

LCD Quality Standards

AOC uses selected high quality panels for the manufacture of its AOC branded LCD monitors. Nevertheless, the display may have a few innate cosmetic imperfections that appear as small dark or bright spots. This is not a specific occurrence to AOC monitors, but linked to the current state of the art of LCD manufacturing.

In fact, LCD panels contain millions of small sub-pixels that are each turned on or off by a transistor which make up the picture on the screen. It is extremely difficult to manufacture millions of perfect transistors on a large surface. As an example, a 15" panel that has a native resolution of 1024 x 768 contains 2,359,296 sub-pixels and a 17" or 19" panel that has a native resolution of 1280 x 1024 contains 3,932,160 sub-pixels. Due to the immense number of sub-pixels, it is extremely difficult to eliminate non-performing pixels in spite of current high technology production processes. Therefore, no manufacturer can currently guarantee 100% non-performing pixel free panels at a reasonable price.

How visible a defect is depends on its type and location.

Each pixel is made up of one red, one green and one blue sub-pixel.

- A defect in a sub-pixel is not very visible, and can often only be seen against specific backgrounds.
- Adjacent sub-pixel defects appearing close in proximity are more visible than "geographically dispersed" defects.
- A full-pixel defect (all three R/G/B sub-pixels always on or always off) is quite visible.

The vast majority of AOC monitors do not have visible imperfections. On the other hand, AOC is obliged – for the reasons outlined before – to accept the possibility of a few sub-pixel defects.

AOC has established clear standards for the maximum of imperfections per panel that can be tolerated. Your display has been checked to comply with these standards.