



Liquid Crystal Light Modulators - made by Jenoptik



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Light modulators



Integrated-optical modulators

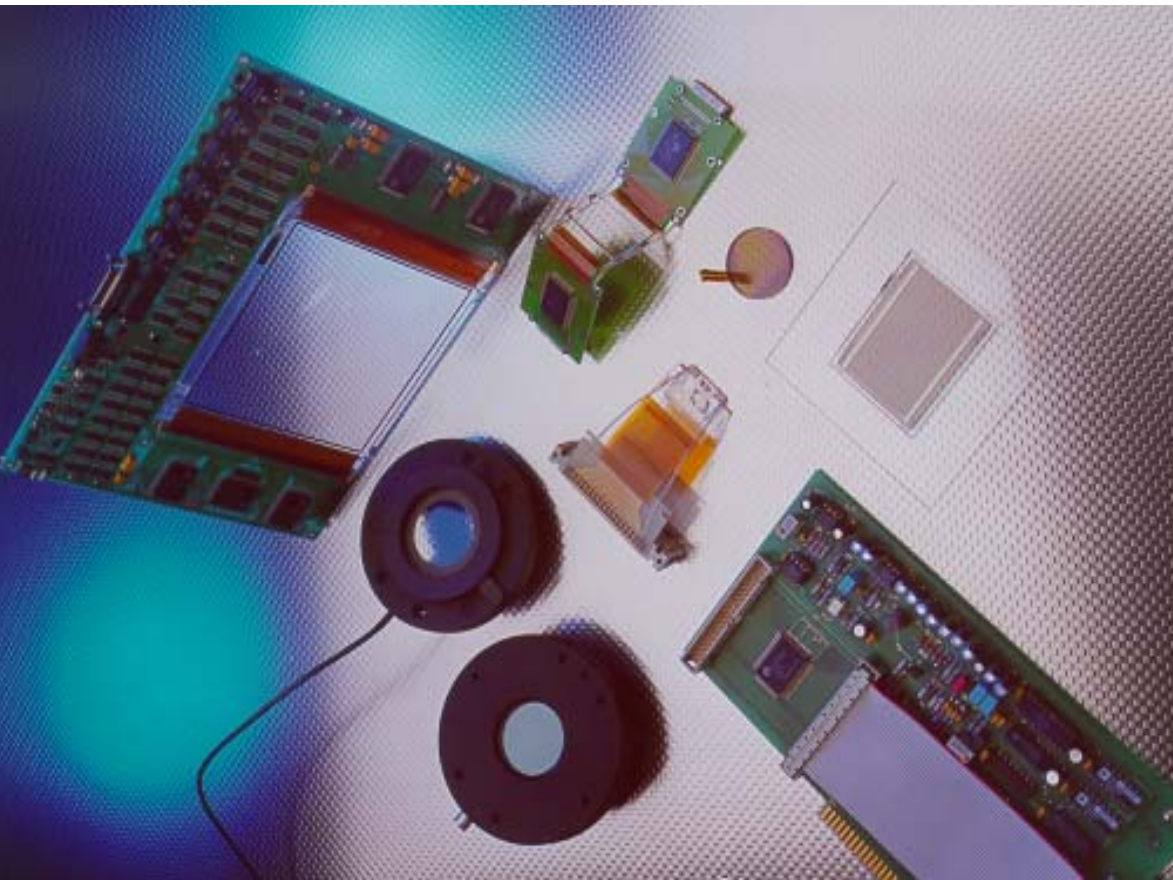


Liquid crystal spatial modulators



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Product spectrum



- Spatial Light Modulator of series SLM-S
- Phase Modulator PLM
- Amplitude Modulator ALM
- Custom made ITO-structure
- Controller

SLM-S 640/320 & SLM-S640d/320d

Applications:

High resolution laser modulation in phase and/or amplitude or polarization state

Pulse shaping of high power and ultrashort lasers for example in:

- Quantum chemistry
- Correction of wavefront dispersions in optical systems
- Short-time spectroscopy



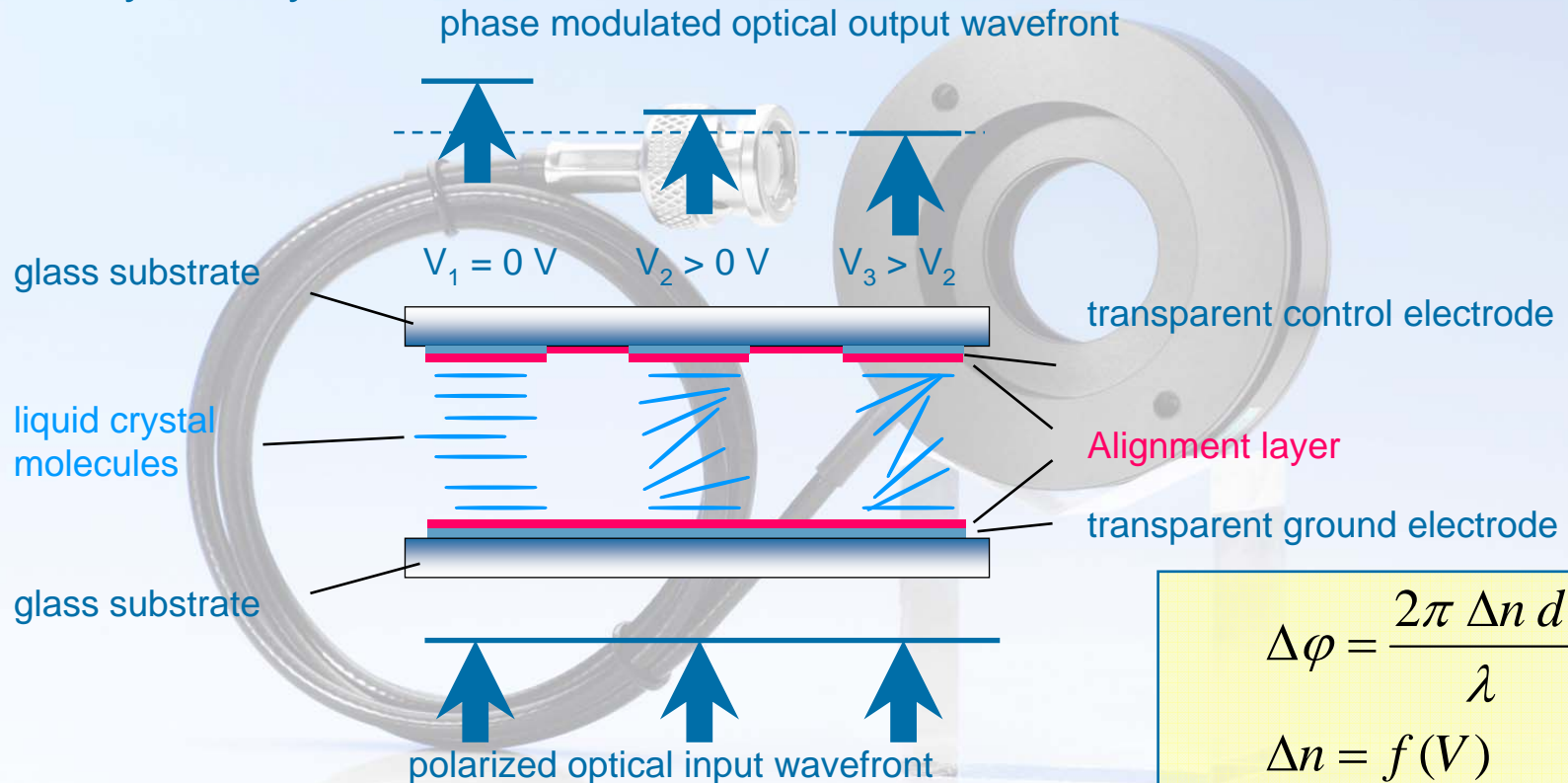
SLM-S 640/320 & SLM-S640d/320d

Benefits:

- Simultaneous modulation of phase and amplitude
- Large active area of 64 x 10 or 32 x 13 (mm²)
- For operation in transmissive or reflective mode
- Technical Data:
- Number of strips: 640 or 320; 2x640 or 2x320 (dual mask)
- Driving voltage: 12 bit resolution
- Inclusive ADC port with 12 bit resolution
- Extensive instruction set
- FireWire port



Influence of an electric field on a homogeneous nematic liquid crystal layer:



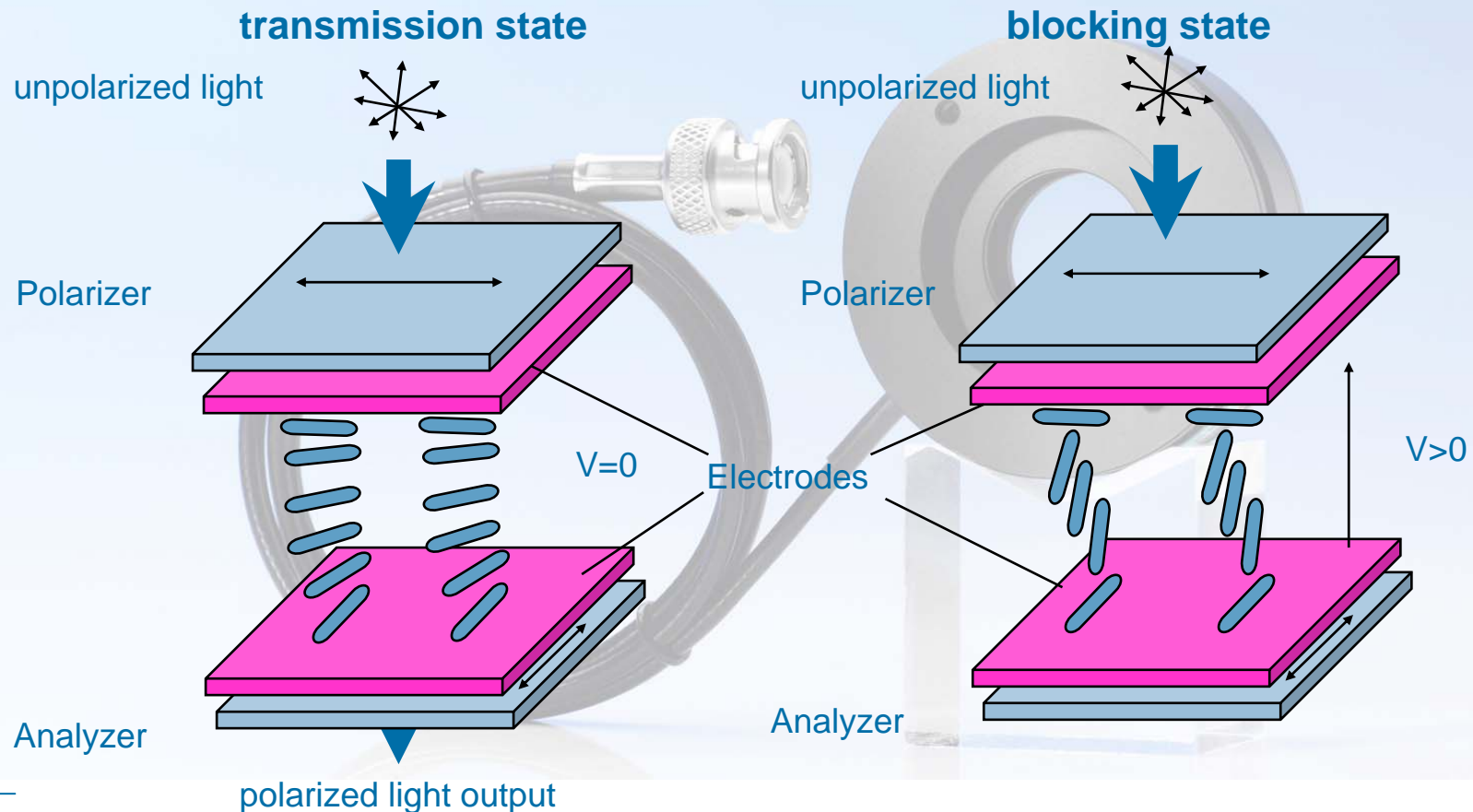
$$\Delta\varphi = \frac{2\pi \Delta n d}{\lambda}$$
$$\Delta n = f(V)$$

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LC amplitude modulator: Operation principle



Principle of a twisted nematic LC cell (TN-display):



4-f-setup for femtosecond-pulse shaping

