

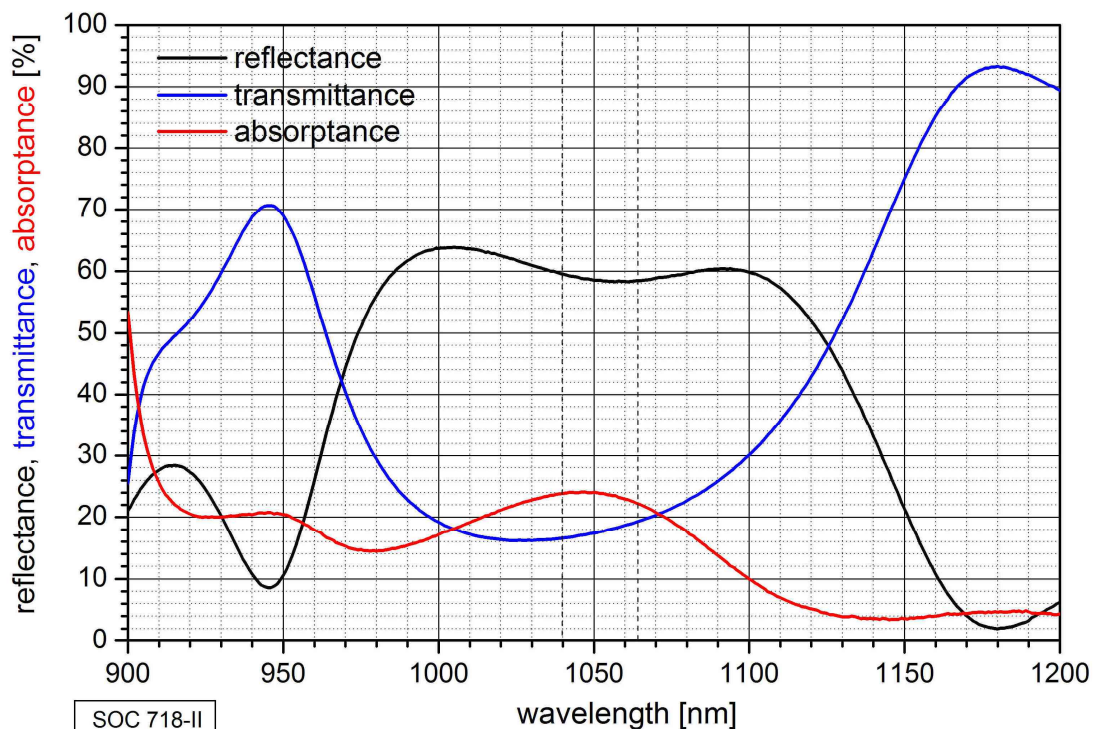
## SOC (saturable output coupler) data sheet SOC-1040-24-19-15ps, $\lambda = 1040 \text{ nm}$

Laser wavelength	$\lambda = 1040 \text{ nm}$
Transmittance	$T = 19 \%$
Reflectance	$R = 58 \%$
Absorptance	$A_0 = 22 \%$
Modulation depth	$\Delta R = 9,5 \%$
Non-saturable loss	$A_{ns} = 9 \%$
Saturation fluence	$\Phi_{sat} = 40 \mu\text{J}/\text{cm}^2$
Damage threshold	$\Phi_{dam} = 5 \text{ mJ}/\text{cm}^2$
Relaxation time constant	$\tau \sim 15 \text{ ps}$
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 has been polished and broadband -antireflection coated for 1050 nm

Mounting option **x** 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



## Pump-probe measurement of relaxation time of SOC-1040-8-15

