

Cobra Dye Laser

Linewidth Specifications

| Dispersion Option | Tuning Range | Linewidth | | Efficiency |
|------------------------|------------------|-----------------------|--------------------------------|--------------------|
| Three Quartz Prisms | 370 nm .. 920 nm | 0.15 nm ¹⁾ | 5 cm ⁻¹ @ 570 nm | 24 % ²⁾ |
| 1800 lines / mm, 60 mm | 400 nm .. 920 nm | 3.6 pm ⁴⁾ | 0.1 cm ⁻¹ @ 625 nm | 12 % ³⁾ |
| 1800 lines / mm, 90 mm | 400 nm .. 920 nm | 2.5 pm ⁴⁾ | 0.07 cm ⁻¹ @ 625 nm | 12 % ³⁾ |
| 2400 lines / mm, 60 mm | 350 nm .. 760 nm | 2.7 pm ⁴⁾ | 0.08 cm ⁻¹ @ 570 nm | 12 % ²⁾ |
| 2400 lines / mm, 90 mm | 350 nm .. 760 nm | 1.8 pm ⁴⁾ | 0.06 cm ⁻¹ @ 570 nm | 12 % ²⁾ |
| 3000 lines / mm, 60 mm | 350 nm .. 620 nm | 2.0 pm ⁴⁾ | 0.07 cm ⁻¹ @ 530 nm | 12 % ²⁾ |
| 3000 lines / mm, 90 mm | 350 nm .. 620 nm | 1.4 pm ⁴⁾ | 0.05 cm ⁻¹ @ 530 nm | 12 % ²⁾ |
| Dual 1800 lines / mm | 410 nm .. 900 nm | 1.7 pm ⁴⁾ | 0.05 cm ⁻¹ @ 625 nm | 10 % ³⁾ |
| Dual 2400 lines / mm | 370 nm .. 710 nm | 1.2 pm ⁴⁾ | 0.04 cm ⁻¹ @ 530 nm | 10 % ²⁾ |
| Dual 3000 lines / mm | 370 nm .. 580 nm | 1.0 pm ⁴⁾ | 0.04 cm ⁻¹ @ 500 nm | 10 % ²⁾ |

¹⁾ for wavelength <660 nm

²⁾ resonator, pre- and main amplifier at 570 nm (peak Rhodamine 6G) pumped at 532 nm

³⁾ resonator, pre- and main amplifier at 625 nm (peak DCM) pumped at 532 nm

⁴⁾ value given for 450 nm

Wavelength and Beam Characteristics

| | | |
|--------------------------------|----------------------|--------------------------------|
| Absolute Wavelength Accuracy | < 15 pm | (prism models: 0.5 nm) |
| Wavelength Resetability | < 2 pm | (prism models: 0.05 nm) |
| Wavelength Stability | < 1.5 pm / °C | (prism models: 10 pm / °C) |
| Divergence (typical) | 1.0 mrad | (0.4 mrad with main amplifier) |
| Polarization | > 98 % | (vertical) |
| ASE | < 0.5 % | |
| Pump Energies (grating models) | 8 .. 100 mJ @ 532 nm | |
| | 8 .. 130 mJ @ 355 nm | |
| Pump Energies (prism models) | 8 .. 230 mJ @ 532 nm | |
| | 8 .. 230 mJ @ 355 nm | |

Requirements

| | |
|------------------|---|
| Voltage | 110 .. 230 V, single phase, 50 Hz / 60 Hz |
| Control Computer | XP / Vista / Windows 7 / Windows 8 / Windows 10, USB Port |

Options

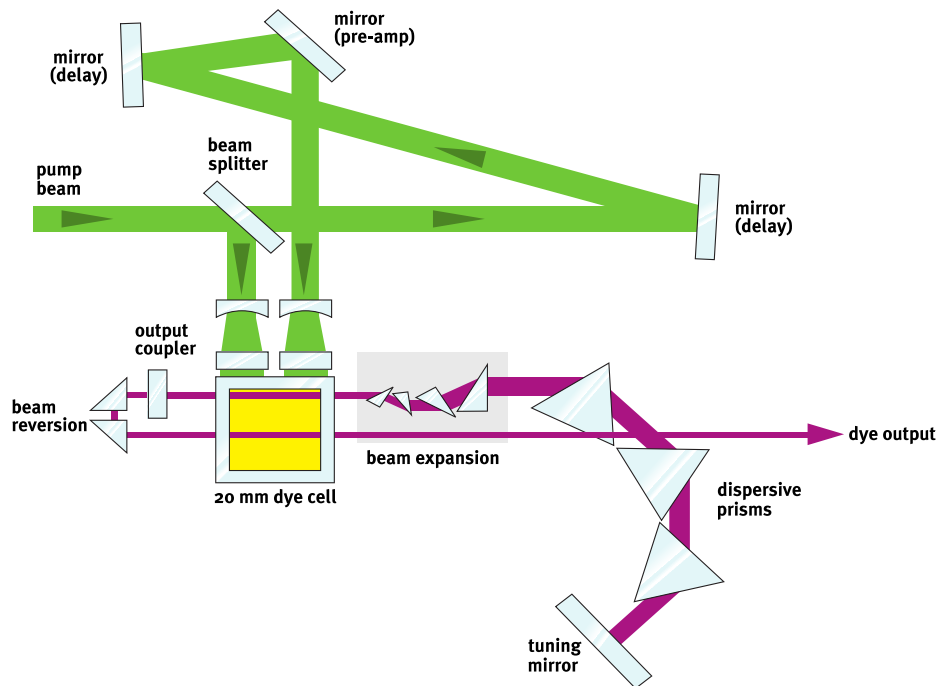
- Double wavelength pump optic (532 nm, 355 nm)
- Frequency doubling / mixing units (external housing)
- Automatic exchange of gratings
- Piezo wavelength control
- Dynamic mode option
- Double bandwidth option

Cobra Dye Laser

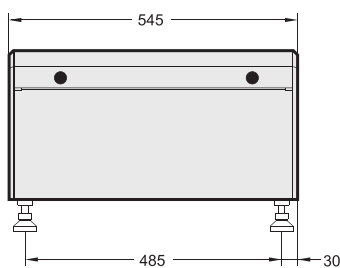
Cobra Dye Laser



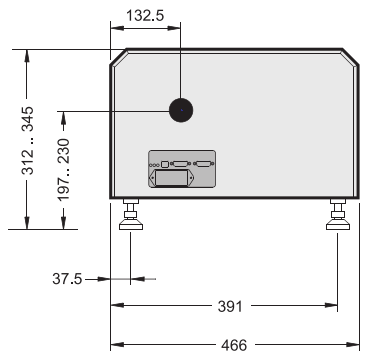
Optical Layout



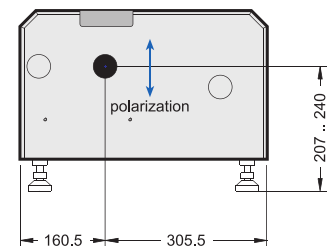
Dimensions



Cobra (side view)



Cobra (pump laser input end)



Cobra (dye laser output end)

All Dimensions in mm
Specifications are subject to change without notice



Heinrich-Hertz-Straße 11
D-41516 Grevenbroich

phone +49 21 82.82 98 18-0
fax +49 21 82.82 98 18-40