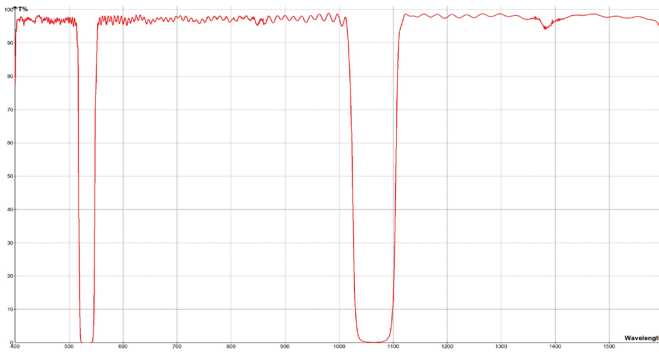


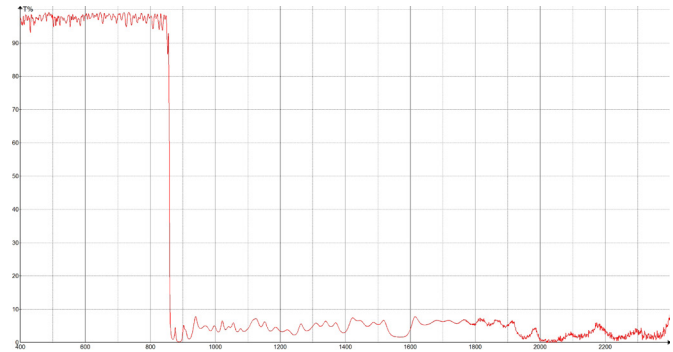
Coating Technologies at Ferroperm Optics

Dielectric interference filters are manufactured by the deposition of alternating layers of at least two different materials onto a substrate: One with a low refractive index (<1.5) and one with a high refractive index (>2.0). There are different ways such materials can be deposited in a vacuum chamber: Conventional deposition, plasma-assisted deposition, or sputtering. Each technology has its benefits, so which one to prefer depends on the specific application.

Sputtering is the newest technology and the advantage here is a very good film quality with low scattering and highly reproducible deposition control. With this technology, thinner layers and a high number of layers can be deposited precisely. This means more complex optical filters can be designed and manufactured even without completing expensive test coating runs. Both examples below have been successfully coated in a first coating run at Ferroperm Optics.



Example 1: Dual Notch Filter.



Example 2: A Hot Mirror with an extended blocking range up to 2400 nm.

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