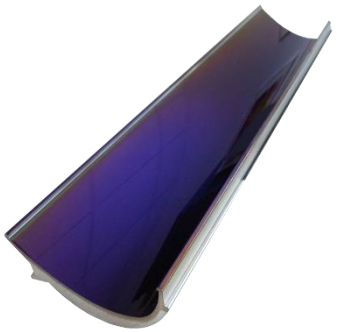
UV Cold Mirror Reflector profiles

Highly reflective and selective cold mirror UV reflector profiles made of aluminium



UV curing is essential in the processing of temperature sensitive substrates in printing and curing applications using solvent free inks, lacquers, glues. The ever increasing requirements being placed on the productivity and performance of these curing UV modules are resulting in higher radiation densities and thus the need for improved heat suppression.

uv-technik international offers solutions for optimizing the performance of UV curing modules. Dichroic UV cold reflector profiles especially designed for the commonly used UV medium pressure lamps result in an extremely high yield of UV-radiation. At the same time the heat load on the product to be cured is reduced to a minimum.

Normal reflectors, typically highly polished anodized aluminium reflectors, reflects UV in a high degree, but also light and IR radiation. Coating of the reflectorprofile with our UV-cold coating reflects UV as good as high gloss aluminium sheets, but absorbs a lot of the IR radiation and gives it to the reflector body (reflector profile) or the cooling air.

Benefits: More UV by high UV reflectivity from dichroic reflector coating, Increased productivity by increased processing speed, Less heat by separation of UV radiation using UV cold reflectors, crucial for curing heat-sensitive materials

Applications: Printing machines, Packaging, high gloss brochures, plastic foils, sensitive labels, optical storage media, (CD, DVD, credit cards), Electronics, Printed circuit boards, Wood working industry, Surface treatments

Technical Data: Spectral characteristics, AOI=45°
Ravg. >= 86% with 220– 400 nm
Ravg. <= 25% with 450–1600 nm
Ravg. <= 50% with 1600–2000 nm

Measured on a flat witness glass coated in the same batch.
Note: A comparison of the specular reflection of anodized Al and glass usually shows reduced values for Al due to scattering losses. Thus for process control only coated glass witness pieces are applied.

Heat resistance: Working temperature up to 150°C on Aluminium. A cooling system from the rear side is essential in application. An airflow from the rear side may be probably not appropriate.