

OASys



Our adaptive optics loops combine the high performance **SID4** wave front sensor* to a phase modulator, chosen to best suit your applications.

“ADAPTIVE OPTICS LOOP MADE SIMPLE !”

Because deformable optics and phase modulators are now affordable, it has never been so simple to minimize the aberrations of any optical system, such a laser beam or an imaging system.

PHASICS- The phase control company

↓ APPLICATIONS

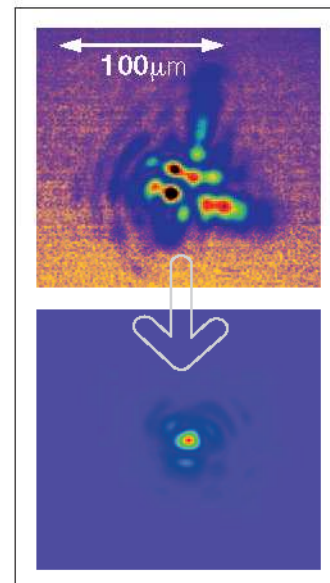
Laser beam optimization

For high power lasers, OASys increases the intensity at focus. For applications demanding high resolution coupling with matter, adaptive optics loop concentrates the energy in the tiniest spot possible.

Imaging optimization

For very high performance imaging such as microscopy, using an adaptive optics loop increases the resolution of the recorded images and increases the number of photons collected by your objective.

Example of 80J/600ps laser correction at LULI (France)



ADAPTIVE OPTICS LOOP

→ ADAPTIVE OPTICS SOLUTIONS

We can integrate deformable mirrors as well as phase modulators in our OASys adaptive optics loops.

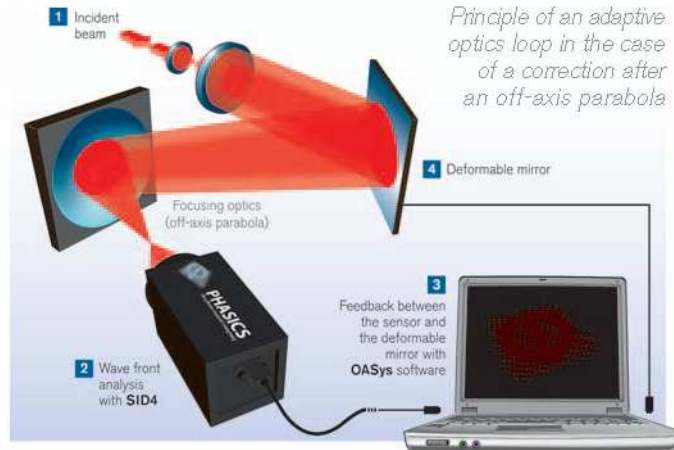
According to your application, we can advise you for your choice between a bimorph mirror or a deformable membrane. For high resolution, we recommend using an optically addressed spatial light modulator (OASLM).

In any case, we share with you our expertise collected on the most prestigious high power laser facilities around the world.

↘ SOFTWARE

The OASys module is an add-on of the SID4 software, thus does not require an additional software.

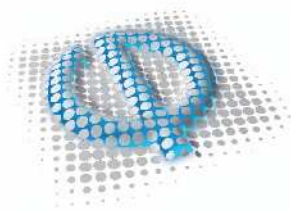
- Full control of the mirror voltages
- Automatic influence function acquisition
- Arbitrary phase generation
- Safety tools
- Loop data saved during the loop
- Mirror modes management



↓ SPECIFICATIONS

| | Bimorph | Membrane | OASLM |
|-------------------|---|--------------------|-----------------------------------|
| Beam diameter | 30–150 mm | 10 – 30 mm | 20 mm |
| Loop Speed | 5–10 Hz | 5–10 Hz | 5–10 Hz |
| Final aberrations | 0.03 λ RMS | 0.03 λ RMS | 0.03 λ RMS |
| Nb of actuators | Around 40 | Around 40 | 640x480 1024x768 |
| Damage threshold | Very high (up to 5 J.cm ²) | High | Medium (<1 J.cm ²) |
| Applications | High Power Lasers | Imaging Correction | Beam shaping & imaging correction |





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