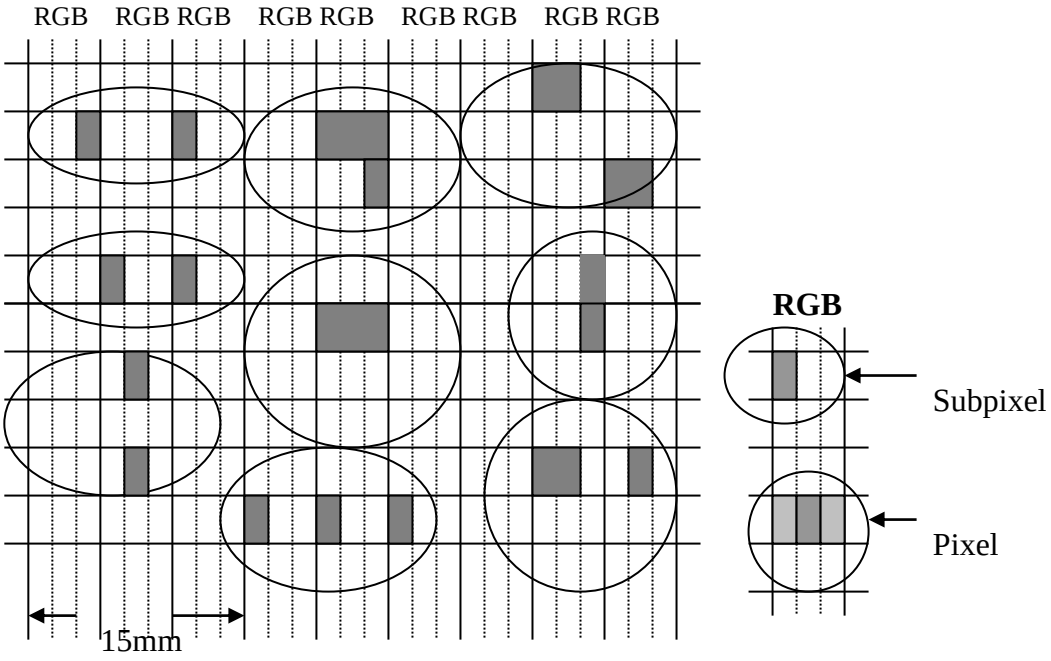
# LCD Inspection Standard

Following are the criteria for monitors and monitors in Shark Gaming laptops and Shark Gaming Monitors for pixel defect.
Panel manufacturers set the limits as to how many defective dots (or sub pixels) are deemed acceptable on any monitors.
Shark Gamings warranty covers any defect that exceeds the criteria. Are pixel error within criteria, they are not viewed as a faulty monitor.
LCD displays are made of pixels. Each pixel is made up of a red, green, and blue sub-pixel, each sub pixel is driven by an individual transistor.
If a transistor becomes defective, the corresponding dot may be permanently light (bright) or may not light (dark).
Independently of the brand and the manufacturer, it is common for one or more sub-pixels to become fixed in an unchanging state.

For monitors:
**Pixel Defect Criteria:**

- A maximum of 6 defect Bright dots is allowed on the whole screen area.
- A maximum of 6 defect dark dots is allowed on the whole screen area.
- A maximum of 3 double bright dots is allowed on the whole screen area.
- A maximum of 3 double dart dots is allowed on the whole screen area.
- A maximum of 7 total bright and dart is allowed on the whole area.
- A maximum of 1 triple bright dot (or triple dark dots) is allowed on the whole screen area.
    1. Each RGB element of a pixel is called subpixel.
    2. Bright or dark spot: A subpixel (red, green, or blue dot) that is stuck on or off.

(Defect Pixel or dots examples)




For monitors in Shark Gaming Laptops and Shark Gaming Monitors:

**Monitor classification**

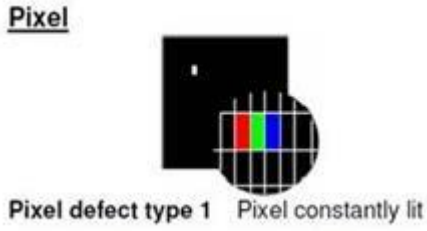
**ISO 9241-307:2008**

| Allowed defects per type per million pixels | | | | | | |
|---|---|---|---|---|---|---|
| Defect classes | Pixel defects | | | Cluster defect | | |
| | Type 1 | Type 2 | Type 3 total ($2xN_{3a} + N_{3b}$) | Type 1 | Type 2 | Type 3 |
| Class: 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Class: I | 1 | 1 | 5 | 0 | 0 | 0 |
| Class: II | 2 | 2 | 10 | 0 | 0 | 1 |
| Class: III | 5 | 15 | 100 | 0 | 0 | 5 |

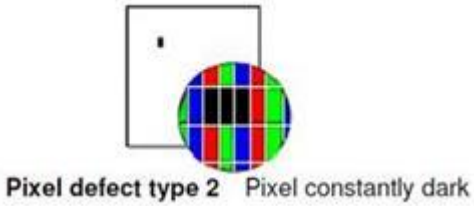
Class II

| Allowable number of pixel faults in monitor applications | | | | | | | |
|---|---|---|---|---|---|---|---|
| Screen type | Native resolution | Number of pixels | Pixel defect type 1 | Pixel defect type 2 | Pixel defect Type 3 total ($2xN_{3a} + N_{3b}$) | Cluster defect type 1 and 2 | Cluster defect type 3 |
| XGA | 1024x768 | 768,432 | 1 | 1 | 7 | 0 | 0 |
| SXGA | 1280x1024 | 1,310,720 | 2 | 2 | 13 | 0 | 1 |
| UXGA | 1600x1200 | 1,920,000 | 3 | 3 | 19 | 0 | 1 |
| FHD | 1920x1080 | 2,073,600 | 4 | 4 | 20 | 0 | 2 |
| WUXGA | 1920x1200 | 2,304,000 | 4 | 4 | 23 | 0 | 2 |

Type 1 :




Type 2 :




Type 3 :