

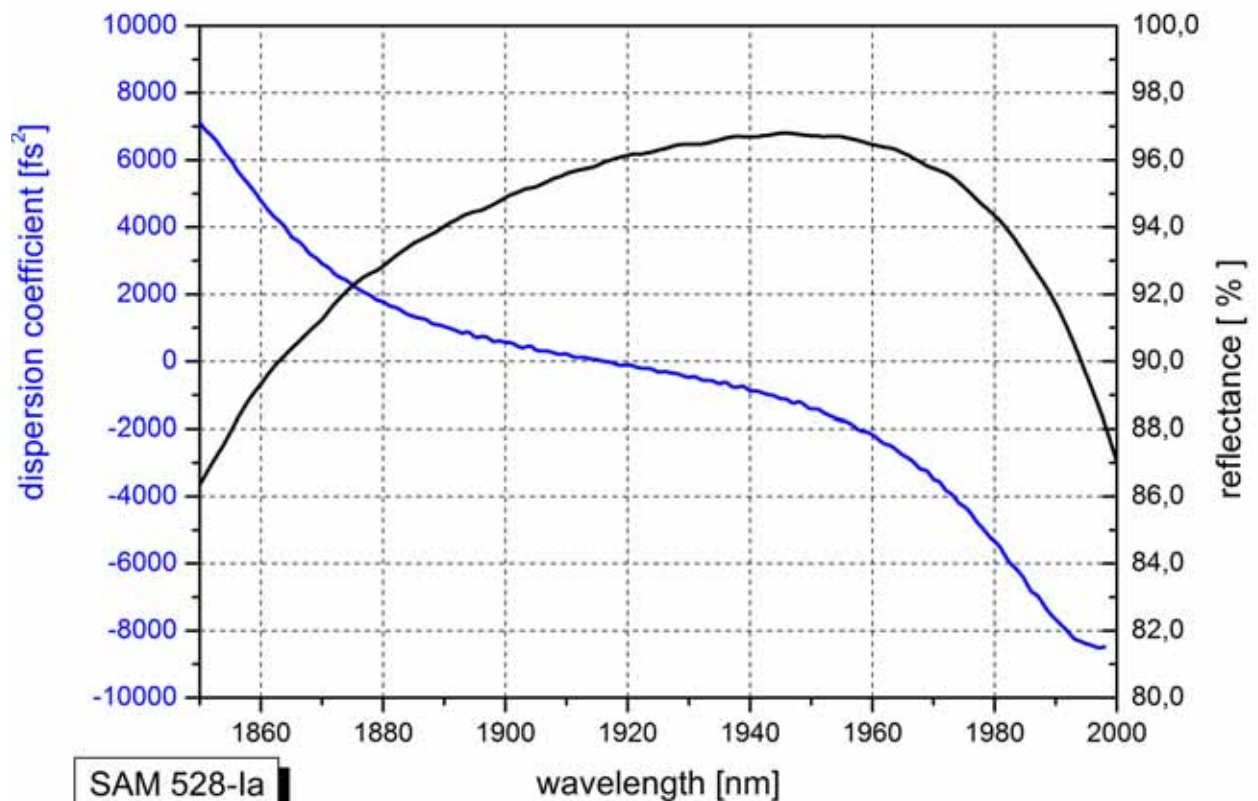
## SAM™ Data Sheet SAM-1920-4-40ps-x, $\lambda = 1920$ nm

Laser wavelength	$\lambda = 1920$ nm
High reflection band (R > 90%)	$\lambda = 1870 \dots 1990$ nm
Absorbance	$A_0 = 4$ %
Modulation depth	$\Delta R = 2.6$ %
Non-saturable loss	$A_{ns} = 1.4$ %
Saturation fluence	$\Phi_{sat} = 35$ $\mu\text{J}/\text{cm}^2$
Relaxation time constant	$\tau \sim 40$ ps
Damage threshold	$\Phi = 3$ $\text{mJ}/\text{cm}^2$
Chip area	4mm x 4mm; other dimensions on request
Chip thickness	450 $\mu\text{m}$
Protection	the SAM is protected with a dielectric front layer

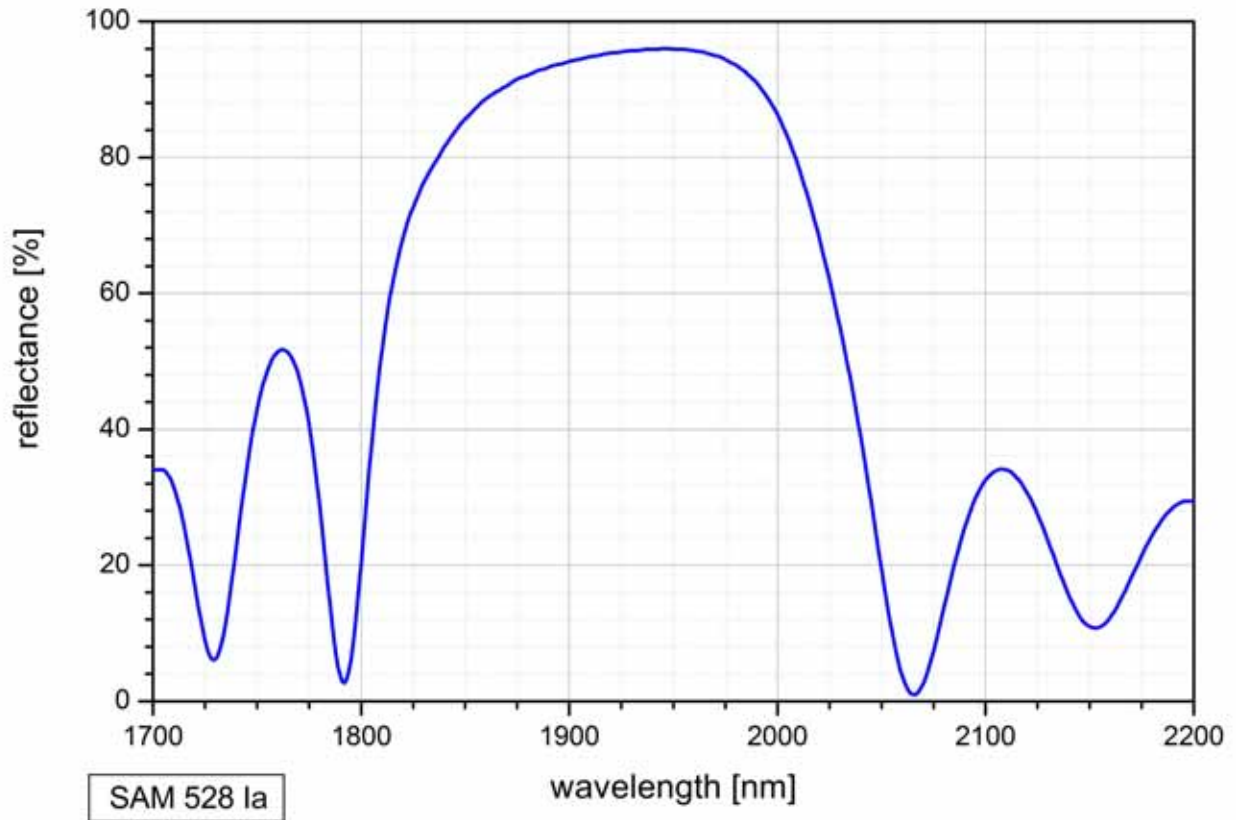
Mounting option **x** denotes the type of mounting as follows:

<b>x</b> = 0	unmounted
<b>x</b> = 12.7 g	glued on a gold plated Cu-cylinder with 12.7 mm $\varnothing$
<b>x</b> = 25.4 g	glued on a gold plated Cu-cylinder with 25.4 mm $\varnothing$
<b>x</b> = 12.7 s	soldered on a gold plated Cu-cylinder with 12.7 mm $\varnothing$
<b>x</b> = 25.4 s	soldered on a gold plated Cu-cylinder with 25.4 mm $\varnothing$
<b>x</b> = FC	mounted on a 1 m monomode fiber cable with FC connector

### Low intensity spectral reflectance and dispersion coefficient $D_2$



SAM 528-1a



**Dispersion coefficient**  $D_2(\omega) = \frac{\partial^2 \varphi}{\partial \omega^2}$  **with**  $\varphi$  - **reflected phase**

$$\omega = 2\pi \frac{c}{\lambda} \text{ - angular frequency}$$

### Pump-probe measurement

The pump-probe measurement has been done by Dr. Uwe Griebner, Max-Born-Institut Berlin, Germany. The measured data can be fitted using a twofold exponential decay function with two amplitudes  $A_1$  and  $A_2$  and two corresponding time constants  $\tau_1$  and  $\tau_2$ .

