

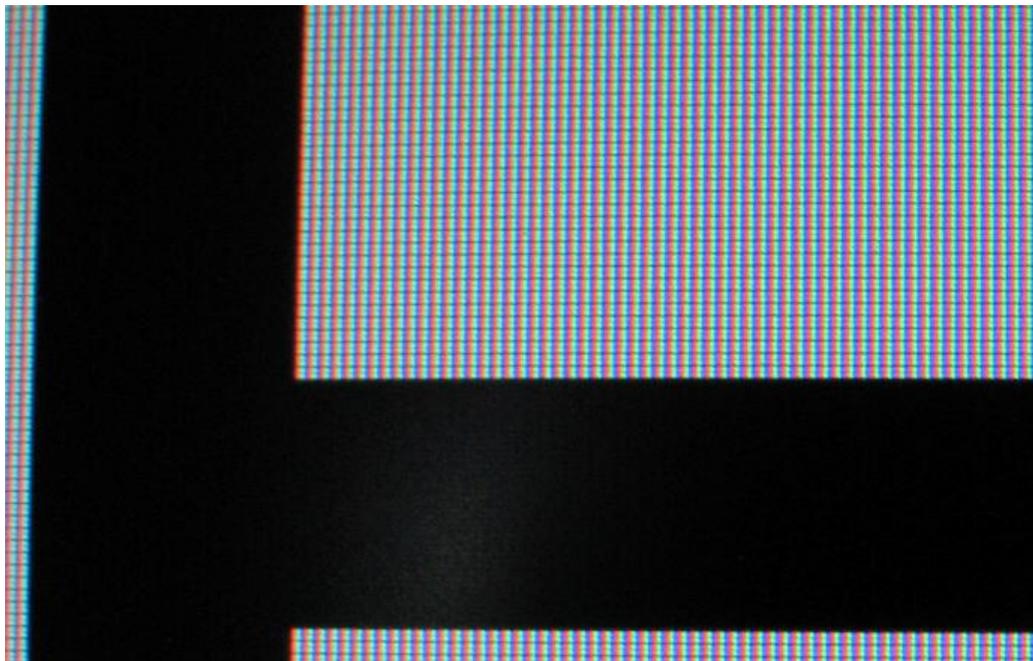
Red shadow between black letters and white background

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Category LCD Monitor
Content optical illusion
Version 1.0
Use External
Pages 2

Dear Customer

With this information we would like to explain the following optical effect which can occur on nearly every LCD display:

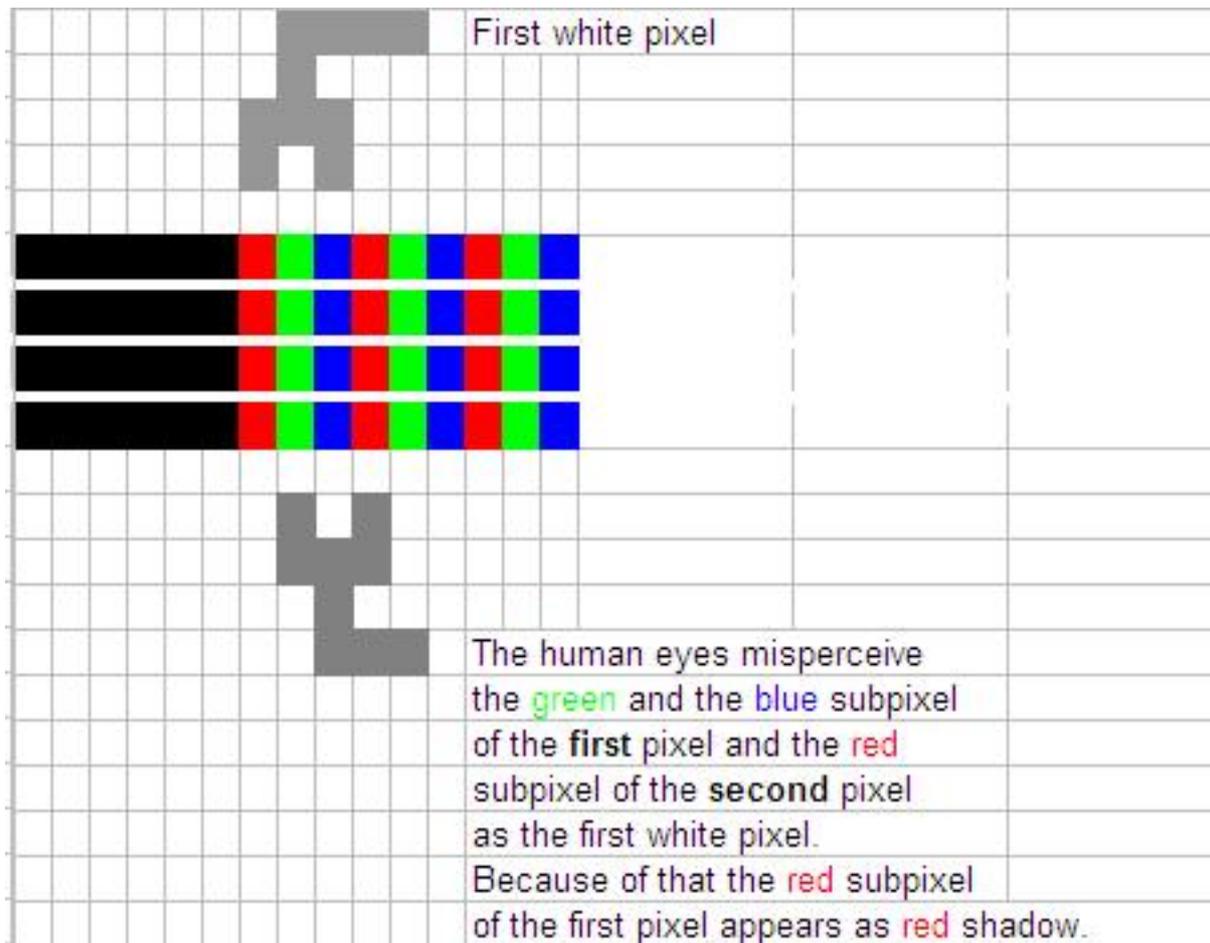
Why can we see a **red shadow between black letters and white background?**



This is a greatly enlarged picture of a letter shown on a LCD display. As you can see, no pixel lights up in the black area. But every white pixel is made of one red, green and blue subpixel.

This picture is nearly self-explaining. But what happens?

It is a kind of optical illusion. Our eyes do not see the first red, blue and green subpixel as the first white pixel. Our eyes will see the first red subpixel as a red shadow of the black letter. The next green and blue subpixel of the first pixel together with the red subpixel of the next pixel we will see as the first white pixel.



There may be two reasons for that:

- The change from black to white is the biggest possible contrast. Our eyes use this apparent red shadow to relieve this hard contrast.
- Red is a signal colour which we cannot take our eyes off.

Finally we can say there is no malfunction which causes the red shadow. This is an optical effect or optical illusion.

Best regards
Your Fujitsu Siemens Support Team