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BenQ Joybook Pixel Policy

General information:

Some LCD displays can have some faulty pixels (e.g. 'black spots'). Therefore, the following BenQ criteria should be observed before deciding to replace the display. This information is to be used to define whether the LCD panel defect is covered by the warranty for the product.

The standard of production techniques today cannot guarantee an absolutely fault-free screen display. A few isolated constant lit or unlit pixels may be present.

The maximum permitted number of pixels faults is stipulated in the stringent international standard ISO 13406-2 (Class II).

For example a 15" flat-screen with a resolution of 1024 x 768 has 1024 x 768 = 786423 pixels. Each pixel consists of three sub pixels (red, green and blue), so there are almost 2.4 million dots in total. According to ISO 13406-2 (Class II), a maximum of 4 pixels and 5 sub pixels may be defective, i. e. a total of 17 fault dots. This corresponds to approx. 0.002% of the entire screen surface.

Due to the cost of producing LCD panels for BenQ Joybook, the panel manufacturers have set limits as to how many defective pixels are acceptable for a standard Joybook Pixel Policy. The goal in setting such limits is to maintain a reasonable price of the panel while minimizing distraction from defective pixels. Your BenQ is warranted with the conditions below.



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1) Total defective pixels limitation.

	All Joybook Series	
Bright Pixels	2	
Dark Pixels	2	
Total Pixels	4	

2) No defective pixels in the central area of the LCD panel.

The central area of the BenQ Joybook LCD panel is measured from the centre of the LCD panel; the LCD panel has been divided into nine areas as illustrated below.

Area B	Area B	Area B
Area B	Area A	Area B
Area B	Area B	Area B

- Area A No any bright pixel allowed in this area, except two dark pixels.
- Area B Please refer to the table illustrated above.

What is Bright and Dark Pixel?

The pixel is defective if one or more of the dots can't be controlled, i.e. the dot stays the same color despite of desired color and it is visible from 30 cm distance from the LCD panel surface. Typically such defects can be seen as bright spots on dark (black) background. The bright spot can be seen as bright white, red, blue or green.

When there is a bright, white background, the dot can be seen as a black spot.

A pixel (picture element) consists of one red, one green and one blue sub-pixel. It is obvious that, for a manufacturer to guarantee a totally defect free LCD panel would lead to a prohibitive cost of manufacture.



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An imperfection may appear on the screen if either the pixel or sub-pixel is stuck always ON; a bright pixel on a dark background, or it is stuck always, OFF; a dark pixel on a bright background. The first is the more visible of the two. A stuck green sub-pixel is more visible than blue or red. Defective sub-pixels (known as a dot defects) are small and only visible on a specific background.

Contact Detail

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