

PolarView®

Electronic ND filter for camera applications

The PolarView®-eND is a liquid crystal (LC)-based electronic neutral density (ND) filter that controls light transmittance by the amplitude of an externally applied AC square drive voltage. Being electro-optical, it contains no moving parts and has a small footprint.

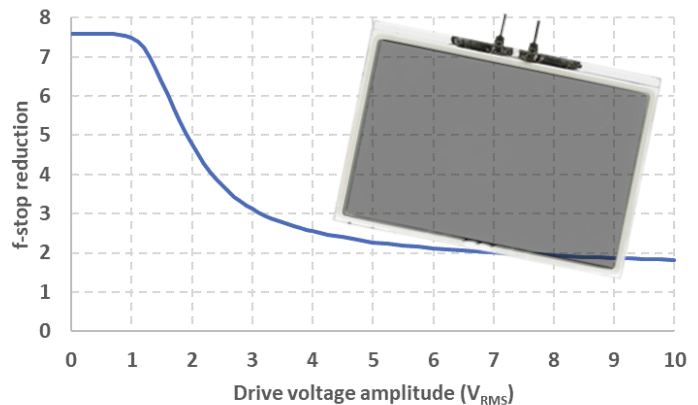
The patented PolarView®-eND(NBf2.0) model is specifically designed for operation as variable ND filter in cinematography and videography applications with recommended placement between the image sensor and the lens. It is based on a dual-cell guest-host (GH) design with dichroic dyes dissolved in the LC mixture and offers uniform angular transmittance properties together with small color shift, not only at the fully open and closed states, but also at intermediate gray levels.

Additional camera products under development:

- 4 x 5.65" ND filter
- Mist filter
- Color-switching filter

Related products:

- High-contrast fast optical shutter series



APPLICATIONS

Cinematography
Videography
Industrial

ADVANTAGES

Electronic
Continuously variable
Fast switching
Reliable

Parameter	PolarView®-eND(NBf2.0)-IQUV*
Technology	Guest host-based liquid crystal
Number of gray levels	Infinite
Polarization dependent	No
AR coating	Yes
UV-cut	Yes
IR-cut	Optional
Temperature range	-40°C to +75°C
Drive waveform	0 to 10V _{RMS} AC square
f-stop reduction range	2 to 7 stops
Switching time**	25ms
MTF and TWE	Available upon request
Thickness	1.86mm
Power consumption***	20mW

*: Typical, not guaranteed values.

** : Fully open ↔ fully closed, longer for gray-to-gray switching.

***: As measured with f=60Hz, V₀=12V AC square drive waveform with transition slew rate of 3.5V/μs.


About LC-Tec:

- Specializing in electronically variable optics based on liquid crystals
- 30 years' experience of designing and manufacturing advanced products for high-end applications
- One-stop-shop covering full span from R&D to volume manufacturing

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