

# 1. TDM Solution

1. Size: 5 ~ 65 inch

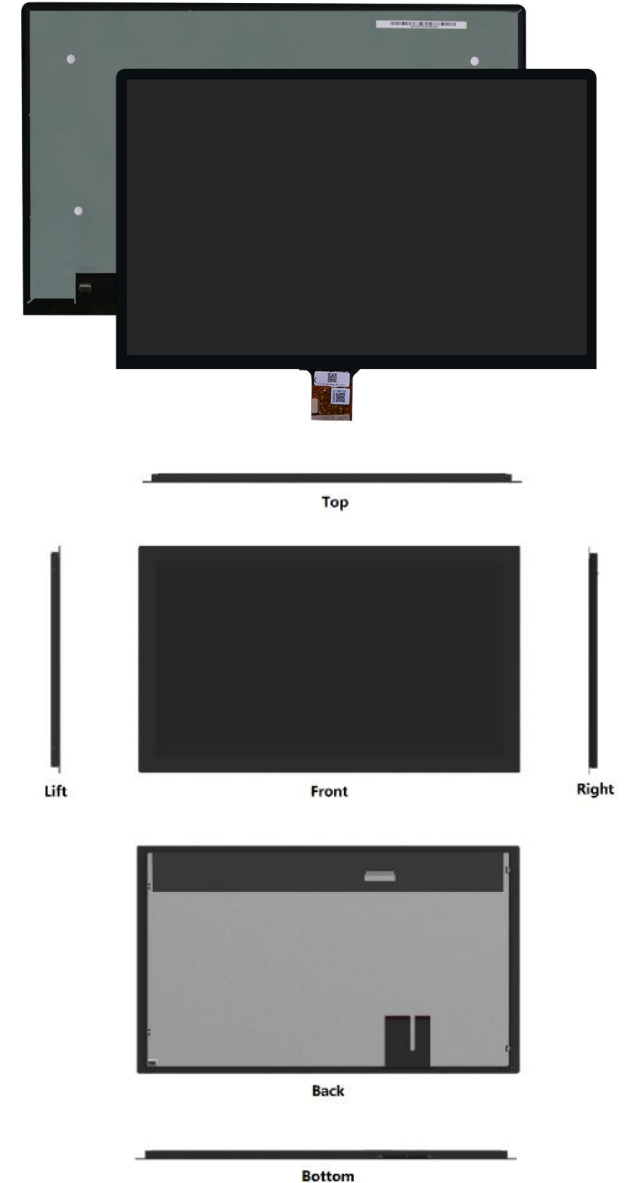
2. LCD brand:

Original panel: BOE, Tianma, AUO, Innolux, IVO, LG, Hannstar.

Assembled panel: Original FOG(open cell+T-CON)+assembled backlight.

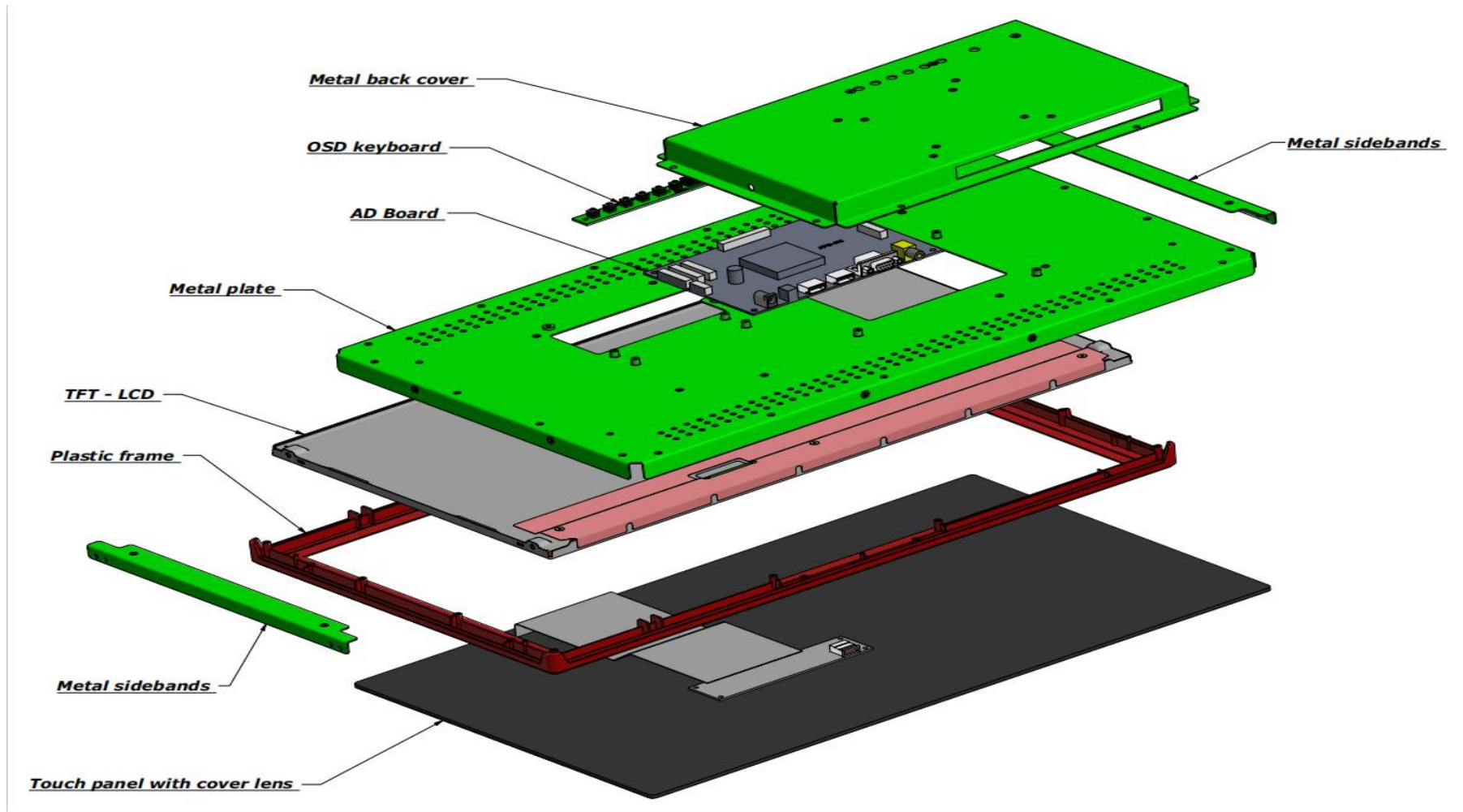
high brightness can be achieved through customized backlight.

Advantages: One-stop service effectively controls product delivery time, resolves material delivery time coordination issues and quality disputes among multiple suppliers, and effectively saves costs.



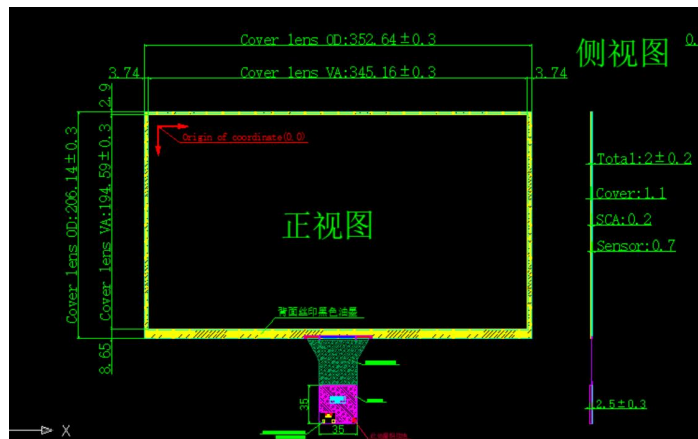
## 2. TDM with Components Solution

If require AD board / backlight board / LVDS cables / front frame for TDM together, we also can provide them according to requirements.

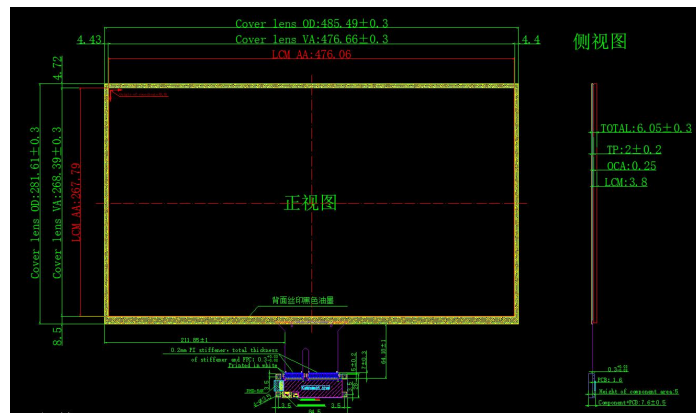


# 3. TDM with Ultra-narrow border

1. 15.6 inch ultra-narrow border solution, line width/distance:30 um / 30 um.



2. 21.5inch ultra-narrow boarder solution, line width/distance:30 um / 30 um.

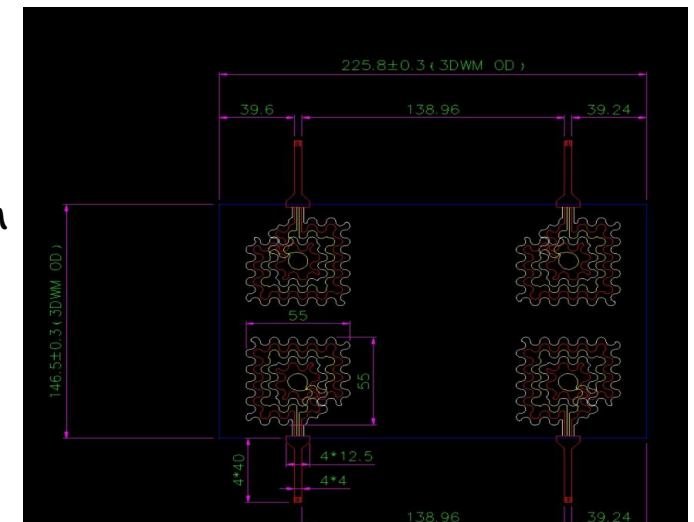


## 4. TDM with NFC solution

1. The antenna is common type and nothing special.
2. For small quantities, tinplate can be cut using a laser cutting process; for large quantities, a punching process can be used, as shown in Figure 1.
3. A common NFC module antenna will suffice, so we recommend using your company's NFC solution.
4. Support optical bonding; adjust the sensing distance based on the actual thickness.
5. A cost-effective NFC solution can be achieved using a copper mesh design, which offers low impedance and low mold costs, as shown in Figure 2.



1



2



# 5. Outdoor TDM solution

1. Application: outdoor EV charger, Kiosks, Parking solution
2. Cover glass: High temperature ceramic ink
3. AR/AG+AF coating for optional
4. S-OBM film (UV blocking rate >99%, IR blocking rate >83%) ,which can be used in laminated cover glass, or between cover glass and sensor glass.
5. LCD: Maximum brightness 2500nits, support automatic brightness adjustment by environment light
6. Operation temperature: -30~80°C
7. Optical bonding between touch and LCD
8. An SRF film can be added to eliminate polarization of the LCD screen when wearing sunglasses



**適用例② 液晶畫面的偏光消除 (SUN GLASS対策)**  
Typical Applications ② Depolarization on LCD (for sunglass users)

**使用SRF With SRF**

如在液晶畫面上放置偏光板(Sun glass), 由于光线无法通过所以画面变黑, 若在此处以斜角插入SRF, 可将液晶屏发出的光转换成接近自然光的光线, 这样便可看到原来的画面。

When a polarizing plate (sunglasses) is placed over the liquid crystal display, light does not pass through and the screen appears completely dark. If the SRF is inserted diagonally, the light emitted from the liquid crystal is converted into more natural light, so the screen becomes visible.

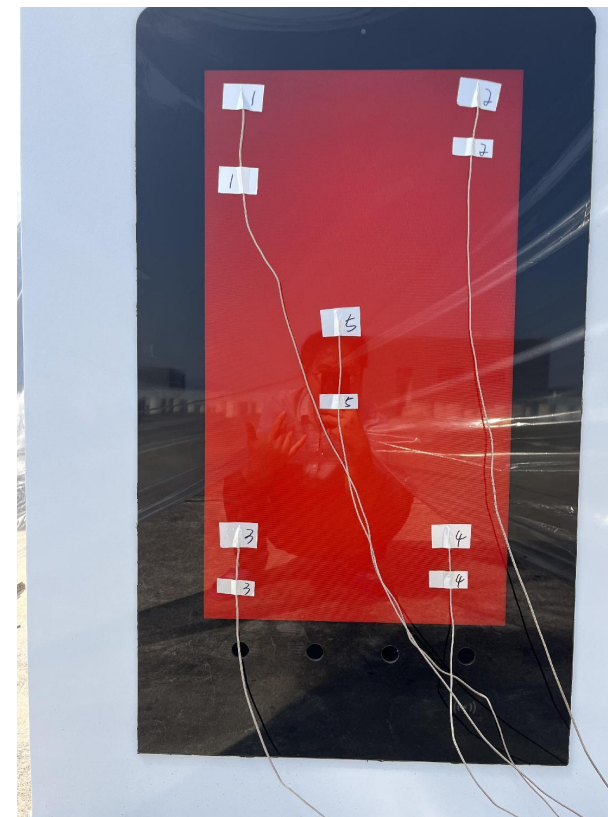
# 5. Reliability testing of outdoor TDM

Rel Item	Test Condition	Spec	Test request	Check Point								
				Before testing	First testing point	Result	Second testing point	Result	Third testing point	Result	Fourth testing point	Result
Low temperature	-40℃	1000 h	Function OK/appearance OK	Oh	240h	Pass	480h	Pass	720h	Pass	1000h	Pass
High temperature and humidity	65℃/90%RH	1000 h	Function OK/appearance OK	Oh	240h	Pass	480h	Pass	720h	Pass	1000h	Pass
Thermal shock	-40℃~85℃	1000 h	Function OK/appearance OK	Oh	240h	Pass	480h	Pass	720h	Pass	1000h	Pass
UV test	0.35±0.02W/(m <sup>2</sup> ·nm) at 340nm	1000 h	Function OK/appearance OK	Oh	240h	Pass	480h	Pass	720h	Pass	1000h	Pass
Q-SUN	Irradiance 835 W/m <sup>2</sup> , wavelength 280-800 nm, black panel temperature 85℃, air humidity 60% RH	1000 h	Function OK/appearance OK	Oh	240h	Pass	480h	Pass	720h	Pass	1000h	Pass

Test results: After a long period of reliability testing, the S-OBM product showed that both its appearance and function were OK.

## 5. Outdoor TDM Simulates Testing

Outdoor touch display products simulates 1000 hours of outdoor sun exposure.



老化视频.mp4

Test results: After prolonged exposure to sunlight, its appearance and function remained OK.



## 6. 3D Air touch

1. Distance 5 cm, enable contactless user interface.
2. Sensing distance 10 cm
3. Force sensing can also be touched
4. It can recognize tiny movements, the mechanism is completely sealed, and meets automotive standards for haptic feedback
5. The tactile feedback can be directly sent to the haptic driver IC, thereby driving the motor and reducing the latency to 10-25 milliseconds
6. 3D curved surface structure/curved surface display, cover glass thickness can be choosed

