

PrecisionScan 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	30 % ²⁾
1800 lines / mm, 60 mm	400 nm .. 920 nm	3.6 pm ⁴⁾	0.1 cm ⁻¹ @ 625 nm	30 % ³⁾
1800 lines / mm, 90 mm	400 nm .. 920 nm	2.5 pm ⁴⁾	0.07 cm ⁻¹ @ 625 nm	30 % ³⁾
2400 lines / mm, 60 mm	370 nm .. 760 nm	2.7 pm ⁴⁾	0.08 cm ⁻¹ @ 570 nm	30 % ²⁾
2400 lines / mm, 90 mm	370 nm .. 760 nm	1.8 pm ⁴⁾	0.06 cm ⁻¹ @ 570 nm	30 % ²⁾
3000 lines / mm, 60 mm	370 nm .. 620 nm	2.0 pm ⁴⁾	0.07 cm ⁻¹ @ 530 nm	30 % ²⁾
3000 lines / mm, 90 mm	370 nm .. 620 nm	1.4 pm ⁴⁾	0.05 cm ⁻¹ @ 530 nm	30 % ²⁾
Dual 1800 lines / mm	410 nm .. 900 nm	1.7 pm ⁴⁾	0.05 cm ⁻¹ @ 625 nm	27 % ³⁾
Dual 2400 lines / mm	370 nm .. 710 nm	1.2 pm ⁴⁾	0.04 cm ⁻¹ @ 530 nm	27 % ²⁾
Dual 3000 lines / mm	370 nm .. 580 nm	1.0 pm ⁴⁾	0.04 cm ⁻¹ @ 500 nm	27 % ²⁾

¹⁾ for wavelength < 660 nm

²⁾ at 570 nm (peak Rhodamine 6G) pumped at 532 nm

³⁾ at 625 nm (peak DCM) pumped at 532 nm

⁴⁾ value given for 450 nm

Wavelength and Beam Characteristics

Absolute Wavelength Accuracy	< 15 pm
Wavelength Resetability	< 2 pm
Wavelength Stability	< 1.5 pm / °C
Divergence (typical)	0.4 mrad
Polarization	> 98 % (vertical)
ASE	< 0.5 %
Pump Energies (grating models)	50 .. 650 mJ @ 532 nm (800 mJ ⁴⁾)
	50 .. 400 mJ @ 355 nm (500 mJ ⁴⁾)
	300 .. 1400 mJ @ 532 nm with 2nd main amplifier
	300 .. 1000 mJ @ 355 nm with 2nd main amplifier

⁴⁾ with enhanced beam profile (capillary) dye cell

Requirements

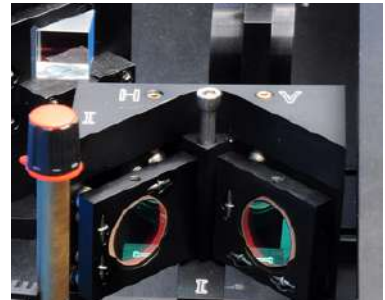
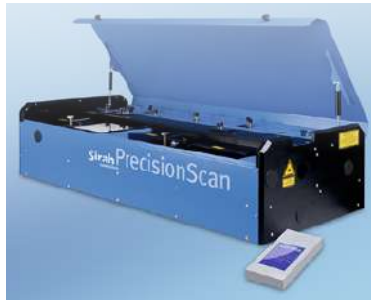
Voltage	110 .. 230 V, single phase, 50 Hz / 60 Hz
Computer Control	XP / Vista / Windows 7 / Windows 8 / Windows 10, USB Port

Options

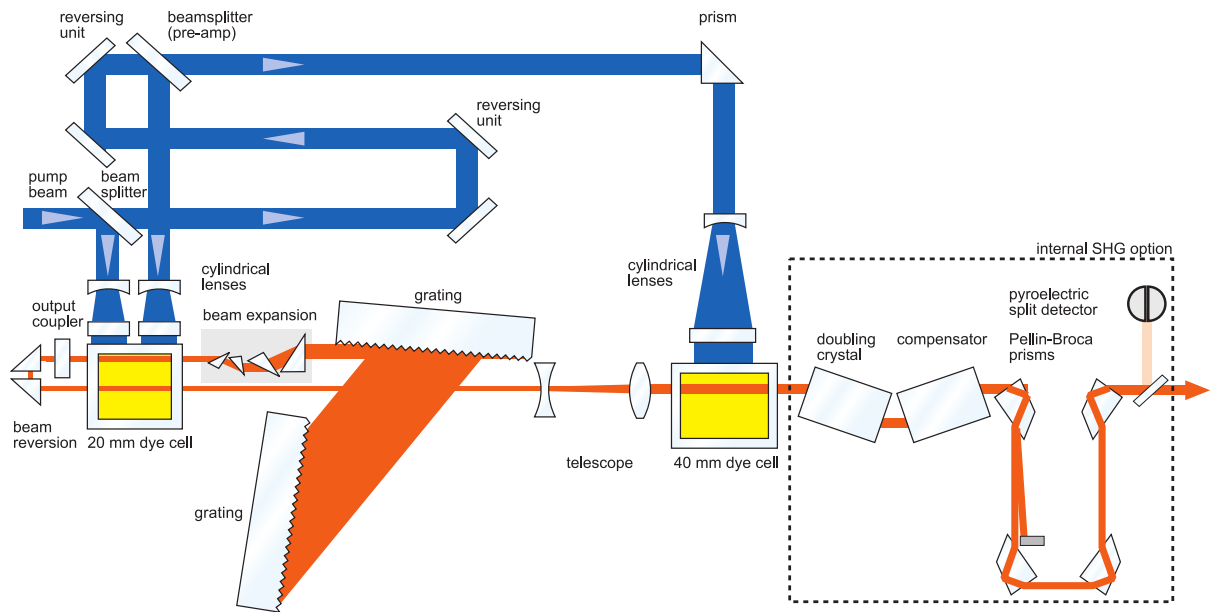
- Automatic exchange of gratings
- Second main amplifier for higher output energy
- Internal frequency doubling (with 2nd main amplifier: external housing)
- External mixing units
- Piezo wavelength control
- Dynamic mode option
- Double bandwidth option)

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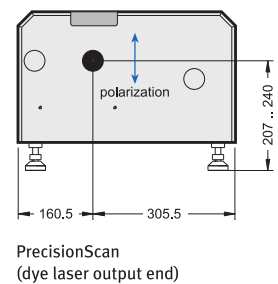
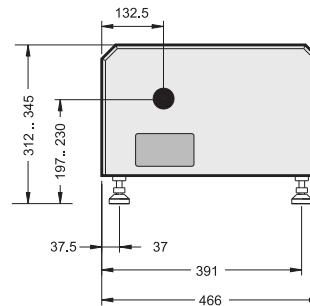
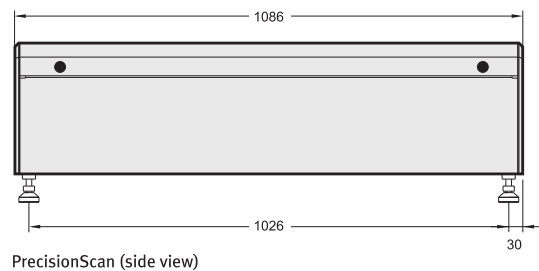
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Optical Layout



Dimensions



All Dimensions in mm
Specifications are subject to change without notice



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