

SAM™ Data Sheet SAM-1040-3-1ps-x, λ = 1040 nm

Laser wavelength	$\lambda = 1040 \text{ nm}$
High reflection band (R > 96%)	λ = 1010 1090 nm
Absorbance	A ₀ = 3 %
Modulation depth	ΔR = 1.6 %
Non-saturable loss	A _{ns} = 1.4 %
Saturation fluence	$\Phi_{sat} = 50 \ \mu J/cm^2$
Relaxation time constant	τ ~ 1 ps
Damage threshold	$\Phi = 4 \text{ mJ/cm}^2$
Chip area	4mm x 4mm; other dimensions on request
Chip thickness	450 µm
Protection	the SAM is protected with a dielectric front layer
Mounting option x denotes the $x = 0$ x = 12.7 g	type of mounting as follows: unmounted glued on a gold plated Cu-cylinder with 12.7 mm \varnothing

x = 12.7 g	glued on a gold plated Cu-cylinder with 12.7 mm \oslash
x = 25.4 g	glued on a gold plated Cu-cylinder with 25.4 mm $arnothing$
x = 12.7 s	soldered on a gold plated Cu-cylinder with 12.7 mm $arnothing$
x = 25.4 s	soldered on a gold plated Cu-cylinder with 25.4 mm $arnothing$
x = 25.4 w	soldered on a water cooled Cu-cylinder with 25.4 mm $arnothing$
x = FC	mounted on a 1 m monomode fiber cable with FC connector

Low intensity spectral reflectance and group delay dispersion



Group Delay Dispersion (GDD)

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Dispersion coefficient $D_2(\omega) = \frac{\partial^2 \varphi}{\partial \omega^2}$ with φ - reflected phase $\omega = 2\pi \frac{c}{\lambda}$ - angular frequency