

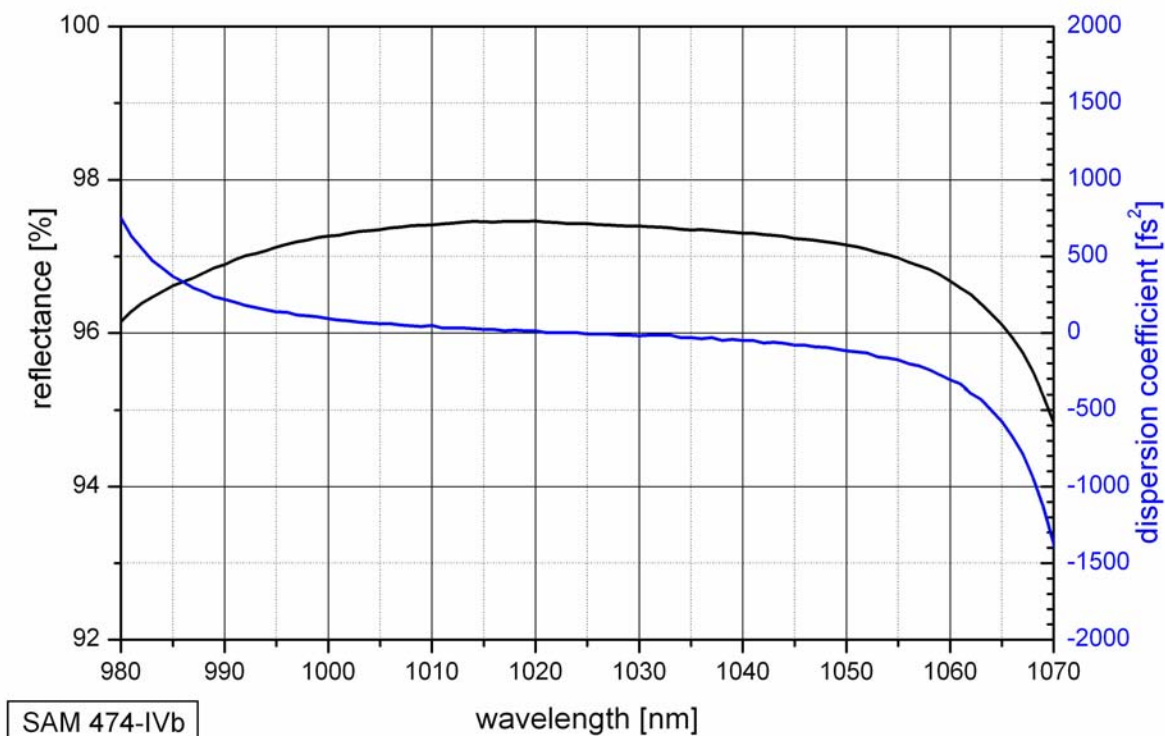
## SAM™ data sheet SAM-1040-1.5-x-1ps, $\lambda = 1040$ nm

Laser wavelength	$\lambda = 1040$ nm
High reflection band (R > 98%)	$\lambda = 990 \dots 1050$ nm
Absorbance	$A_0 = 1.5$ %
Modulation depth	$\Delta R = 0.8$ %
Non-saturable loss	$A_{ns} = 0.7$ %
Saturation fluence	$\Phi_{sat} = 70$ $\mu\text{J}/\text{cm}^2$
Relaxation time constant	$\tau \sim 1$ ps
Damage threshold	$0.8$ $\text{GW}/\text{cm}^2$
Chip area	4mm x 4mm; other dimensions on request
Chip thickness	400 $\mu\text{m}$
Protection	the SAM is protected with a dielectric front layer

Mounting of SAM-1040-1.5-x-1ps 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> = 25.4 w	soldered on a water cooled 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 group delay dispersion



### Group Delay Dispersion (GDD)

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

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

