

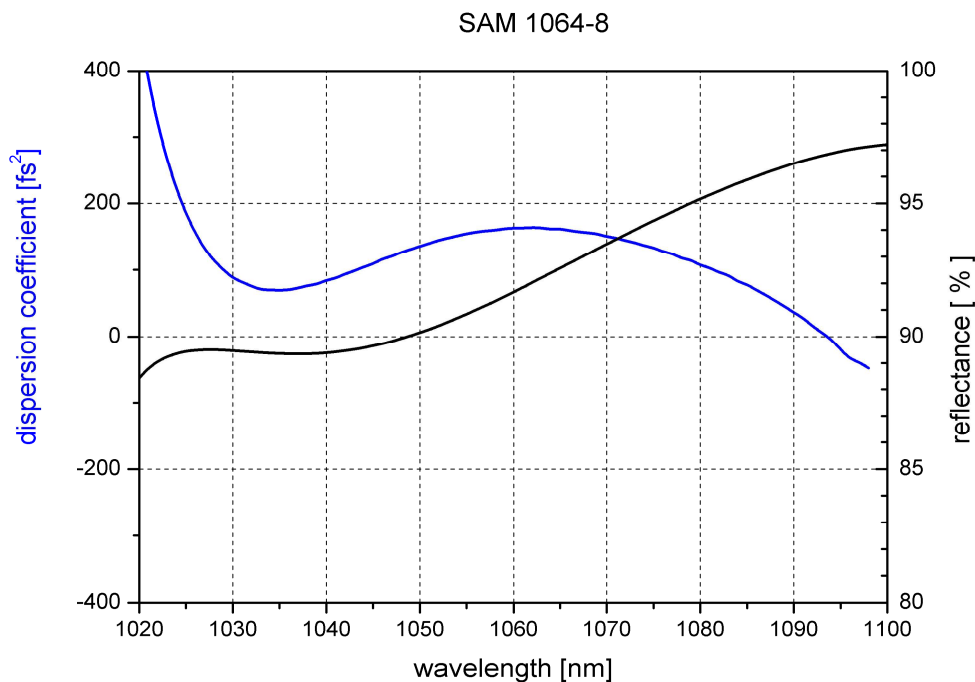
## SAM™ Data Sheet SAM-1064-8-500fs-x, $\lambda = 1064 \text{ nm}$

Laser wavelength	$\lambda = 1064 \text{ nm}$
High reflection band	$\lambda = 1030 \dots 1120 \text{ nm}$
Absorbance	$A_0 = 8 \%$
Modulation depth	$\Delta R = 6 \%$
Non-saturable loss	$A_{ns} = 2 \%$
Saturation fluence	$\Phi_{sat} = 98 \mu\text{J}/\text{cm}^2$
Relaxation time constant	$\tau \sim 500 \text{ fs}$
Damage threshold	$\Phi = 2.5 \text{ mJ}/\text{cm}^2$
Chip area	4.0 mm x 4.0 mm; 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 $D_2$

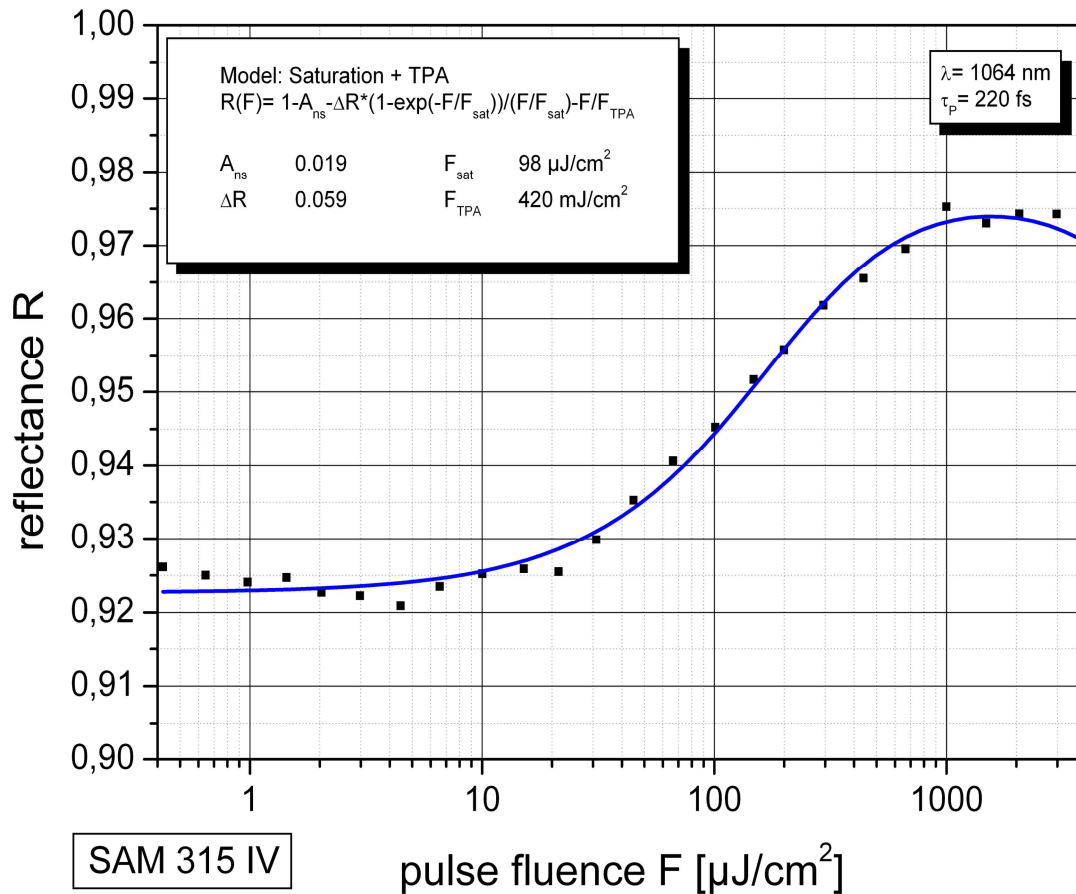


## Group Delay Dispersion (GDD)

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

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

## Saturation measurement



## Relaxation time

Response time of the SAM, measured in a pump-probe experiment with a 200 fs probe pulse by D. Fischer and G. Steinmeyer, MBI Berlin, Germany.

time dependent differential reflectivity

