

## Key Features

- 50 Degrees Field-of-View
- SXGA OLED (Color & Monochrome)
- Lightweight, 64 Grams
- Small Form Factor
- Less than 3.5% Distortion
- Low Power Consumption
- Eyecups / Bumpers Available
- Multiple Video Inputs
  - RS170, NTSC, PAL (with Video Scaling)
  - Display Port/ HDMI/ DVI
  - HD-SDI
  - Analog RGB, Digital RGB

### eyeMod50 SXGA OLED Eye Piece

The eyeMod50 is a lightweight 50 degrees Field-of-View (FOV) eye piece that is designed for use with the eMagin SXGA OLED (color and monochrome). It consists of Optics, SXGA OLED, and a low power high performance OLED driver board. The eyeMod50 has less than 3.5% distortion and supports refresh rates up to 120Hz at SXGA resolutions (1280 x 1024) and thus its designed for high performance applications.

Because of its design characteristics the eyeMod50 can be easily adapted to both military and commercial applications which include but not limited to:

- Head Mounted Displays
- Night Vision Goggles
- Image Enhancers
- Virtual Binoculars
- Weapons Sites
- Multispectral Systems

The eyeMod50 supports a wide range of video input formats such as Display Port, HDMI, DVI, Analog VGA, RS170, NTSC, PAL, and HD-SDI. Video up scaling is also included for video formats that are not natively at SXGA resolutions such as RS170, NTSC and PAL. In addition to video up scaling, the eyeMod50 also supports simultaneous video input where data fusion, and complex video algorithms can be performed in real time.



## Optical Characteristics

Field-of-View	50 Degrees (diagonal)
Nominal Distortion	Less than 3.5%
Exit pupil Diameter	5mm, 12mm (extender)
Eye Relief	25mm
Resolution	20 / 40
Spectral Band	Visual (0.47– 0.66 microns)
Diopter Range	-6 / +2 stops
Ingression Protection Rating	IP68
Weight	64 Grams
Optic Material	Glass
Operational Temp. Range	-45 C— +70 C
Storage Temp. Range	-55 C—+90 C
Optic Material	Glass
Chassis Material	Aluminum
IPD (Stereo Option)	55 to 75 mm

## Power Consumption (Depends on Configuration)

Input Voltage	3.5 – 15 V DC
Power Consumption	350mW

## Input Video Format

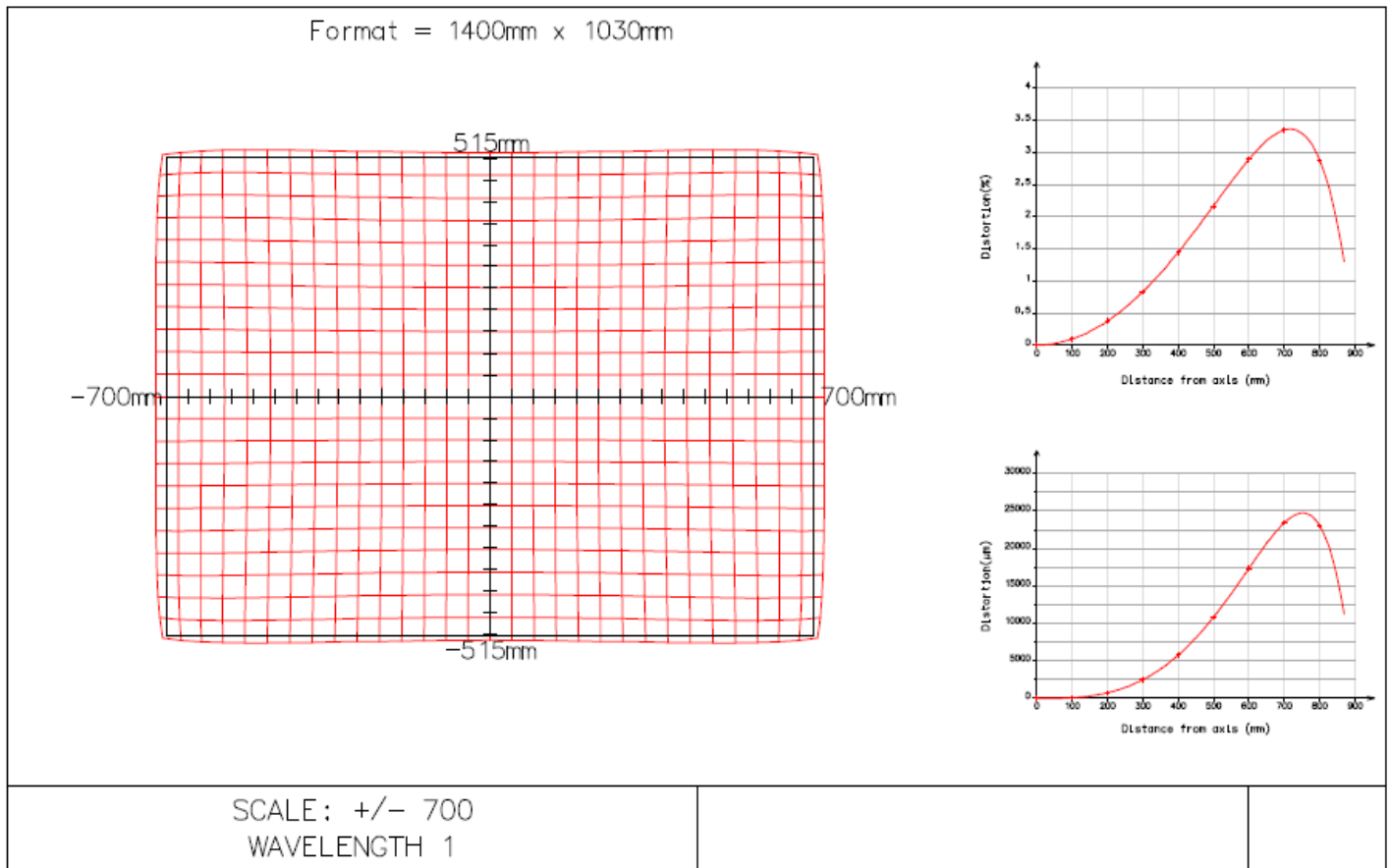
Display Port, HDMI, DVI,	1280 x 1024 @ 60-120 Hz
Analog RGB, HD-SDI,	1280 x 720 @ 60– 120 Hz
RS170, PAL, NTSC	1024 x 768 @ 60– 120Hz

## Auxiliary Features

Custom Image Processing & Application Development

## Distortion Plot for eyeMod50

The graph below shows a plot of distortion for the eyeMod50 eyepiece as it will appear to the viewer's eye when viewing a uniform rectangular grid pattern on the display. The most significant factor here is the accuracy of the grid pattern over the central 1030 mm (30 deg.) square portion of the image. This regularity of the grid pattern, this shows the elimination of any apparent pincushion or barrel distortion pattern that might be interpreted visually as a curvature of the image surface. Removing the possibility of false depth information to the user.



## Light Weight

At 64 Grams, the eyeMod50 and the eyeMod50S are one of the lightest available options for both digital monocular and digital stereo applications. The eyeMod50 have been developed as a solution for near-to-eye applications with the operator in mind. In addition, lightweight eyecups and bumpers are available.

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## Additional Photos

### eyeMod50



### eyeMod50S (stereo)



## Ordering Information

Part Number	Description
SXGA-eyeMod50 HDMI	eyeMod50 with HDMI video Input
SXGA-eyeMod50 NTSC/PAL	eyeMod50 with NTSC/PAL Input. Input video is up-scaled to 1280 x 960
SXGA-eyeMod50 Analog VGA	eyeMod50 with analog VGA Input
SXGA-eyeMod50 DVI	eyeMod50 with DVI video Input
SXGA-eyeMod50 Display Port	eyeMod50 with Display Port Video Input with up to 120Hz Refresh Rate
SXGA-eyeMod50 Custom	eyeMod50 with customer sensor interface (contact us)

## Contact Information

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