

Data sheet SA-1020-40-x, $\lambda = 1020 \text{ nm}$ SA – Saturable Absorber in transmission

Laser wavelength	$\lambda = 980 \text{ nm} \dots 1040 \text{ nm}$
Absorptance	$A_0 = 40 \%$
Modulation depth	$\Delta T = 25 \%$
Non-saturable loss	$A_{ns} = 15 \%$
Saturation fluence	$\Phi_{sat} = 300 \mu\text{J}/\text{cm}^2$
Pulse damage threshold	$\Phi = 1.2 \text{ mJ}/\text{cm}^2$
Relaxation time constant	$\tau \sim 500 \text{ fs}$
Chip area	5mm x 5mm; other dimensions on request
Chip thickness	625 μm ; semi-insulating GaAs
Front side protection	AR coating for 1020 nm
Back side coating	the SA back side is polished and antireflection coated for 1020 nm
Mounting of SA-1020-40-x	denotes the type of mounting as follows:
x = 0	unmounted
x = 12.7 g	glued on a gilded Cu-cylinder with 12.7 mm \varnothing and 4 mm \varnothing center hole
x = 25.4 g	glued on a gilded Cu-cylinder with 25.4 mm \varnothing and 4 mm \varnothing center hole
x = FC	a back-thinned SA chip with 90 μm thickness is mounted inside a 1 m monomode fiber cable

Spectral low intensity transmittance and **absorptance**

