

Diffraction for MEDICAL LASER

In many health care applications, laser processing enable to achieve better results than classical surgery or medical treatments, particularly in dermatology and ophthalmology. For a greater accuracy, the dedicated laser beams require to be homogenized, shaped or splitted.

To fulfill these needs, SILIOS Technologies provides customized Diffraction Optical Elements (DOEs) for different medical laser sources like **Nd:Yag, Er Glass, KTP, Excimers or CO₂**.

Examples:

Skin remodelling (smoothing of wrinkles and improvement of skin texture)

SILIOS' beam splitter separates the Er Glass beam in numerous and homogenized spots over the curing area.

Vascular lesion treatment (erythrosis, spider angioma, leg veins,...)

SILIOS' DOE homogenizes the KTP laser beam scanned over the treatment area.

Cornea reshaping (treatment of myopia, hyperopia, presbyopia)

SILIOS' DOE shapes the Excimer laser beam in a perfect Gaussian beam to ensure a very high working accuracy.

Capsulometry

SILIOS' DOE shapes the Nd:Yag laser beam in a small round homogenized beam to drill perfect holes in the capsule introduced in the eyes.

Technical specifications:

Optic type :	plate
Material :	fused silica, BK7, glass, silicon, Znse,...
Beam diameter :	up to 4" diameter
Wavelength range :	UV (down to 193nm) to IR (up to 12-14 microns)
Efficiency :	up to 95%

