

Projected Capacitive Touch Screen DUS-U series, Mounting Guidance of Touch Screen

Projected capacitive touch screen detects the touched locations by measuring the increased amount of the capacitance value between its electrodes. Once it is built into a system, capacitance couplings are continually yielded among the touchscreen, FPC tail, controller board and metal Chassis.

If surrounding environment changes or materials to alter the electrical field (a large capacitor, power-supply unit, LCD panel, or materials with high dielectric constant) is near, these external factors will adversely affect the function of the touch screen to detect the correct input positions.

At structure design, please refer to the mounting guidance below and ensure enough gap distances among each component in order to avoid the external factors described above.

Fix the touchscreen firmly so that the gap distances between the touchscreen and other components will not be affected by touching or will not change with the passage of time. An unexpected input may be caused if the gap is too narrow.

In case of using capacitive sensor outside, the moisture may cause the trouble.

In order to avoid the gap distance L1 from being changed with the passage of time, it is recommended to apply the adhesive tape onto all the 4 sides with no space (fully sealed) when gluing the touch screen.

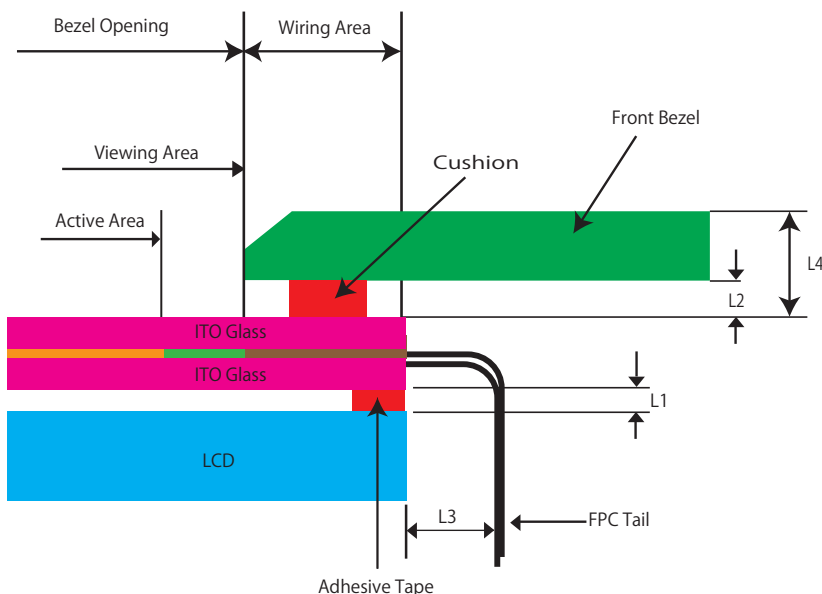
The distance values indicated in this sheet are for reference only.

The appropriate distance values depend on touch screen size, LCD, chassis design and other factors.

Please confirm the appropriate distances with the actual products prior to fixing the chassis design.

Structure with Bezel

- It is recommended to use an insulating resin material for the bezel. Ensure the gap between the touch screen and front bezel (L4)
- If a metal material is used for the bezel, unintended capacitance couplings may occur on the periphery of the active area.
If a metal material is used for bezel, ensure the gap of approximately 2mm between touch screen and bezel (L2).
- In order to avoid the gap distance L1 from being changed with the passage of time, it is recommended to apply the adhesive tape onto all the 4 sides with no space (fully sealed) when gluing the touch screen.



$L4 \geq 2\text{mm}$: Distance between touch screen and bezel surface

$L2 \geq 2\text{mm}$: If the bezel is metal, at least 2mm would be needed between the touch screen and bottom of the bezel.

$L1 \geq 1\text{mm}$: Distance between touch screen and LCD bezel

$L3 \geq 1\text{mm}$: Distance between LCD and FPC Tail

Flat-surface Structure (Covering glass is needed)

- In order to avoid the gap distance L1 from being changed with the passage of time, it is recommended to apply the adhesive tape onto all the 4 sides with no space (fully sealed) when gluing the touch screen.

