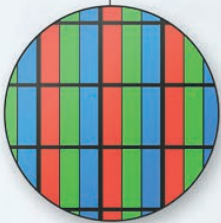


How a pixel gets its colors

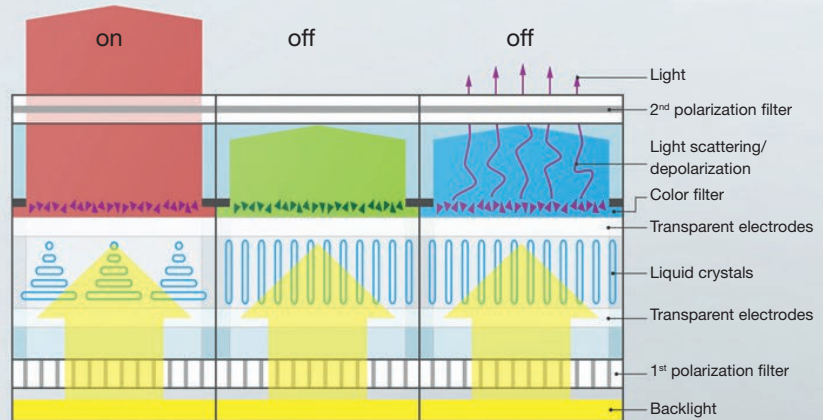
A single display contains millions of picture elements, better known as pixels.



Liquid crystal display (LCD)



Each individual pixel is composed of red, green, and blue subpixels that can be switched on and off, one by one.



Only red is visible. Green and blue are blocked, i.e. deactivated.

Switching the color filters on and off is the job of the liquid crystals attached to them. Arranged in a helical formation, the crystals rotate the oscillation plane of the light wave so that it can pass through the second polarization filter. When an electrical field is applied, the liquid crystals align themselves parallel to it. The second polarization filter stops the light from passing through.

If light, which has been scattered and depolarized by the crystals, leaks through a deactivated subpixel, colors and contrasts suffer. The smaller each pigment particle is, the less the likelihood of this unwanted effect and the higher the image quality.