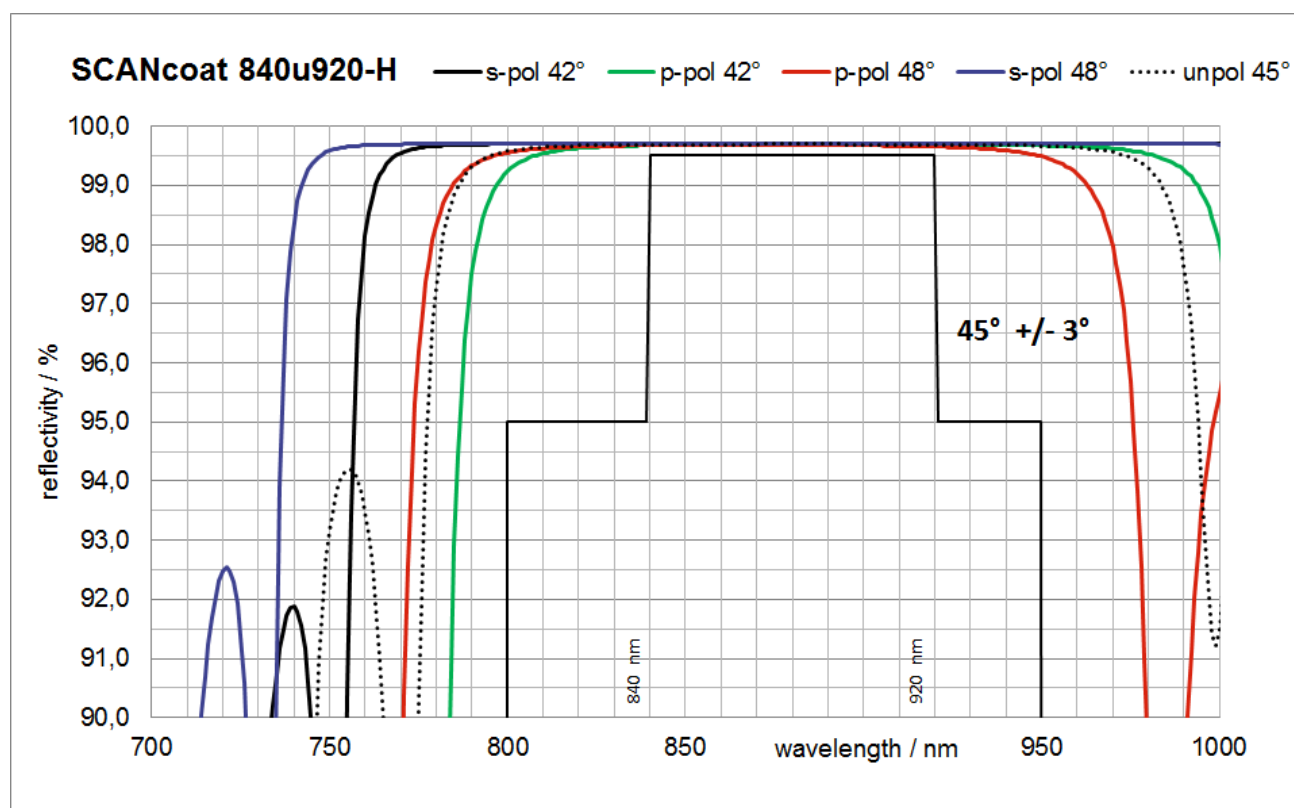


Coatings for ultra-high performance optoSiC-PLUS[®] mirrors SCANcoat 840-920-H

SCANcoat 840-920-H is a surface-tension reduced coating to minimize the coating induced wavefront deformation, giving high reflectivity for high power lasersystems requirements when used on common galvano-scanning systems. This coating captures the small range for the scan angle at the widest spectral range on large substrates.

Coated optoSiC-PLUS[®]-mirrors can withstand strong laser radiation at high power and high energy densities. For other wavelength are dedicated standard coatings available and many other coatings on request. Please refer to technical datasheets for SCANcoat coatings available on optoSiC-PLUS[®] or see download-links on homepage and ask our sales people for further choices on other specialized coatings.



GENERAL	PROPERTIES		Typical values	
COATING	Wavelength [λ_1]	(nm)	840...920	s. spectrum
	Wavelength [λ_2]	(nm)	632,8	
	Scan Angle	(°)	45 ±3	+/10° gives ~50nm cutoff-change
	$R_{avg}(\lambda_1)$ @45° s+p-pol	(%)	> 99,5	+/- 0,5 %
	$R_{avg}(\lambda_2)$ @45° r-pol	(%)	> 80,0	+/- 2,5 %
	Phase Shift	(°)	n.d.	
	Powerdensity	(kW/br)	n.d.	LIDT (@ 1064nm CW)
	Damage Treshold Energy Density	(J/cm ²)	n.d.	for pulsed 1064nm radiation 10 ns, 1 kHz

LIDT = laser induced damage threshold typically given as
x-Watts per linear millimeter of beam radius (br) (1/e² intensity points) ±10%
at 45° Angle of Incidence.

Transmission edges can vary ~ 2% of the given wavelength.

All data given for lab.-conditions 20...25°C, at higher temperatures thermal shifts will occur.

n.d. = not defined

typical surface imperfections: 5/ 2*0,04; C2*0,1; L1*0,006 ~ S/D 10-5

COATING characteristics	SCANcoat 840-920-H		
Adhesion	MIL-F-48616	§ 4.6.8.1	Tape Test: peel off medium grade
Humidity	MIL-F-48616	§ 4.6.8.2	Storage 49°C : 100 % RH min. 24 h
Abrasion	MIL-F-48616	§ 4.6.8.3	"cheesecloth", 50 times pulles with force 450 g over the surface
Temperature	MIL-F-48616	§ 4.6.9.1	Typ ambient use: -20 ... 80 °C storage -61°C ... 72°C for min. 2 h
Cleaning:	carefully	With pure chemical analytical reagent grade di-Water, Alcohol iso-Propanol, Aceton	

Use an air bulb to blow off any loose contaminants from the surface before proceeding to the cleaning steps.

- I. Damp an unused cotton swab or a cotton ball with acetone or iso-propanol (purity-grades 99.99).
- II. Gently wipe the surface with the damp cotton. Do not rub hard.
- III. Drag the cotton across the surface just fast enough so that the liquid evaporates right behind the cotton.
This should leave no droplets or streaks.

Note: Use only paper-bodied cotton swabs and high-quality surgical cotton balls.

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