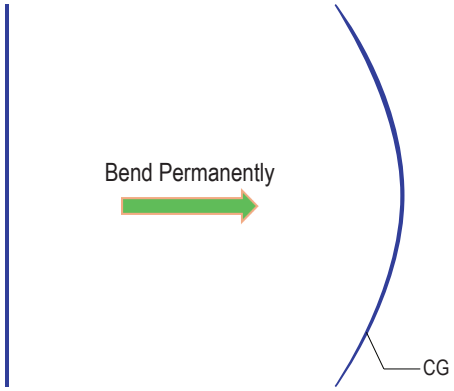
faytech Curved Bonding

Process Description

1. Glass Bending

The process begins by precisely placing the glass onto a specialized bending mold. The glass is then heated till it reaches proper flexibility to shape it onto the mold's curvature. The reachable maximum radius is 1500mm

Once shaped, the glass is cooled in a controlled manner enhancing its strength and ensure the shape is permanently retained. Please note that the minimum glass thickness suitable for this process is 2mm.



2. Touch Sensor Lamination

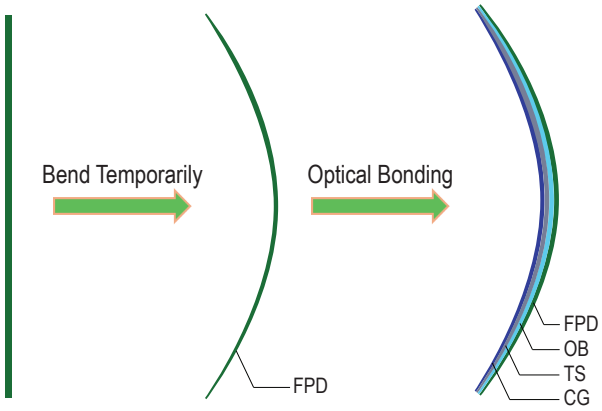
Next, a touch sensor foil is laminated onto the curved cover glass using an adhesive layer.

This process securely bonds the touch sensor to the glass surface while maintaining optical clarity and responsiveness.

3. Liquid Optical Bonding

In this step, the flat display panel is temporarily formed to match the curvature of the glass. Then, a liquid optical bonding process is employed, using a high-quality two-component silicone adhesive called Faytech-X6-1688 (Clear Bond).

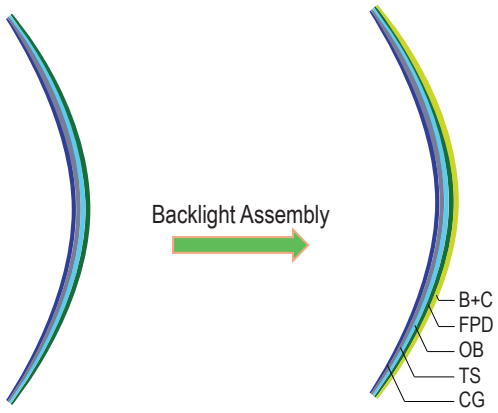
This adhesive is precisely dispensed between the display and the curved glass to create a seamless optical interface. The assembly is then cured at 60 °C, resulting in a robust, optically clear bond that preserves the curvature and delivers superior visual performance.



4. Backlight Assembly

Finally, the backlight unit is mounted into its designated housing.

The entire assembly, backlight and optically bonded stack, is then integrated into the final enclosure, ensuring a sturdy and visually appealing finished device.



CLEAR-BOND® Optical Bonding

- Reduced reflections
- Enhanced durability
- Improved contrast and colors
- Increased readability
- Reduced Shattering Risk
- Enhanced Brightness and Clarity
- Improved Heat Capacity

CG = Cover Glass
TS = Touch Sensor
OB = Optical Bonding
FPD = Flat-Panel Display
B+C = Backlight + Case

43" C-Shape Curved LCD Display

55" J-Shape Curved LCD Display