



LCD Specifications

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Horner APG LCD Quality Specifications

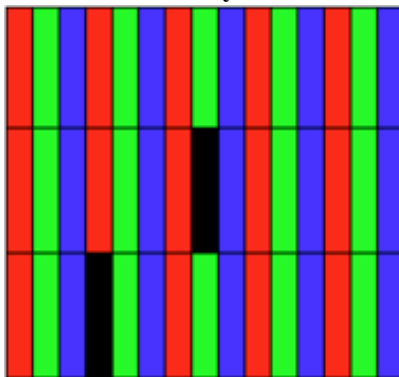
Summary

Horner APG prides it self on using some of the highest quality LCD products in the industry. We have even worked with LCD manufactures to create custom LCD modules where current industry products do not meet our specifications. Even the highest quality LCD panels sometimes have minor imperfections that do not affect the operation of the product but may be perceptible in some conditions. LCD manufactures provide Horner with their quality specifications and our production tests look for LCD panels that do not meet the manufactures specification. Below is a list of common Horner products and the policy for LCD quality.

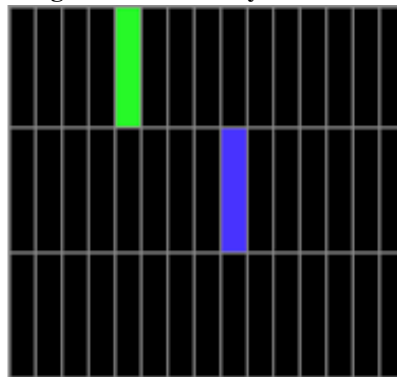
Types of Issues:

A typical VGA LCD panel contains almost 1 million LCD elements. The electronics driving those elements contains millions of transistors. Occasionally during manifesting one of these transistors or elements is defective.

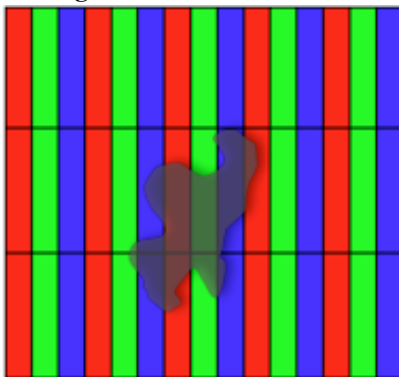
Dark Pixel Anomaly



Bright Pixel Anomaly



Foreign Material



Foreign material can also block some of the pixel elements on an LCD display and appear like a pixel defect. The foreign material is often on the outside of the unit and can be removed with a microfiber cloth and water if needed.

Product Specifications:

XLe family 2” 128x64 monochrome – There should be no dark or bright pixel anomalies on this display

XLt family 3.5” 160x128 monochrome – There should be no dark or bright pixel anomalies on this display.

XL6, XL6e, QX351 family 320x240 color - A total of four bright pixel anomalies are allowed. Up to five dark pixel anomalies is considered acceptable. The total dark and bright anomalies must be 7 or less. For bright or dark anomalies each must be 5 mm from another anomaly.

RX371 family 320x240 color – Two bright pixel anomalies and four dark pixel anomalies are considered acceptable. The total must be less than five anomalies. Two adjacent pixels cannot have anomalies.

XL10e, QX501 family 640x480 color – A total of four bright pixel anomalies are allowed. Only two of these bright pixels may be green. Up to four dark pixel anomalies is considered acceptable. For bright or dark anomalies each must be 10 mm from another anomaly.