

OPTOMAN

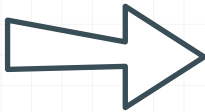
YOUR SIDEKICK FOR
LASER OPTICS DEVELOPMENT



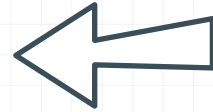
VS

OPTOMAN

LADY DISPERSION



A dielectric fight for pulse duration
downscaling and energy upscaling
IN MULTIPASS CELLS (MPC)



Nonlinear compression of laser pulses with tens of millijoule energy in a gas-filled multipass cell is a promising approach to realize a new generation of high average power femtosecond sources.

The whole approach relies on efficient HR mirrors, which enable to have a large number of reflections with low losses.

OPTOMAN developed dielectric mirrors optimized specifically for MPC application. OPTOMAN offers flat, concave, and convex broadband mirrors with high reflectivity ($R > 99.99\%$), high LIDT ($> 1 \text{ J/cm}^2$ @ 1030 nm, 500 fs) and low and smooth GDD.

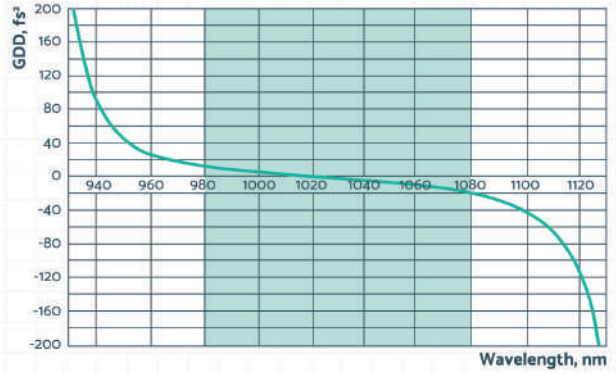
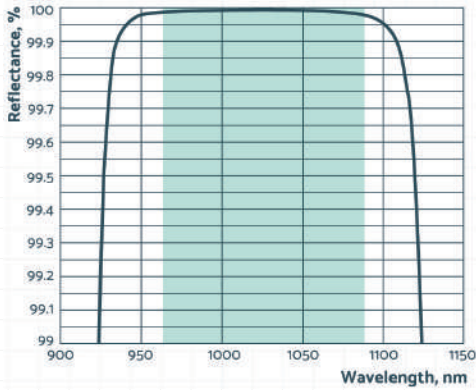
Core competence

- Ultrafast laser optics,
- High LIDT and enhanced lifetime,
- Durable and environmentally stable coatings,
- Extreme low loss coatings,
- Agility, flexibility, speed, and quick prototyping.

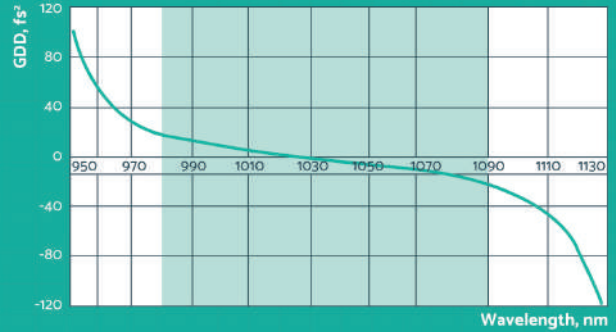
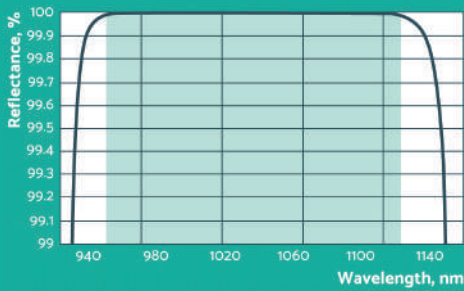
**DO NOT FORGET THAT WITH
GREAT LASER POWER COMES
GREAT RESPONSIBILITY
FOR COATERS!**

HR MIRRORS FOR MPC DESIGN EXAMPLES

HR > 99.99% @ 970-1090 nm, AOI = 0° (IGDDr1 < 20 fs² @ 980-1080 nm)



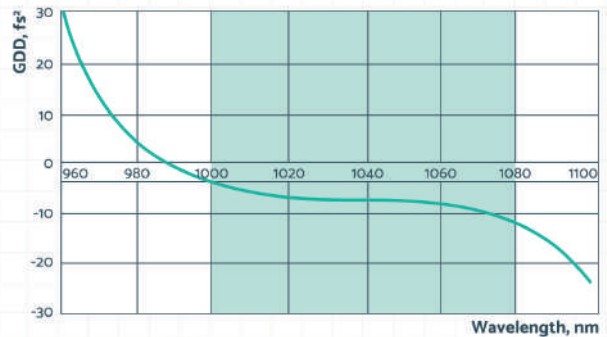
HR > 99.95% @ 950-1130 nm, AOI = 0° (IGDDr1 < 20 fs² @ 980-1090 nm)



Features:

- Mirrors available in spectral range of 400-2000 nm,
- HR (in gas) > 99.99%,
- Absorption: < 1 ppm @ 1030 nm.
- LIDT: > 1 J/cm², 1030 nm, 500 fs, 10 kHz.

Negative GDD optimization
GDD = -10 fs² ± 5 fs² @ 1000 - 1080 nm



CONTINUOS R&D

As Lady Dispersion is a tough opponent, OPTOMAN can't stop here. Spectral bandwidth of 300 nm is coming soon...