	Power ground.
2	SCLK	IIC clock signal. Must be pulled high.
3	SDA	IIC data signal. Must be pulled high.
4	INT	External interrupt to the host.
5	VDD	Power supply.
6	GND(VSS)	Power ground.

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5.Other

5.1. Environmental characteristics

Item	Specification
Operating Temp.	-20℃～70℃
Storage Temp.	-30℃～80℃

Note: Testing environment is under normal atmospheric pressure. When the ambient temperature is above 65℃,the humidity is allowed to be below 50%RH

5.2. Optical characteristics

Item	Specification	Remark
Light transmission	≥86%	-

5.3. Reliability

Item	Specifications	Remark
High Temperature Storage	80ºC,240hrs，Normalized for 24 hrs	-
Low Temperature Storage	-30ºC, 240hrs，Normalized for 24 hrs	Non-condensing
Temperature/ Humidity Storage	60ºC/90% RH, 240hrs，Normalized for 24 hrs	Non-condensing
High Temperature Operation	70ºC,240hrs,Perform well	-
Low Temperature Operation	-20 ºC,240hr,Perform well	Non-condensing
Thermal Shock	-20 ~ 70℃, 60 Mins/cycle Total 10 Cycles , Normalized for 24 hrs	No change

5.4. Durability

Item	Specifications	Remark
Hitting life	35,000,000 times	Hitting test may cause surface slight scratch yet the function stays intact.
Panel Slide Test	TBD	Slide test may cause surface slight scratch yet the function stays intact.

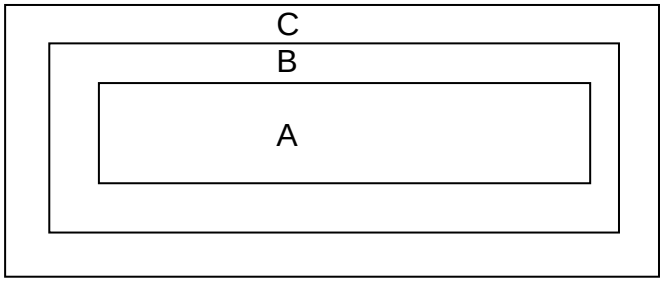
6. Inspection specification

Inspection Standard:

MIL-STD-105E table normal inspection single sample level II.

Definition

1 Major defect : The defect that greatly affect the usability of product.
2 Minor defect : The other defects, such as cosmetic defects, etc.
Definition of inspection zone:

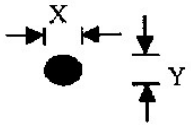


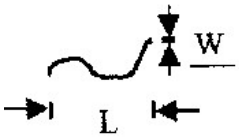
Zone A: Active Area
Zone B: Viewing Area except Zone A
Zone C: Outside Viewing Area
Note: As a general rule, visual defects in Zone C are permissible, when it is no trouble of quality and assembly to customer`s product.

Inspection Methods

1 The general inspection : Under fluorescent light illumination: 750~1500 Lux, about 30cm viewing distance, within 45º viewing angle, under 25±5°C.
2 The luminance and color coordinate inspection : By SR-3 or BM-7 or the equal equipments, in the dark room, under 25±5°C.

NO	Item	Criterion	AQL
01	Electrical Testing	No function	0.65
02	Black or white spots on OLED (display only)	2.1 White and black spots on display ≦0.25mm, no more than four white or black spots present. 2.2 Densely spaced: No more than two spots or lines within 3mm.	2.5

<table>
<tr><th>NO</th><th>Item</th><th>Criterion</th><th>AQL</th></tr>
<tr><td rowspan="2">03</td><td>OLED black spots, white spots, contamination (non-display)</td><td>3.1 Round type :
As following drawing
Φ=(x + y) / 2


<table><tr><th>SIZE</th><th>Acceptable QTY</th><th>Zone</th></tr><tr><td>Φ≦0.10</td><td>ignore</td><td>A+ B</td></tr><tr><td>0.10＜Φ≦0.20</td><td>3</td><td>A+ B</td></tr><tr><td>0.20＜Φ≦0.25</td><td>1</td><td>A+ B</td></tr><tr><td>0.25＜Φ</td><td>0</td><td>A+ B</td></tr></table></td><td>2.5</td></tr>
<tr><td>3.2 Line type : (As following drawing)


<table><tr><th>Length</th><th>Width</th><th>Acceptable Q TY</th><th>Zone</th></tr><tr><td>---</td><td>W≦0.02</td><td>ignore</td><td>A+B</td></tr><tr><td>L≦3.0</td><td>0.02＜W≦0.03</td><td rowspan="2">4</td><td>A+B</td></tr><tr><td>L≦2.5</td><td>0.03＜W≦0.05</td><td>A+B</td></tr><tr><td>---</td><td>0.05＜W</td><td>As round type</td><td></td></tr></table></td><td>2.5</td></tr>
<tr><td>04</td><td>bubbles</td><td>If bubbles are visible, judge using black spot specifications, not easy to find, must check in specify direction.
<table><tr><th>Size Φ</th><th>Acceptable Q TY</th><th>Zone</th></tr><tr><td>Φ≦0.20</td><td>ignore</td><td>A+B</td></tr><tr><td>0.20＜Φ≦0.50</td><td>2</td><td>A+B</td></tr><tr><td>0.50＜Φ≦1.00</td><td>0</td><td>A+B</td></tr><tr><td>Total Q TY</td><td>2</td><td></td></tr></table></td><td>2.5</td></tr>
<tr><td>05</td><td>Scratches</td><td>Follow NO.3 OLED black spots, white spots, contamination.</td><td></td></tr>
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