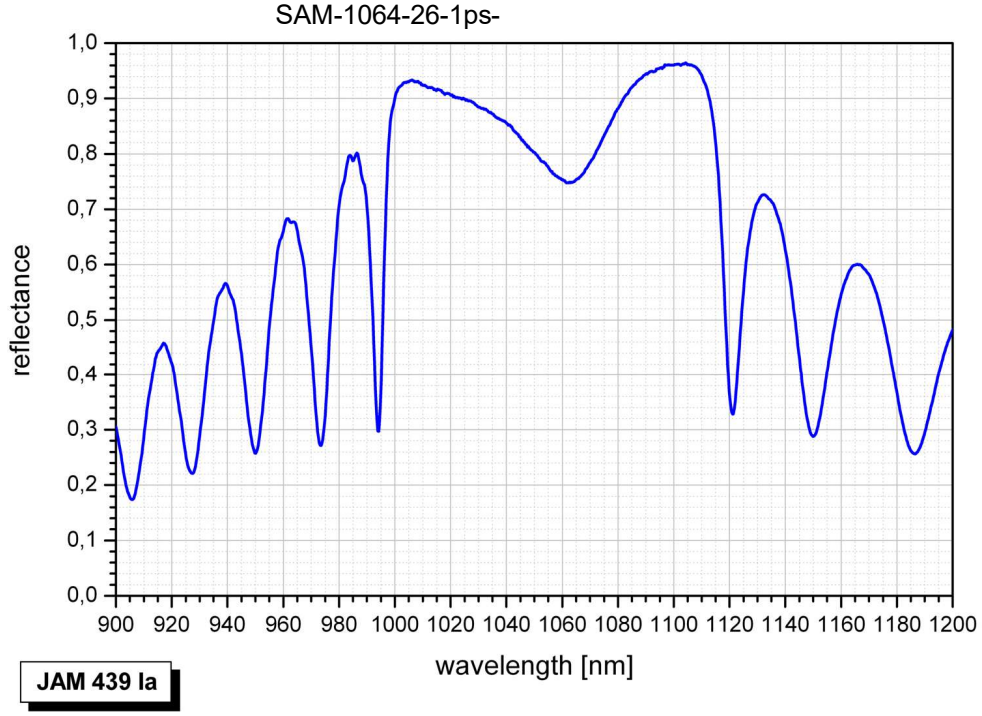
SAM™ Data Sheet SAM-1064-26-1ps-x, λ = 1064 nm

Laser wavelength	λ = 1064 nm
High reflection band	λ = 1000 .. 1110 nm
Absorbance	A_0 = 26 %
Modulation depth	ΔR = 13 %
Non-saturable loss	A_{ns} = 13 %
Saturation fluence	Φ_{sat} = 32 µJ/cm^2
Relaxation time constant	τ ~ 1 ps
Damage threshold	Φ = 2 mJ/cm^2
Chip area	4.0 mm x 4.0 mm; other dimensions on request
Chip thickness	450 µm
Protection	the SAM is protected with a dielectric front layer

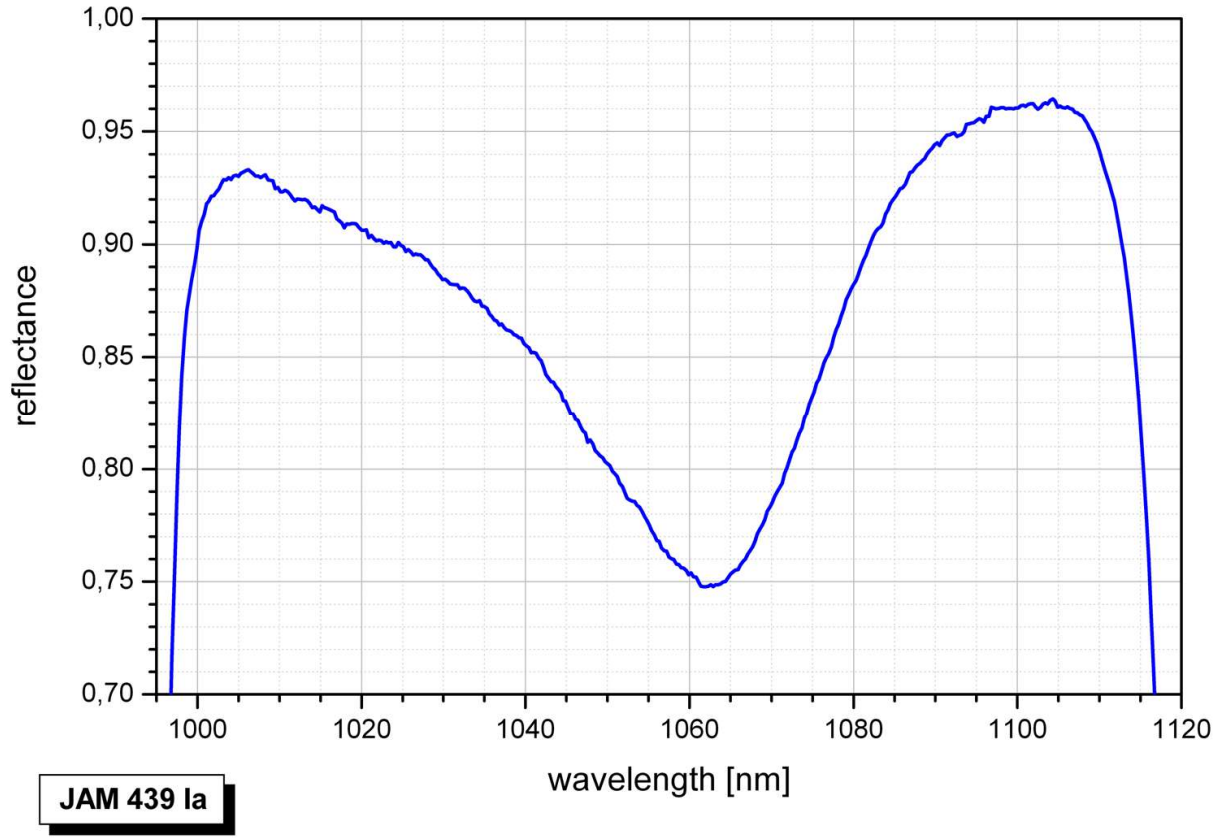
Mounting option **x** denotes the type of mounting as follows:

x = 0	unmounted
x = 12.7 g	glued on a gold plated Cu-cylinder with 12.7 mm ∅
x = 25.4 g	glued on a gold plated Cu-cylinder with 25.4 mm ∅
x = 12.7 s	soldered on a gold plated Cu-cylinder with 12.7 mm ∅
x = 25.4 s	soldered on a gold plated Cu-cylinder with 25.4 mm ∅
x = 25.0 w	soldered on a water cooled Cu-cylinder with 25.4 mm ∅
x = FC	mounted on a 1 m monomode fiber cable with FC connector

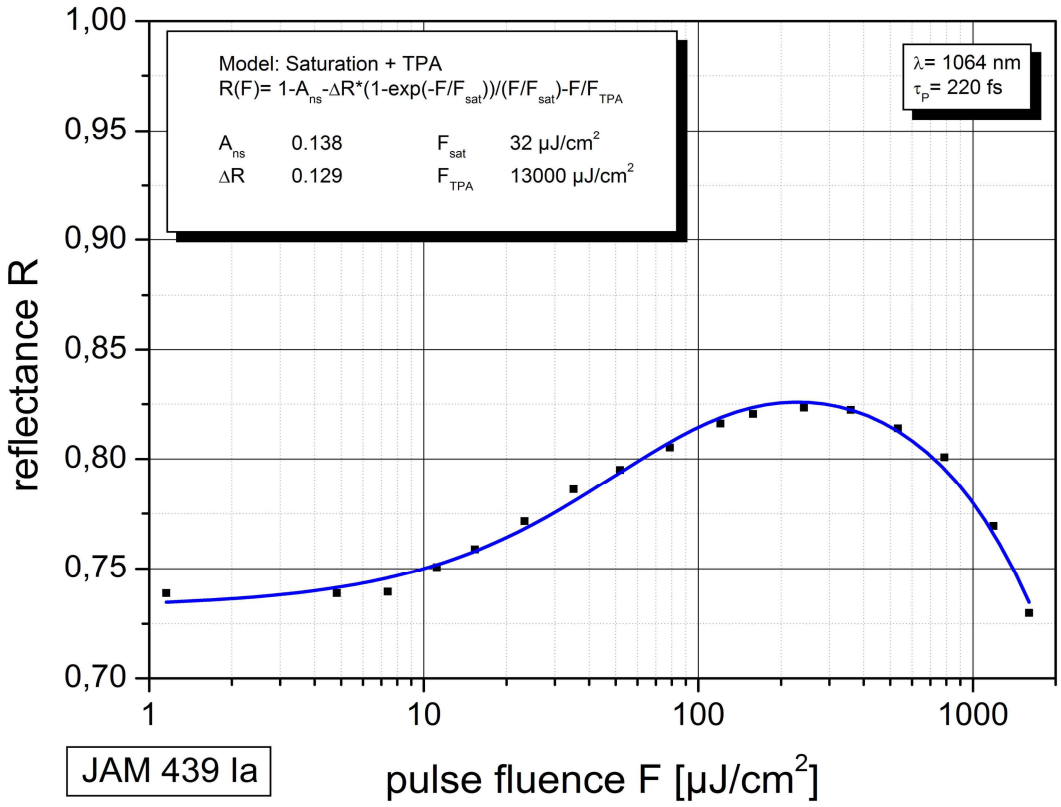
Low intensity spectral reflectance



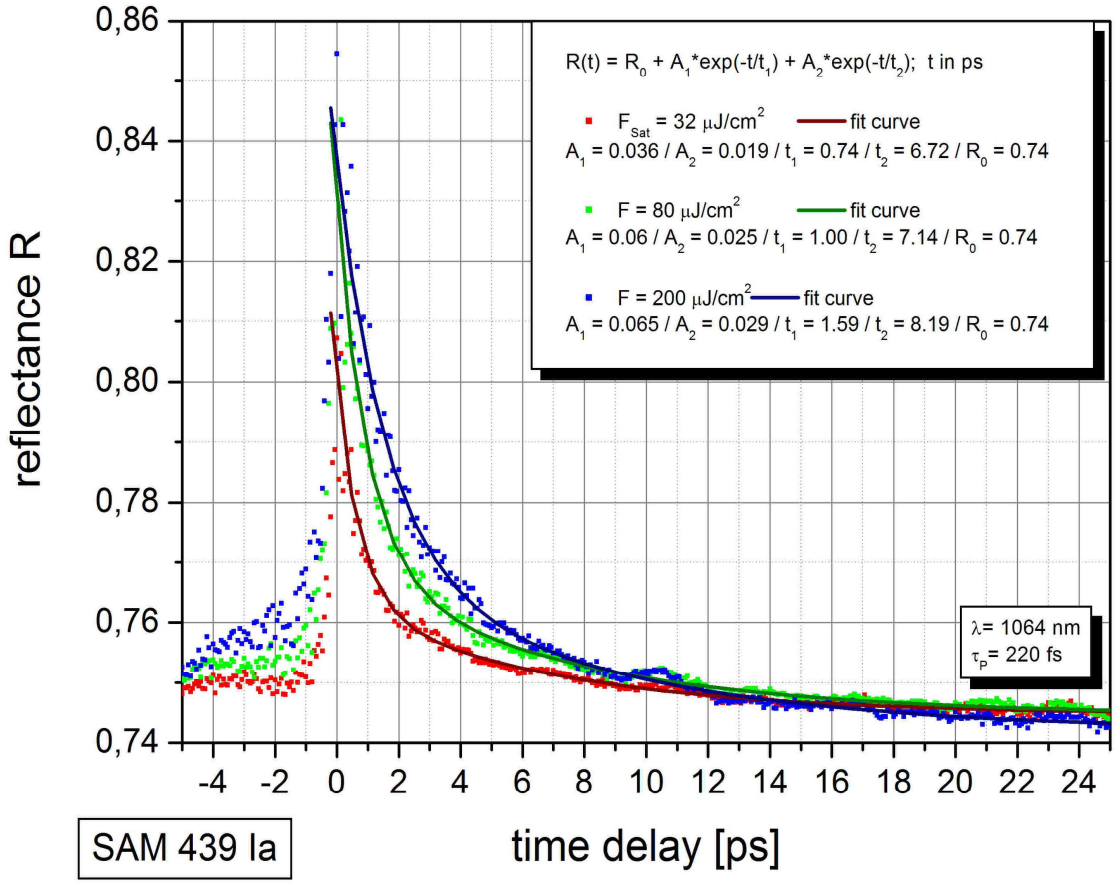
x



Saturation measurement



Pump-probe measurement


R(t) = R0 + A1*exp(-t/t1) + A2*exp(-t/t2); t in ps
FSat = 32 µJ/cm2 fit curve
A1 = 0.036 / A2 = 0.019 / t1 = 0.74 / t2 = 6.72 / R0 = 0.74
F = 80 µJ/cm2 fit curve
A1 = 0.06 / A2 = 0.025 / t1 = 1.00 / t2 = 7.14 / R0 = 0.74
F = 200 µJ/cm2 fit curve
A1 = 0.065 / A2 = 0.029 / t1 = 1.59 / t2 = 8.19 / R0 = 0.74
λ= 1064 nm
τP= 220 fs
reflectance R
0,86
0,84
0,82
0,80
0,78
0,76
0,74
-4 -2 0 2 4 6 8 10 12 14 16 18 20 22 24
time delay [ps]
SAM 439 Ia