

Resistive VS Capacitive touch panel technology:

Let us compare them to help you decide which type is best for you.



About Capacitive Touch Panels

These touch panels have multi-touch ability and are extremely durable in most environments including withstanding water contact, dust and grease. Capacitive touch panels will activate with either a bare finger or a capacitive stylus and have excellent dragging performance. Newhaven Display offers capacitive touch panels with mutual capacitive sensors on the 3.5", 4.3" and 5.0" TFTs. These capacitive touch panels come with a built-in I2C interface controller. This allows for quick time to market while keeping development costs low.

Key Features and Advantages:

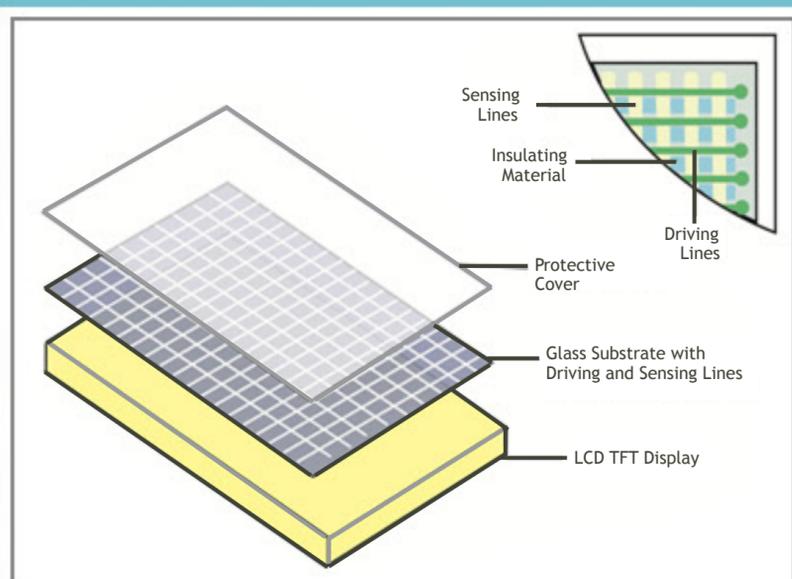
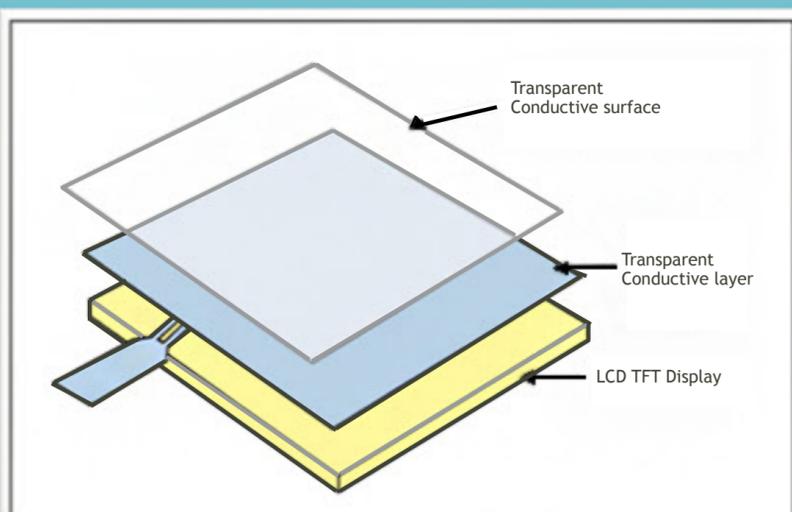
- Built-in controller with I2C interface (400KHz)
- Multi-touch capability, 5 simultaneous touches: touch, life, directional & zoom gestures
- Sizes designed to mate with 3.5", 4.3" 5.0" TFTs
- 6H hardness, >1 million touches
- 82% light transmittance
- 6mA at 3.3V power supply
- 0.03mA sleep mode



As capacitive screens don't need much contact at all, you can swipe across them very lightly and get just as good a response as you would with a slow, heavy drag.

Capacitive Touch Panels are made of an insulator that is coated with a transparent conductor. Typically, Capacitive Touch Panels consist of glass as the insulator coated in indium tin oxide (ITO). The human body is also an electrical conductor, so when the human body comes into contact with the Capacitive Touch Panel, the touch panel's electrostatic field becomes distorted. It is this distortion that is then read by the touch panel controller and, depending on the program written, the display will respond accordingly.

Projected capacitance has an etching on the conductive layer which forms a grid pattern allowing it to be more accurate and have a more flexible operation. The grid pattern on the conductive later is either created by etching on either a single layer of a conductive layer or by etching parallel lines on two separate perpendicular layers of conductive layers. Since this type of capacitance has a greater resolution, the touch panel can operate without direct contact allowing it to be operable under screen protectors or other protective insulating layers. In addition to the human body, projected capacitance can also interact with an active or passive stylus. There are two different sensor types for projected capacitive touch panels: Mutual Capacitive and Self Capacitive



About Resistive Touch Panels

These touch panels are designed to allow items other than your finger to activate the touch. Resistive touch panels don't rely on organic properties of your finger so you have more options to interact with them. Resistive technology senses pressure which is why a gloved hand will work, but it requires harder contact so a stylus responds more accurately. Resistive touch screen are great for handwriting recognition with a stylus. Newhaven Display offers many size options for our resistive touch panels including 240x320, 480x272, 640x480 and 800x480 pixels.

Key Features and Advantages:

- Can operate with pointing devices like stylus, pen, nail, gloved finger..etc.
- Sizes fit 2.4", 3.5", 4.3", 5.7", 7.0" TFTs
- Can operate at any level of humidity
- approx 75% light transmittance
- 3H hardness, >1 million touches
- Lower cost

Courtesy of <http://wiiu.nintendolife.com>



The resistive touch panel is made up of several layers. When you press down onto the touch panel with your finger or stylus, the top layer flexes and pushes back onto a layer behind it. This will effectively complete a circuit and tell the controller which part of the touch panel is being pressed.

