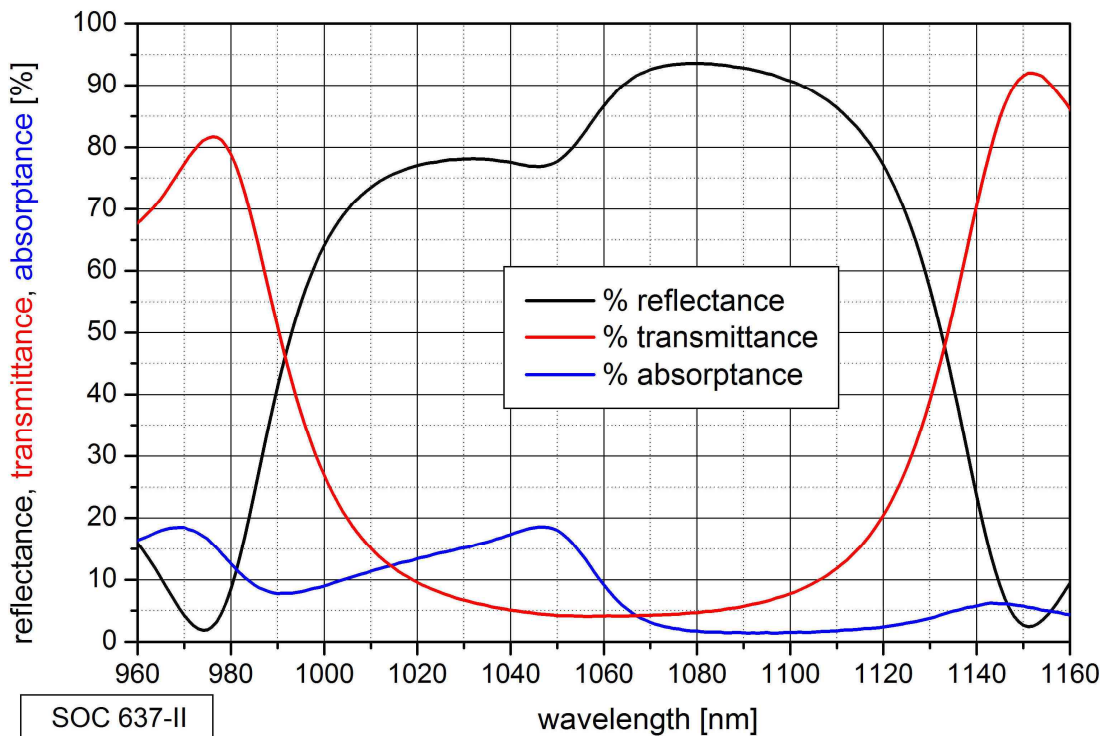


### SOC data sheet SOC-1040-17-5-1ps-x, $\lambda = 1040$ nm

Laser wavelength	$\lambda = 1040$ nm
Absorptance	$A_0 = 17$ %
Transmittance	$T = 5$ %
Reflectance	$R = 78$ %
Modulation depth	$\Delta R = 10$ %
Non-saturable loss	$A_{ns} = 7$ %
Saturation fluence	$\Phi_{sat} = 90$ $\mu\text{J}/\text{cm}^2$
Relaxation time constant	$\tau \sim 1$ ps
Chip area	5.0 mm x 5.0 mm; other dimensions on request
Chip thickness	625 $\mu\text{m}$ ; semi-insulating GaAs
Front side protection	with a dielectric layer
Back side AR coating	the SOC back side is polished and antireflection coated for 1040 nm
Mounting option <b>x</b> denotes the type of mounting as follows:	

<b>x</b> = 0	unmounted
<b>x</b> = 12.7 g	glued on a gilded Cu-cylinder with 12.7 mm $\varnothing$ and 4 mm $\varnothing$ center hole
<b>x</b> = 25.0 g	glued on a gilded Cu-cylinder with 25. mm $\varnothing$ and 4 mm $\varnothing$ center hole
<b>x</b> = 25.4 g	glued on a gilded Cu-cylinder with 25.4 mm $\varnothing$ and 4 mm $\varnothing$ center hole
<b>x</b> = FC	mounted on a 1 m single mode fiber cable with FC connector

### Spectral reflectance, transmittance and absorptance

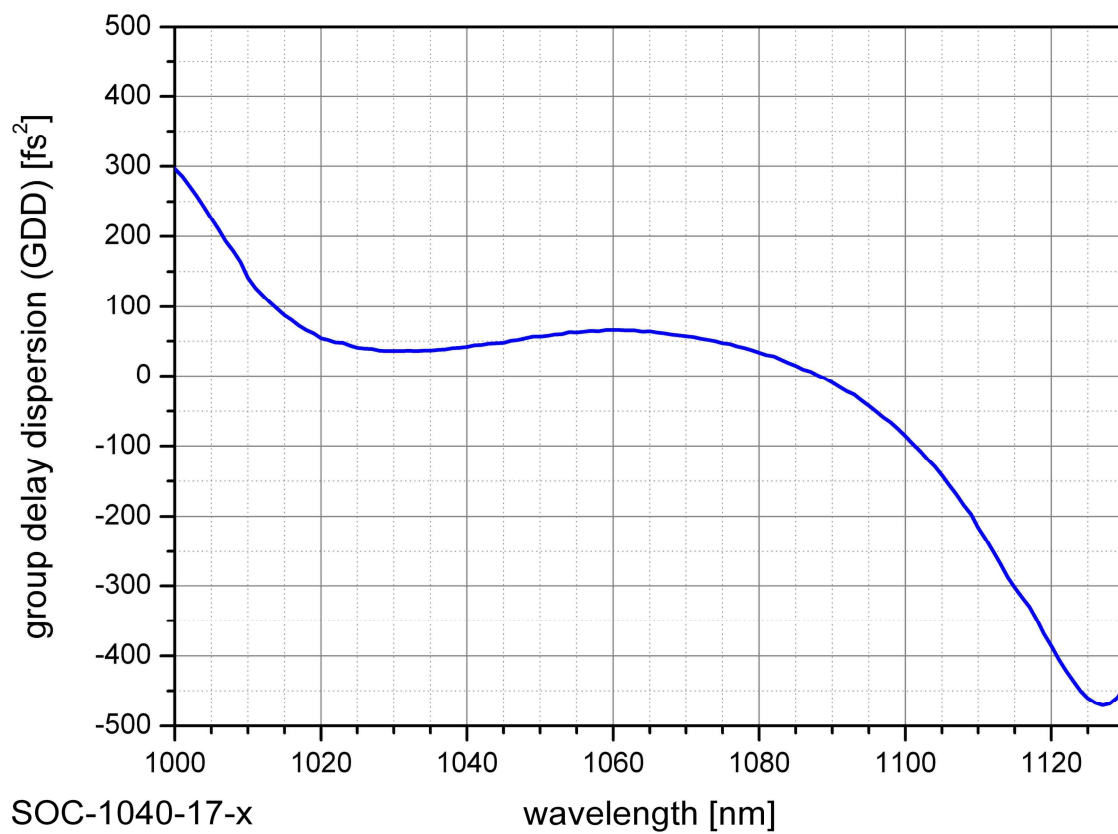


SOC 637-II

## Group Delay Dispersion (GDD)

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

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



SOC-1040-17-x

wavelength [nm]