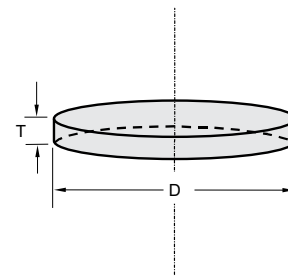


OPTICAL FLATS

- Flatness of reference surface $\lambda/20$

Optical flats are used for testing and evaluating other optical elements. An interference pattern is formed in the air between the flat and object being evaluated, and this pattern is usually more easily seen through the flat than through the object. The pattern consists of alternating bright and dark bands or fringes which are a contour map of the thickness of the air film. If the surface

of the optic is significantly flatter than the surface being evaluated, it is correct to interpret the interference pattern directly as a contour map of the surface being evaluated. If the flat is used on the top of the object, and the interference pattern viewed through the flat, it is advantageous to have an anti-reflection coating on the top surface of the flat (the surface which does not touch the object being evaluated).



For an appropriate AR coating, please refer to the Coatings section (see pages 1.5-1.6).

Catalogue number	Diameter D, mm		Thickness T, mm	Price, EUR	
	UV FS	Metric			English
230-1208		25.0	25.4	8.0	112
230-1410		40.0	38.1	10.0	149

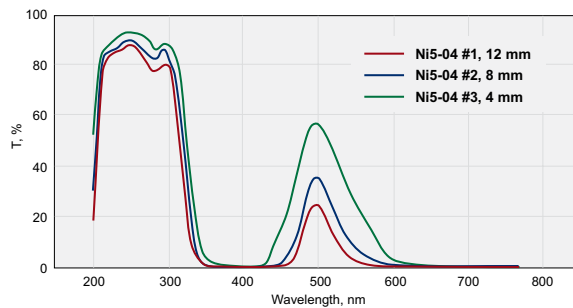
For metric dimensions please add to catalogue number letter M, for English – letter E.

SPECIFICATIONS

Material	UV FS
Diameter tolerance	+0.00 -0.12 mm
Thickness tolerance	±0.2 mm
Surface flatness: 1st surface	$\lambda/20$ @ 633 nm
2nd surface	2λ @ 633 nm

CRYSTALLINE MATERIALS FOR OPTICAL UV BAND PASS FILTERS

Almost all UV radiation (especially 240–280 nm) is absorbed by the Earth’s ozone layer, and UV radiation that is created by some objects near the Earth surface can be detected only using special ozone filters. Crystalline materials are robust substrates from which optical filters of high purity and optical homogeneity can be fabricated. Available crystalline materials: $\text{NiSO}_4 \cdot 6\text{H}_2\text{O}$ (NSH) and $\text{K}_2\text{Ni}(\text{SO}_4)_2 \cdot 6\text{H}_2\text{O}$ (KNSH).



Typical spectral transmittance curves of different thickness $\text{NiSO}_4 \cdot 6\text{H}_2\text{O}$ elements

SPECIFICATIONS

Surface quality	60-40 scratch & dig (MIL-PRF-13830B)
Surface flatness	$\lambda/2$ @ 633 nm
Parallelism	1 arcmin
Side surfaces	fine grinding
Coating	uncoated

Polished cylinders of $\text{NiSO}_4 \cdot 6\text{H}_2\text{O}$ measuring up to $\varnothing 60 \times 40$ mm are available.

Polished cylinders of $\text{K}_2\text{Ni}(\text{SO}_4)_2 \cdot 6\text{H}_2\text{O}$ measuring up to $\varnothing 60 \times 40$ mm are available.

