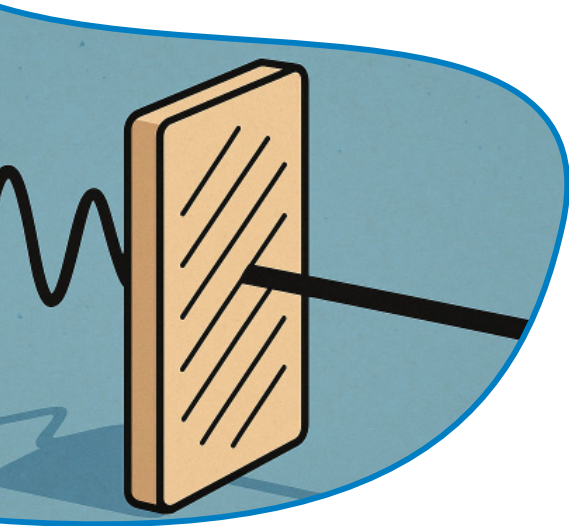




NOISE EATER

LASER AMPLITUDE STABILIZATION



STABLE LASER POWER WITH BROADBAND POLARIZED CONTROL

Noise Eaters are used to reduce laser intensity noise and stabilize continuous-wave (CW) lasers.

By combining a liquid crystal amplitude modulator with a photodiode feedback loop, they achieve amplitude stabilization down to 0.05 % — essential for sensitive experiments such as optical tweezers, interferometry, or precision measurement setups.

However, the performance of these systems depends critically on the quality and spectral coverage of the integrated polarizers.

THE INTEGRATION CHALLENGE

Noise Eaters rely on linearly polarized input light and precise modulation of its amplitude. In many cases, the system must cover multiple laser lines: for example 445 nm, 532 nm, 635 nm, or 1064 nm — within one compact design.



IR 1300 BC5

IN PRACTICE

How **colorPol®** solves the integration challenge:

- **Broad spectral coverage:** One polarizer can cover multiple laser wavelengths (e.g. 425 – 650 nm or 650 – 1050 nm)
- **Compact optical paths:** Thin glass substrates (0.2 – 0.5 mm) allow slim beam geometries and minimal build height
- **High performance:** Transmission up to > 96 % with AR coating, contrast ratios exceeding 100 000 : 1
- **Thermal stability:** Reliable operation between –50 °C and +400 °C without drift
- **Customization freedom:** Wavelength range, polarization axis, and geometry can be tailored to your system concept — enabling developers to design the Noise Eater exactly as planned.

WHY DEVELOPERS CHOOSE US

RELIABLE PERFORMANCE

Glass-based polarizers remain stable under UV exposure, humidity and cleaning cycles. Optical characteristics stay constant even after repeated sterilization.

EASY SYSTEM INTEGRATION

Produced on glass wafers, **colorPol**® elements are compatible with automated processes such as pick & place or bonding. This ensures precise assembly and efficient series production.

DESIGN FREEDOM

Custom wavelength ranges, polarization axes, shapes and AR coatings allow developers to design their system exactly as planned – without adjusting to component limits.

CONSISTENT QUALITY

In-house production and ISO 9001:2015-certified processes ensure reproducible optical performance and full traceability across batches.

LONG-TERM ECONOMY

High transmission and mechanical durability reduce recalibration, downtime and replacements, lowering total system cost.

colorPol® polarizers give developers freedom of design with reliable, long-lasting optical components made for integration and scalability.

codixx AG

Innovation in Glass – Reliability & Quality

We develop and produce high-precision, customized polarizers and substrates that set new standards. Our products stand for the highest quality, long-lasting performance, and reliable availability.

Manufactured in Germany and supported by stable supply chains, we offer our customers maximum planning security and reliability – even for demanding applications.



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