HOLOEYE

LASER COMPONENTS®

ERIS

Analog Phase Only Spatial Light Modulator Series

The analog ERIS Spatial Light Modulator shows extreme phase stability, low latency and the display architecture allows low crosstalk LCOS-cell designs.

The ERIS phase only Spatial Light Modulator is based on an 0.717″ LCOS microdisplay with a resolution of 1920×1200 pixels and 8µm pixel pitch. The SLM provides 8-bit phase levels but can also be operated in 10-bit phase mode.

Display Type	Reflective LCOS
Resolution	1920 x 1200 Pixel
Pixel Pitch	8.0 µm
Active Area / Diagonal	15.42 x 9.66 mm / 0.717”
Fill Factor	>92%
Addressing Bit Depth	8 Bit / 10 Bit
Input Frame Rate*	60 Hz*
Signal Format	HDMI

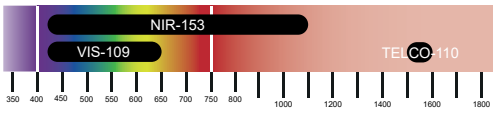
*Please note that this is the input frame rate. The actual response time of the LC material depends on the version and configuration.

ERIS Series Versions

HOLOEYE offers three different versions of the analog ERIS Spatial Light Modulator which are optimized for the use at different wavelength ranges or for different applications.

One version is optimized for the visible range and provides a linear phase shift of at least 2π at 420-650 nm. Another version covers a broad wavelength range from 420 nm up to 1100 nm. The TELCO version is especially designed for the telecommunication waveband and provides a phase shift of 2.1 π at 1550 nm.

The ERIS SLM is addressed at 60 Hz input frame rate using 256 (8-bit) phase levels. The device can also be configured for 1024 (10-bit) phase levels.



Version	λ Range	Maximum Phase	Average Refl.
VIS-109	420-650 nm	3.0 π @ 635nm	70-76 %
NIR-153	420-1100 nm	2.1 π @ 1064nm	70-91 %
TELCO-110	1500-1600 nm	2.1 π @ 1550nm	80-85 %

ERIS Flexible Driver

The ERIS driver provides an HDMI interface, a USB connection for calibration and a trigger sync output.

The driver features an embedded dual-core ARM® Cortex™-A9 processor running an embedded Linux operating system, which provides USB and network interfaces to be able to address phase functions and do calibration without the need for an HDMI interface.

In addition, the embedded system can be used stand-alone when phase functions or images are either computed or stored on the device. The system is located on an SD card, which provides plenty of storage space and allows easy customization of the system itself.

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