# SAM™ – Saturable Absorber Mirror

BATOP optoelectronics

## Product Overview

### Application:

- Passive mode-locking
- Q-switching

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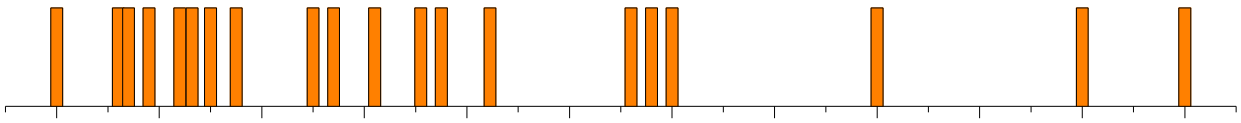
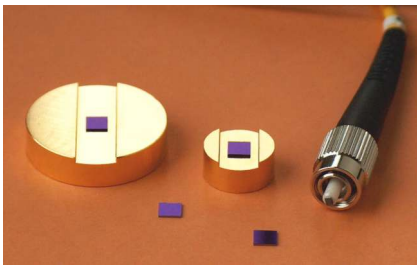
**Available Wavelengths**

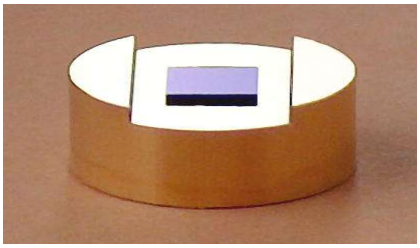



wavelength [nm]

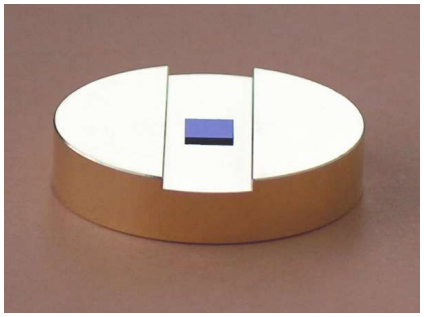
| | | |
|---|---|---|
| **SAM 800** | Laser wavelength | $\lambda$ = 780 - 830 nm |
| | Saturable absorption | $A_0$ = 1 - 32 % |
| | Relaxation time | $\tau$ = 1 - 5 ps |
| **SAM 920** | Laser wavelength | $\lambda$ = 890 - 950 nm |
| | Saturable absorption | $A_0$ = 20 - 45 % |
| | Relaxation time | $\tau$ = 0.5 - 3 ps |
| **SAM 940** | Laser wavelength | $\lambda$ = 900 - 990 nm |
| | Saturable absorption | $A_0$ = 4 - 68 % |
| | Relaxation time | $\tau$ = 1 / 2 ps |
| **SAM 980** | Laser wavelength | $\lambda$ = 940 – 1020 nm |
| | Saturable absorption | $A_0$ = 3 - 70 % |
| | Relaxation time | $\tau$ = 500 fs / 1 ps |
| **SAM 1040** | Laser wavelength | $\lambda$ = 990 .. 1070 nm |
| | Saturable absorption | $A_0$ = 1 - 65 % |
| | Relaxation time | $\tau$ = 500 fs - 30 ps |
| **SAM 1064** | Laser wavelength | $\lambda$ = 1030 .. 1100 nm |
| | Saturable absorption | $A_0$ = 0.6 - 70 % |
| | Relaxation time | $\tau$ = 500 fs - 240 ps |
| **SAM 1100** | Laser wavelength | $\lambda$ = 1070 .. 1120 nm |
| | Saturable absorption | $A_0$ = 30 - 90 % |
| | Relaxation time | $\tau$ = 500 fs |
| **SAM 1150** | Laser wavelength | $\lambda$ = 1100 .. 1200 nm |
| | Saturable absorption | $A_0$ = 3 - 32 % |
| | Relaxation time | $\tau$ = 500 fs / 1ps |



Mounting Options



12.7 mm ∅ - (1/2" ∅) - Cu-Mount

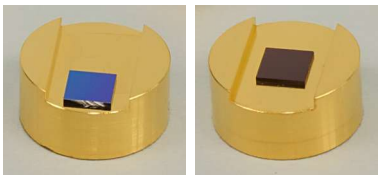


25.4 mm ∅ - (1" ∅) - Cu-Mount

| | | |
|---|---|---|
| **SAM 1300** | Laser wavelength | $\lambda$ = 1230 .. 1330 nm |
| | Saturable absorption | $A_0$ = 4 - 12 % |
| | Relaxation time | $\tau$ = 10 ps |
| **SAM 1340** | Laser wavelength | $\lambda$ = 1310 .. 1370 nm |
| | Saturable absorption | $A_0$ = 1 - 15 % |
| | Relaxation time | $\tau$ = 1 ps |
| **SAM 1420** | Laser wavelength | $\lambda$ = 1360 .. 1460 nm |
| | Saturable absorption | $A_0$ = 1 - 4 % |
| | Relaxation time | $\tau$ = 10 ps |
| **SAM 1510** | Laser wavelength | $\lambda$ = 1470 .. 1570 nm |
| | Saturable absorption | $A_0$ = 4 - 23 % |
| | Relaxation time | $\tau$ = 2 ps / 10 ps |
| **SAM 1550** | Laser wavelength | $\lambda$ = 1500 .. 1600 nm |
| | Saturable absorption | $A_0$ = 3 - 55 % |
| | Relaxation time | $\tau$ = 1.5 - 18 ps |
| **SAM 1645** | Laser wavelength | $\lambda$ = 1560 .. 1720 nm |
| | Saturable absorption | $A_0$ = 2 - 50 % |
| | Relaxation time | $\tau$ = 2 ps |
| **SAM 2000** | Laser wavelength | $\lambda$ = 1890 .. 2050 nm |
| | Saturable absorption | $A_0$ = 2 - 54 % |
| | Relaxation time | $\tau$ = 10 ps - 40 ps |
| **SAM 2400** | Laser wavelength | $\lambda$ = 2300 .. 2600 nm |
| | Saturable absorption | $A_0$ = 1 % / 1.5 % |
| | Relaxation time | $\tau$ = 10 ps |
| **SAM 2800** | Laser wavelength | $\lambda$ = 2700 .. 2900 nm |
| | Saturable absorption | $A_0$ = 14 % - 34 % |
| | Relaxation time | $\tau$ = 10 ps |
| **SAM 3000** | Laser wavelength | $\lambda$ = 2500 .. 3100 nm |
| | Saturable absorption | $A_0$ = 9 - 33 % |
| | Relaxation time | $\tau$ = 10ps |

Fiber coupled SAM

Fiber mount FM1.3



Edge mounting | Center mounting

Water-cooled 25.0 mm ∅ Cu-mount

Chip area: 1.3 mm x 1.3 mm, 4 mm x 4 mm, 8 mm x 8 mm
Chip thickness: (other dimensions on request)
Mounting: 450 µm

- Unmounted
- Glued or soldered on:
  - 12.7 mm ∅ (1/2" ∅) Cu-mount
  - 25.0 mm ∅ Cu-mount
  - 25.4 mm ∅ (1" ∅) Cu-mount
- Soldered on a water-cooled 25.0 mm ∅ Cu-mount
- Thin film soldered on a water-cooled Cu-mount
- Fiber coupled (SMF, PM fiber) / Fiber mount FM1.3
- Mounting on custom mounts on request

Batch of 4 chips, 1.3 mm x 1.3 mm

For other wavelengths and parameters please ask!