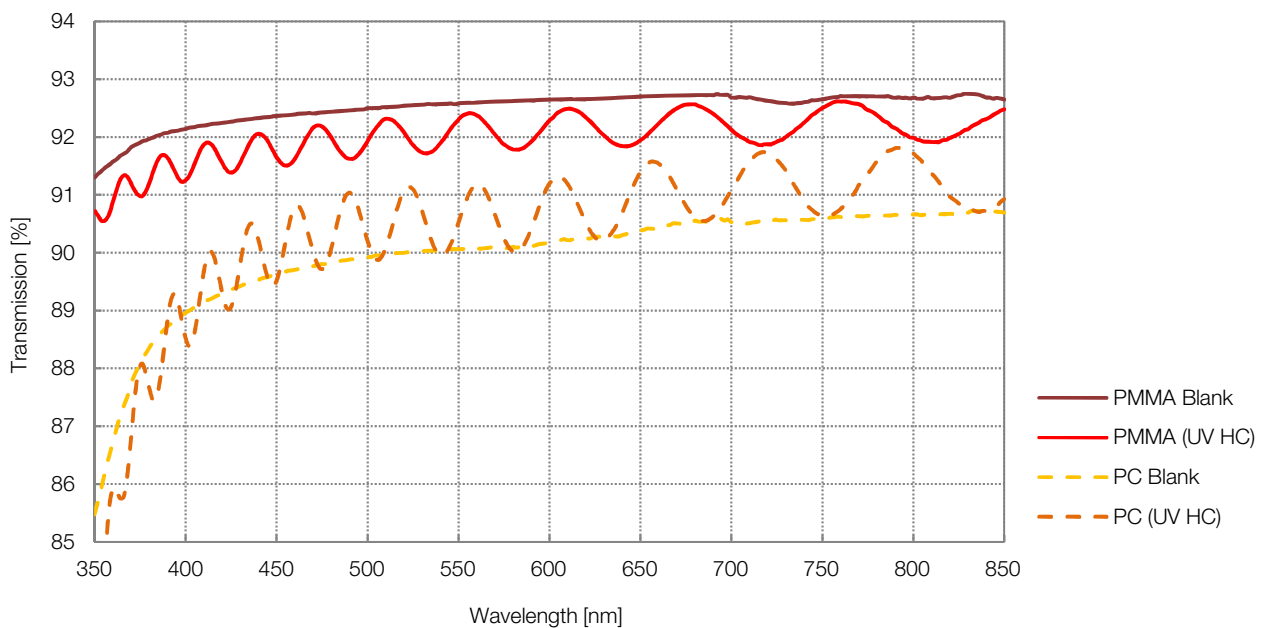


HARD COATINGS

In some applications, the protection of sensitive surfaces is essential and we – ORAFOL Fresnel Optics GmbH – are able to offer hard coatings on plano plastic substrates up to a diameter of 480mm (19"). For hard coatings we use an optical clear lacquer which consists of nanoscopic hard abrasives. It is applied in a spin-coating process and is hardened under UV-light or by a special heat-treatment.

Due to differences of the refractive indices between the plastic part and the lacquer, optical interference effects (wave-like transmission curve) do occur. Although these effects are not visible they can have an adverse influence, e.g. in laser applications.

Principle curve: Interferences between hard coating and plastic part (part thickness 2 mm)



We also offer the combination of our hard coatings with interference layers.

Properties:

- resistant according to DIN 52347
- abrasion resistant according to DIN EN ISO 2409 (cross hatch-Tape Test)
- climate resistant according to DIN EN ISO 9022-14-06 (5 cycles at 70°C to -40°C)
- climate resistant according to DIN EN ISO 9022-16-01 (5 cycles at 23°C / 40°C – 85% / 92% relative humidity)

Engineered to Save Energy™

ORAFOL Fresnel Optics GmbH

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