

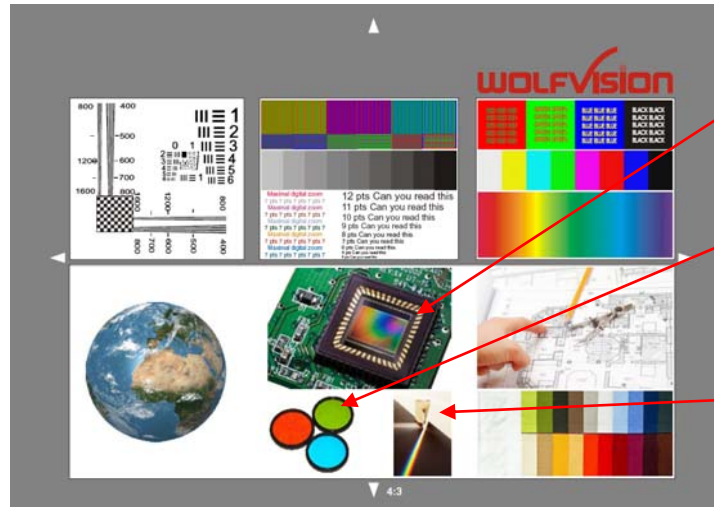
How to use the WolfVision test chart

General introduction

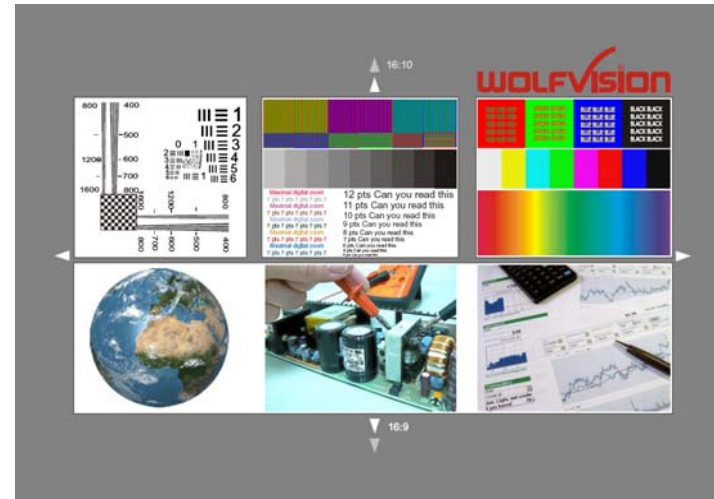
The WolfVision test chart is designed for quick (mainly visual) appraisal of transmission characteristics of high-resolution cameras. It consists of various test patterns to support assessment of image quality which means especially resolution, color reproduction, dynamic range, geometry and spatial distortion of the camera system.

Beside test patterns for judging image quality there are also images of potential applications where Visualizers are the perfect solution to enhance flexibility and interactivity during a presentation!

The test chart supports standard format of 4:3 and on the backside widescreen formats of either 16:9 or 16:10. Choose the right aspect ratio according to your display unit and the supported resolution of the WolfVision Visualizer. For testing zoom in according to the outlined markers on the chart!



Standard format of test chart in 4:3 aspect ratio.



Widescreen format of test chart in 16:10/16:9 aspect ratio.

Educational images

CCD-chips are used as image sensors in WolfVision cameras. Image sensors can only produce grey-scale images.

Single chip cameras use filters (like the common Bayer-pattern with the primary colors red, green and blue) to produce colored images.

A prism is used in three chip cameras to separate the light into the primary colors and there is a designated chip for each color.

Application images

Instead of presenting static images a live presentation can be performed easily by the use of a Visualizer. By adding interactivity the audience can be engaged better!

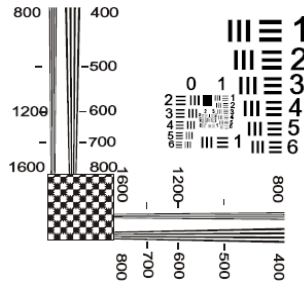
A Visualizer is the perfect presentation tool and can be used in various applications:

- meeting and conference rooms
- for training and education
- within court rooms
- as an enhancement to Videoconferencing systems
- for medical applications
- documentation and multimedia applications

Resolution / Image quality

Resolution

Zoom in according to the outlined markers on the test chart and the resolution of the complete system can be measured on the display unit.



Dynamic range

9 graduated grey scales are used to judge the dynamic range of the camera.

Differences between grey scales should be visible on the display unit.



Color accuracy

Color bars are used to check color reproduction of cameras. There are six color bars showing the three primary colors red, green and blue and the secondary colors cyan, yellow and magenta; in addition there is one bar of white and black.



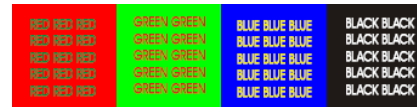
Color gradation

This test pattern consists of different color grades. It is used to check quantization errors which results in visible steps in the grades.



Color resolution

This test pattern is designed to demonstrate color resolution and show differences of single chip and three chip camera systems.



Contrast ratio

This test pattern is designed to measure contrast ratio and show differences of single chip and three chip camera systems. Pattern consists of the three primary colors red, green and blue and multiburst patterns.



Readability of text

Simple test to find out the smallest size of letters which can be displayed on an A4/letter page and read by the audience.



Geometry

Circular object is used to test if there is a match of aspect ratios from camera and display unit. Mismatch will result in stretched or squeezed objects which end up in unnecessary distractions for the audience!



Spatial distortion

Rectangular objects on the test chart will show if there is spatial distortion of the camera lens system or not. Depending on the zoom position it can look like a barrel or a pincushion. Cheap lens systems show more significant distortion than high-end lenses designed for special applications.

