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1 General handling instructions for dichroic filters

The dichroic filters produced by Auer Lighting are usually flat glass panes made of borosilicate glass that have been coated with alternating oxide layers.

Following notes should be generally considered:

- Use gloves while handling. Fingerprints on the filter do affect the performance / lifetime.
- Do not damage filters while handling. Smallest defects can cause a pre-damage that could lead to breakage during operation.
- Stock filters in closed packing units only to avoid dust/pollution.

2 Advice on the right choice

In general, filters are only designed for use with a specific light source. These can be LEDs, discharge lamps or other light sources. Figure 1 and 2 show typical set-ups.

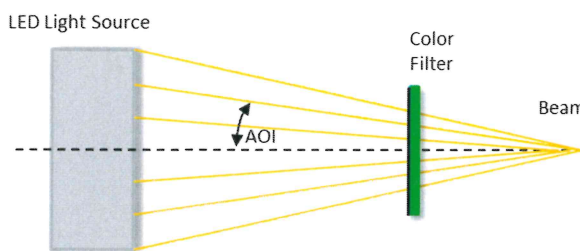


Figure 1: Set-up of filters with a LED light source

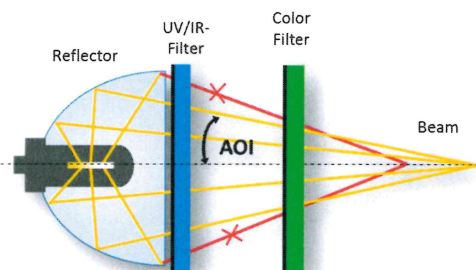
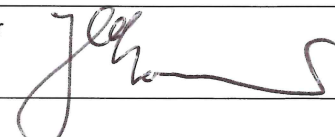
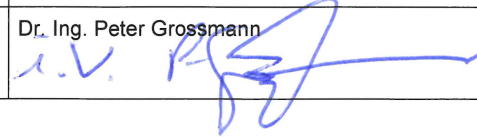


Figure 2: Set-up of filters with a classical light source

Depending on the application attention has to be paid to:

- The filters are calculated for a certain angle of incidence (AOI). Unless otherwise specified the filter is calculated for an AOI of 15°.
- The filter should match the light source (UHP, LED,...).
- The generated spectrum of a light source together with a specific filter creates a unique coloration, e.g. on a screen. When you change the light source, you inevitably

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change the light spectrum. Accordingly, the same filter gives a different color impression when a different light source is used.

3 Correct assembly of the filters

The following points are particularly important:

- The filter must be installed in the right direction. The coated side is facing the light source.
- The filter must not be installed in the focus. The energy in the focus can lead to overheating and destroy the filter.
- UV / IR filters are a must for discharge lamps.
- Mounting of the filters must be stress-free.
- The maximum operating temperature must not exceed 400 °C.

4 Color specifications

Typically filters are specified by a transmission spectrum. In addition, an edge position is specified referring to the 50% transmission. The spectrum of the transmitted light and the coloring of the filter are dependent on the individual light source.

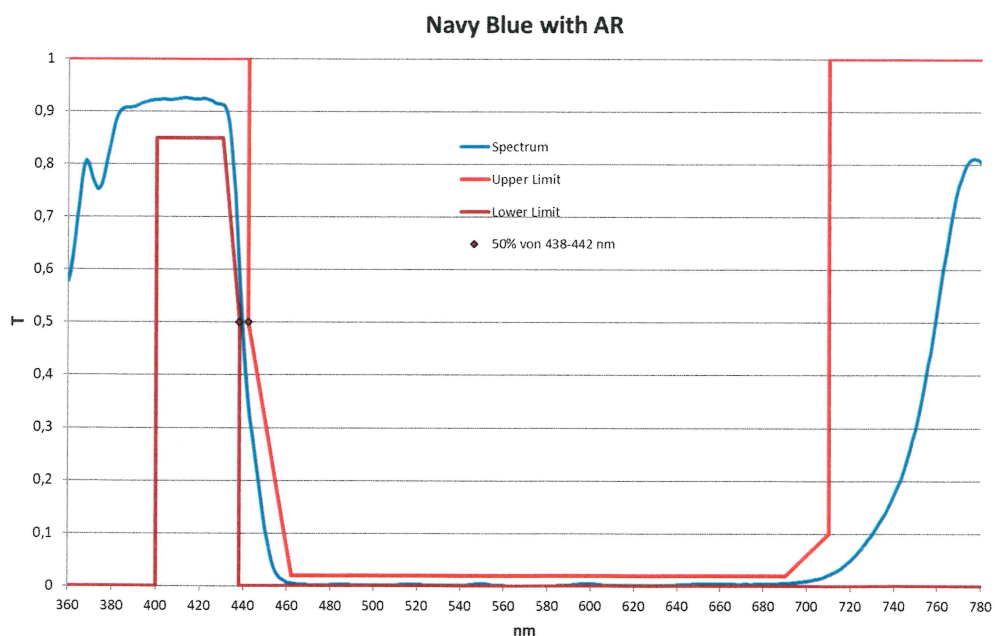


Figure 1: Typical filter specification via the transmission spectrum