

TPC156T0001G01V1

15.6 inch, G+G structure capacitive touch panel



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1 Structure

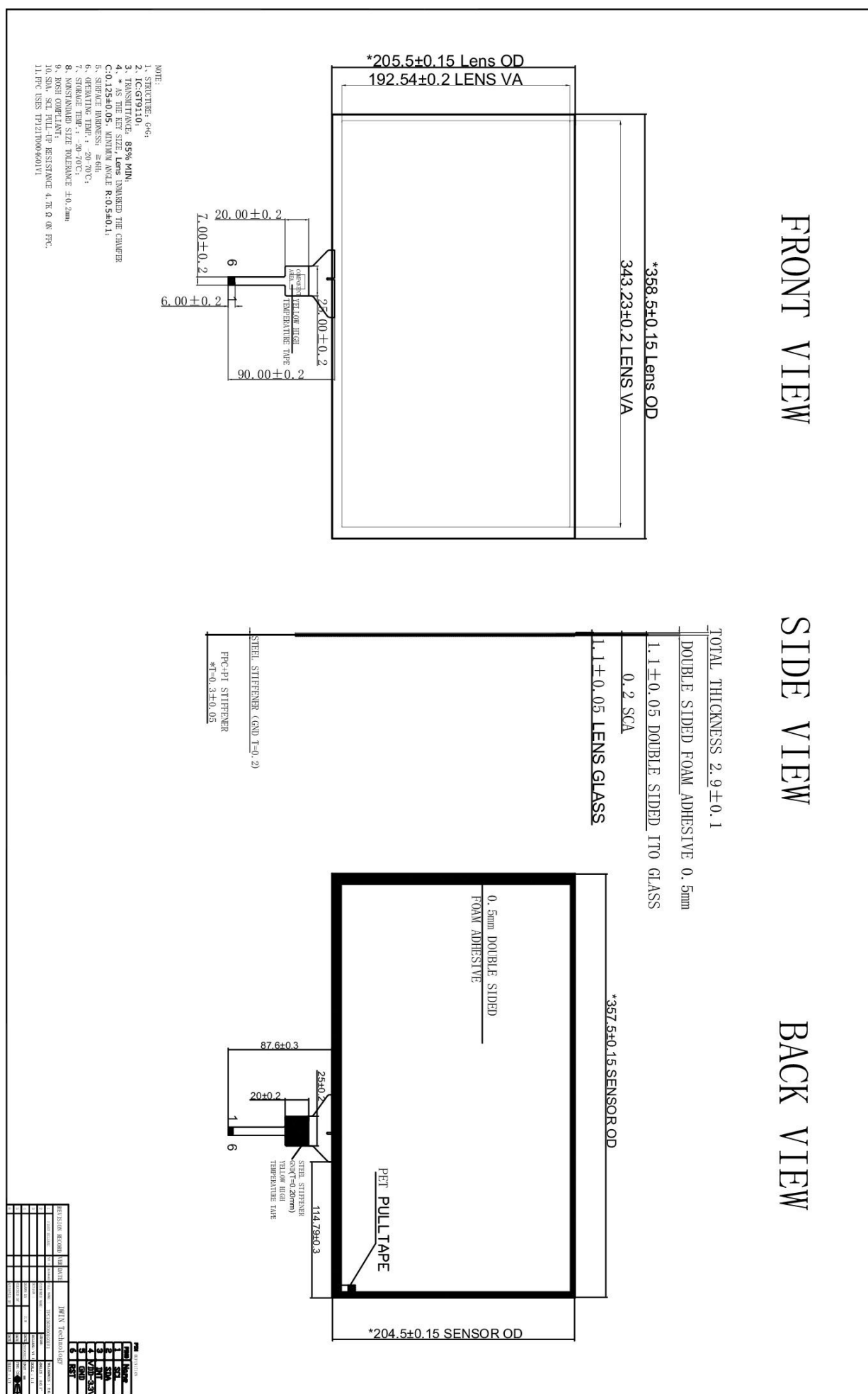
Structure	Materials	Description
Cover Lens	Glass	Thickness:1.10mm
SCA	Adhesive	Thickness:0.20mm
Sensor	Glass	Thickness:1.10mm

2 General Features

Item	Description	Unit
Connection	COF	-
Screen Size	15.6	inch
Physical Dimension	358.5(W)*205.5(H)*2.9(T)	mm
View Area	343.23(W)*192.54(H)	mm
Support Operation	Finger	-
Surface Hardness	6H	-
Interface Type	I ² C	-
Touch IC	GT9110	-
Operating Temperature	-20~70	°C
Storage Temperature	-20~70	°C

Note: Compliant with the latest ROHS directive.

3 Dimension Drawing



4 PIN Definition

PIN	Signal	Description
1	SCL	I ² C Serial Clock Input
2	SDA	I ² C Serial Data Input And Output
3	INT	Interrupt
4	VDD-3.3V	Power Voltage
5	GND	Ground
6	RST	Reset

5 Optical Characteristics

Item	Value	Remark
Light Transmittance	≥85%	-

Note: Light source C-light (Measure point: Center of the point)

6 Reliability Condition

No.	Test Items	Test Condition	Remark
1	High Temperature Storage	70℃±2℃×72Hours	
2	Low Temperature Storage	-20℃±2℃×72Hours	
3	High Temperature, High Humidity Storage	60℃,90% RH 72Hours	
4	Thermal Shock	-20℃(30min)~25℃(5min)~60℃(30min), 50 cycles.	
5	ESD	Air: ±8KV. Contact: ±4KV.	
6	Ball Drop	Ball 25.4mm/64g/40cm drop one time on the center of lens VA, no defect.	

7 Inspection Item Condition

7.1 Scope

Touch panel Viewing Area.

7.2 Inspection Conditions

(1)The brightness in text site: 1000 ± 300 Lux;

(2)Inspection distance: 30 ± 10 cm;

(3)Visual angle: $> 60^\circ$;

(4)Light source: 30W natural light.

Remark: D=diameter; L=length; W=width; GT=glass thickness; DS=distance; N=number.

7.3 Appearance defect, damage

Viewing area(cover)

7.3.1 Scratch Damage



No.	Criteria	Description	Comment
1	$W < 0.03\text{mm}$ or $L \leq 1.0, DS \geq 10$	Ignored	
2	$0.03\text{mm} \leq W < 0.10\text{mm}, L \leq 5\text{mm}, DS \geq 10; N \leq 3$	allowed	
3	$W \geq 0.10\text{mm}$ or $L > 5\text{mm}$	Not allowed	

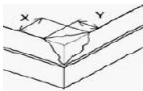
7.3.2 Dot-like Foreign Particle

No.	Criteria	Description	Comment
1	$\Phi \leq 0.1\text{mm}, DS \geq 10$	Ignored	
2	$0.1\text{mm} < \Phi \leq 0.35\text{mm}, DS \geq 10, N = 3$	3 allowed	
3	$0.35\text{mm} < \Phi, N = 0$	Not allowed	

7.3.3 Linear Foreign Particle

No.	Criteria	Description	Comment
1	$W \leq 0.03\text{mm}$ or $L \leq 1.0\text{mm}$	Ignored	
2	$0.03\text{mm} < W \leq 0.10\text{mm}, L \leq 5.0\text{mm}, N \leq 3$	3 allowed	
3	$0.10\text{mm} < W, N = 0$	Not allowed	

7.3.4 Non-viewing area(cover)

No.	Criteria	Description	Comment
1	Foreign Particle	Gray Dot $\Phi \leq 0.30\text{mm}$, $N \leq 1$; White Dot $\Phi \leq 0.25\text{mm}$, $N \leq 2$	
2	Edge light-leakage	Or use a black "paintbrush" to repair and sweat tests will not fade.	
3	Can not wipe dirt	5 seconds, 30cm is invisible.	
4	Corner-chipping 	$X \leq 2.0\text{mm}$, $X \leq 0.3\text{mm}$, $Z \leq 1/2\text{GT}$, $N \leq 2$, $DS \geq 20$ allowed.	
5	Edge 	$X \leq 2.0\text{mm}$, $X \leq 0.3\text{mm}$, $Z \leq 1/5\text{GT}$, $N \leq 2$, $DS \geq 20$ allowed.	

8 Precautions for Use of Touch Screen

8.1 Storage

- 8.1.1 The products should be stored within the storage temperature and humidity range, excluding any external loads.
- 8.1.2 The products should be stored in a suitable packing box.
- 8.1.3 Do not expose the product to water, organic solutions or acids for use or storage.
- 8.1.4 Do not expose the product to direct sunlight.

8.2 Unpacking

- 8.2.1 When you handle the product, hold the product by its body. Do not hold by the FPC tail.
- 8.2.2 Before opening the box, check the "UP/ DOWN" indicator.

8.3 Handling

- 8.3.1 When you handle the product, do not touch the sensor A.A area to avoid damage to the touch panel.
- 8.3.2 Please be careful not to exert any pressure on the heat-sealed FPC, heavy pressure may cause malfunction.
- 8.3.3 Do not depress or scratch the product with any object with a sharp edge to avoid scratch to the product surface.
- 8.3.4 Do not forcibly bend or fold the product.
- 8.3.5 Do not put heavy objects on the product.
- 8.3.6 Clean the product with a soft cloth or that with neutral detergent or alcohol. When contaminated by chemicals, wipe them off immediately with caution to avoid injury to human body.

8.4 Mounting

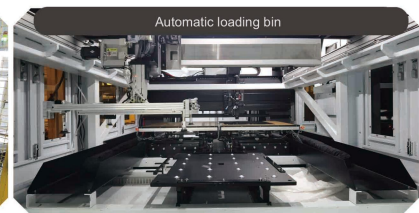
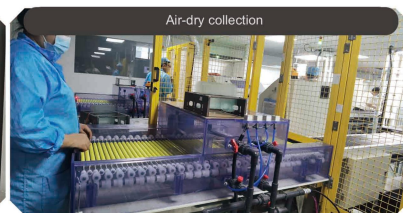
- 8.4.1 After removing the protective film and re-laminating it to the product surface, make sure the product surface is free of dirt.
- 8.4.2 When installing the bezel design, try to reduce the pressure of the bezel edge on the touch screen.
- 8.4.3 The end of the FPC must not be forcefully stressed or excessively bent to avoid conduction in the insulated area and break the wire.

9 TP Introduction

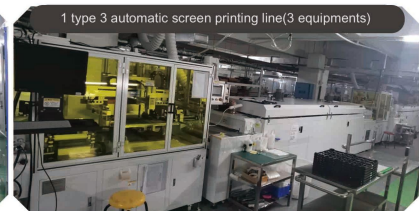
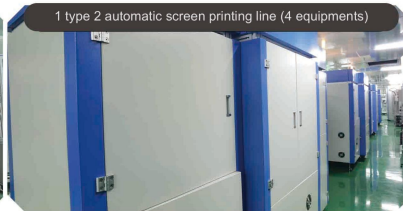
9.1 Process capacity

DWIN adopts the advanced laser cutting and CNC finishing cover production process in a total of 15,000 square meters of clean workshop, which centralized capacitive touch screen manufacturing of cover, ITO glass, nano-silver film, and back-end lamination, with a monthly output of about 1 million pieces.

Laser split and finishing integrated molding



100 meters long clean workshop achieving 6-station articulated automatic printing line



Automatic cleaning and tempering line

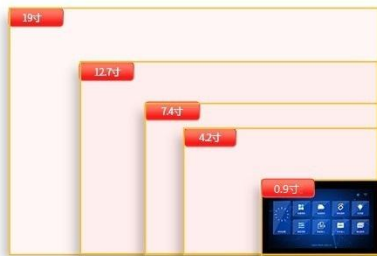


9.2 ODM service

Customized sample orders are completed by the prototype line, and sample delivery is shortened to less than 5 days; after the deal is made, the order enters into 24H fully automated production line production, and the OCA bonding yield is up to 99.3% or more in large volume uninterrupted production. The ODM services available are as follows.

9.2.1 Form factor

1. Non-conventional size within 0.9~37 inch
2. Circular screen
3. Cover shape: fillet, irregular and chamfer
4. Silkscreen color
5. Logo



Non-conventional size within 0.9~37 inch



Circular screen



Cover shape



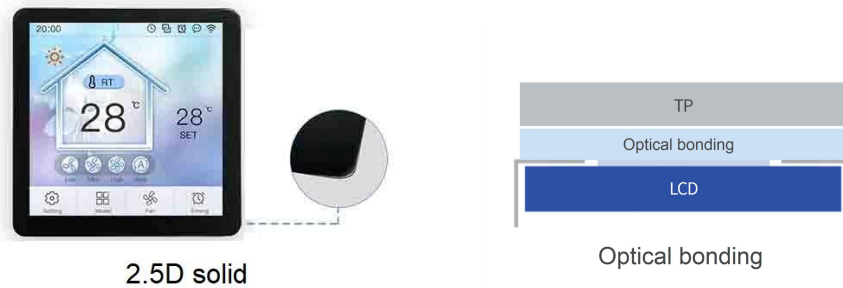
Silkscreen color



LOGO

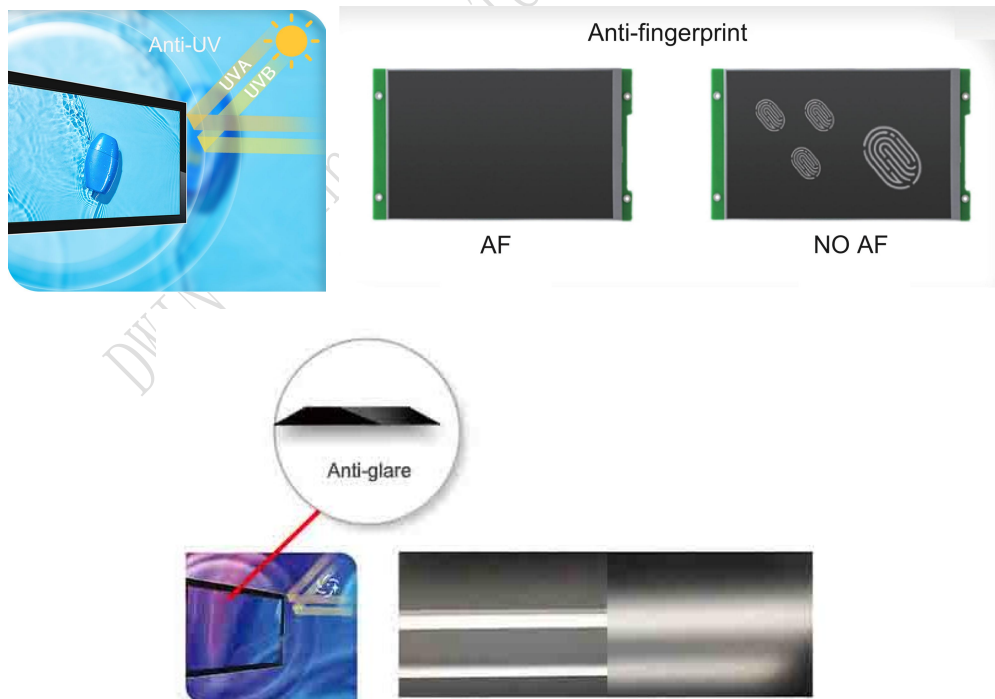
9.2.2 Process

1. 2.5D solid
2. Visible in sunlight
3. Optical bonding
4. OCA bonding
5. GFF ultra-thin



9.2.3 Material

1. Anti-UV
2. Anti-fingerprint
3. Anti-glare



Record of Revision

Rev	Date	Description	Editor
00	2022-06-17	First Release	Yang Zehua
01	2024-07-12	English Version	Chen

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