

ABSTRACT

FLAT PANEL DISPLAY AND METHOD OF MANUFACTURE

In a flat panel display, a laser spacer array is created on the transparent substrate 10' to maintain the two substrates at a pre-determined spacing in the finished panel. The spacers 20 are distributed between the two substrates, which are sealed using sealant 18 resulting in a cell gap with pre-determined spacing distance.

The gap between the two sealed substrates 10 and 10' forms a cell for a liquid crystal 22. The gap of the cell should be uniform for good liquid crystal performance. The laser-induced spacers 20' have a pre-determined profile with uniform height, diameter and distribution. The spacer characteristics can be flexibly and precisely controlled.

(Fig. 2)