

# Warranty Policy for Display Pixel Defects

## General Terms

Dot defects (bright or dark spots on LCD-panels, often referred to as “pixel defects”) are unavoidable. Dot defects that fall within the acceptance criteria set forth in this “Warranty Policy for Display Pixel Defect” document are excluded from Moxa’s warranty coverage. Warranty claims due to dot defects outside of the acceptance criteria set forth in this policy must be reported **within one (1) month** of the shipping date of the product from Moxa, after which time, Moxa will not provide any replacement or repair service for panels with dot defects.

## What is a Dot Defect?

Dot failures (bright or dark spots on the panel) are an inevitable part of TFT technology, and the occurrence of such failures cannot be prevented. Even though many dot defects occur during the production process, new defects may also appear within the lifespan of a TFT display. Neither the production of an LCD monitor by the supplier nor its usage after its shipment can be affected by Moxa. Therefore, Moxa will not be responsible for such dot failures. However, Moxa understands and accepts its responsibility to deliver new displays and accepts limited responsibility on the occurrence of dot defects in new displays based on specific conditions listed in the “Warranty Limitations” section of this document.

## Warranty Limitations

1. One pixel consists of 3 dots (Red, Green, and Blue).
2. Dot defects can either be:
  - *Bright dot defects*: Spots on the panel that appear as pixels or sub pixels which always light up (ON) and never dim.
  - *Dark dot defects*: Spots on the panel that appear as pixels or sub pixels which are always dark (OFF) and never illuminate.
3. During inspection, the LCDs (placed on a worktable) are observed in a normal direction from a distance of 50 cm. Dark dots are counted when the entire screen is set to white. Bright dots are counted when the entire screen is set to black.

4. Dot failures within the pixel defect tolerances listed below are excluded from warranty claims:
- The number of bright dots are  $\leq 4$ .
  - The number of dark dots are  $\leq 7$ .
  - The total number of bright and/or dark dots are  $\leq 8$ .
  - The number of pairs of two adjacent bright or dark dot defects are  $\leq 2$  pairs (This includes vertical, horizontal, and oblique defects. 1 or 2 adjacent dot defects are considered as 1 defect.)
  - The distance between 2 dot defects is  $\geq 15$  mm.
5. If clouding effects (also known as *mura*), which are uneven patches of changes in luminance, can be detected by a  $\leq 2\%$  ND filter, it will be covered by this warranty policy. Otherwise, these defects will be excluded from the warranty coverage.

## Backlight Modules (LED)

The brightness of a backlight is typically reduced if it is turned on when the product is in use. Moxa's display warranty does not cover replacement of backlight modules whose intensity and performance have been reduced from the original settings.