

Femtosecond Laser Technical Specifications

Doc. Nr. FL5910-000-0062-07



System Specifications

Laser Type	Mode-locked, diode-pumped Yb oscillator
Mode	Fundamental (TEM ₀₀)
Central Laser Wavelength	1045 nm ±10 nm
Laser Pulse Duration	200 – 350 fs
Laser Class	4
Maximum laser beam output	< 1000 mWatts
Remote Interlock	Yes
Operating current of pump diode	Difference to undesired modes of laser > 0.5 A
Base Station Footprint	95cm (L) x 70cm (W) x 76cm (H)
System Height	100cm (floor to fixed mirror articulating arm) 139cm (floor to top of screen)
System Weight	215 kg
Input Voltage & Maximum Current	100/120/230-240 VAC, 50-60 Hz; 700 VA
Interfaces	USB 2 / Ethernet / ext. interlock / footpedal
Ambient Operating Conditions	18 to 24° C (65 to 75° F), 20 to 70% rH
Recommended Storage Conditions	10 to 50°C (50 to 122° F), 20 to 70% rH
Recommended Transport Conditions	-20 to 60°C (-4 to 140° F), 10 to 90% rH not condensed
Atmospheric pressure range	500 hPa to 1060 hPa.

Application Parameters

Time to create a Flap	< 1 minute from "suction on" to "suction off"
Flap Diameter *)	Selectable flap diameters are: 8.5, 9.0, 9.5, 10.0 mm
Flap Thickness *)	Selectable values: 140 µm, 110 µm, 90 µm
*) Flap diameter and thickness are determined by the choice of a suction ring and of an InterShield spacer with appropriate dimensions. System software will automatically recognize dimensions of suction ring and InterShield selected by the user.	
Eye fixation	Suction ring and computer controlled vacuum system. Vacuum level 300 – 700 mbar.
Hinge Position	nasal; temporal; superior; inferior
Hinge Angles	45°, 50°, 55°, 60°, 65°
Hinge Size	Hinge size is determined by the selected hinge angle. The resulting hinge length and hinge width are computed and displayed.
Small Hinge Width Warning	If a hinge width of < 0.75 mm is computed, a warning message is displayed and must be acknowledged to be able to proceed. This is a safety measure to prevent an unintended creation of a free flap.

Regulatory Status: CE marked 0297; FDA 510(k) cleared.