

SA data sheet SA-1550-41-2ps-thin-x, λ = 1550 nm, thin saturable absorber for fiber coupling

Laser wavelength $\lambda = 1400 \text{ nm} \dots 1600 \text{ nm}$

Absorptance $A_0 = 41 \%$ Modulation depth $\Delta T = 25 \%$ Non-saturable loss $A_{ns} = 16 \%$ Fiber coupling insertion loss $\leq 1.6 \text{ dB}$

Saturation fluence $\Phi_{sat} = 300 \ \mu \text{J/cm}^2$ Damage threshold $\Phi = 1.5 \ \text{mJ/cm}^2$

Relaxation time constant $\tau \sim 2 \text{ ps}$

Chip area 1.3 mm x 1.3 mm; other dimensions on request

Chip thickness 150 µm; semi-insulating GaAs

Front side protection AR coating for 1550 nm

Back side coating the SA back side is polished and antireflection coated for 1550 nm

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

x = 1.0b-0 batch of 5 unmounted chips with area 1.0 mm x 1.0 mm x = 1.3b-0 batch of 5 unmounted chips with area 1.3 mm x 1.3 mm

x = FC SA chip with 150 μm thickness is mounted inside a 1 m long single

mode fiber cable.

The fiber coupled SA has an additional coupling loss of about 15 %.

Spectral low intensity reflectance, transmittance and absorptance 100 reflectance: 7% @ 1550nm reflectance, transmittance, absorptance 90 transmittance: 52% @ 1550nm absorptance: 41% @ 1550nm 80 70 60 50 40 30 20 10 1200 1250 1300 1350 1400 1450 1500 1550 1600 1650 1700 wavelength [nm] Wafer 552 III

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