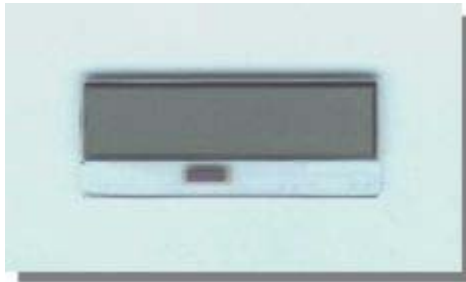




CHIP-ON-GLASS (COG)



Chip-On-Glass – is one of the high-tech mounting methods that uses Gold Bump or Flip Chip IC's, and implemented in most compact applications. Chip-On-Glass integrated circuits were first introduced by Epson. In flip-chip mounting, the IC chip is not packaged but is mounted directly onto the PCB as a bare chip. Because there is no package, the mounted footprint of the IC can be minimized, along with the required size of the PCB. This technology reduces the mounting area and is better suited to handling high-speed or high frequency signals.



Advantages:

1. Very space economical. Chip-On-Glass LCD modules can be as thin as 2 mm.
2. Cost effective over COB, especially in graphic LCD modules, because reduces the number of IC's.
3. More reliable than TAB because of the weakness in the bond area of TAB.

Disadvantages:

1. COG can only be used at a certain resolution level where the lines are not too fine. At very fine pitches COG becomes difficult to test, and TAB is the preferred approach.
2. It may be more cost-effective to use TAB or COB, if a designer has to integrate a keypad or indicator around the display.
3. The active area is not centred within the outline but offset, because of the area where the circuits are.

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