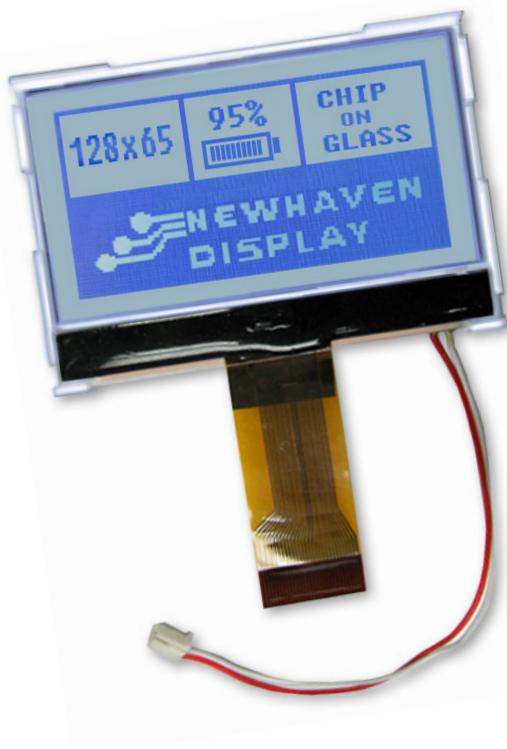


# LCD Assembly Types

The most commonly used methods for mounting an LCD's IC Controller/Driver are COG, COB and TAB type assemblies.



## COG (Chip-On-Glass)

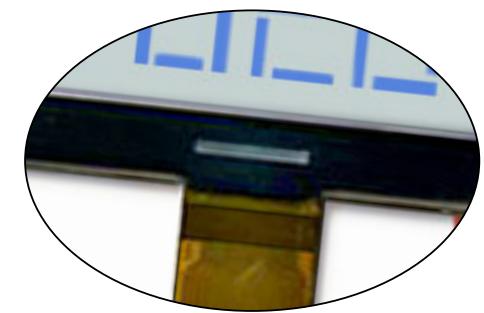
The COG mounting method is most popular for compact design applications. For this mounting method, the controller IC chip or driver is directly mounted to the LCD glass as a bare chip. This method allows for a smaller footprint of the IC and reduces the mounting area.

### Advantages:

- Smaller footprint and mounting area
- Allows for thin displays
- Better suited for handling high frequency signals

### Disadvantages:

- No real "industry standard" sizes
- Can be difficult to assemble or mount the display to an application
- Active area is offset rather than centered
- External capacitors are required on the main board



## COB (Chip-On-Board)

The COB mounting method is the most commonly seen mounting type in LCD display applications. With this method, the controller IC chip or driver is directly mounted on the back of a PCB board. This PCB board is affixed to the LCD glass. The COB mounting method allows for easy assembly of the display to any design application.

### Advantages:

- Compact displays
- Available in "industry standard" sizes
- Easy application industry

### Disadvantages:

- Larger overall dimensions
- More costly than COG



## TAB (Tape Automated Bonding)

The TAB mounting method requires that the LCD's controller IC or driver be packaged in a thin, hard bubble package. This package is then affixed to the tape which is connected to the LCD by adhesive that is located along the edge of the tape.

### Advantages:

- Can be more cost effective than COG if keypad integration is desired
- Active area is centered
- Allows for thin displays
- Better suited for handling high frequency signals

### Disadvantages:

- Weak bonding area
- More expensive than COG
- Requires packaging of the controller IC or driver
- External capacitors are required on the main board

