

LASERS OF HCL SERIES (0.442 μm)

Helium-Cadmium lasers of HCL series are intended to be used as a source of coherent emission in scientific and research activities, stereolithography, manufacturing of holographic optical elements, metrology, biochemistry and cytometry, polygraphy, medical diagnostics and therapy.

The lasers comprise of laser head and power supply. Optics holder, to which a discharge tube is fastened and which is sealed by Brewster windows, is the basis of the laser head design.



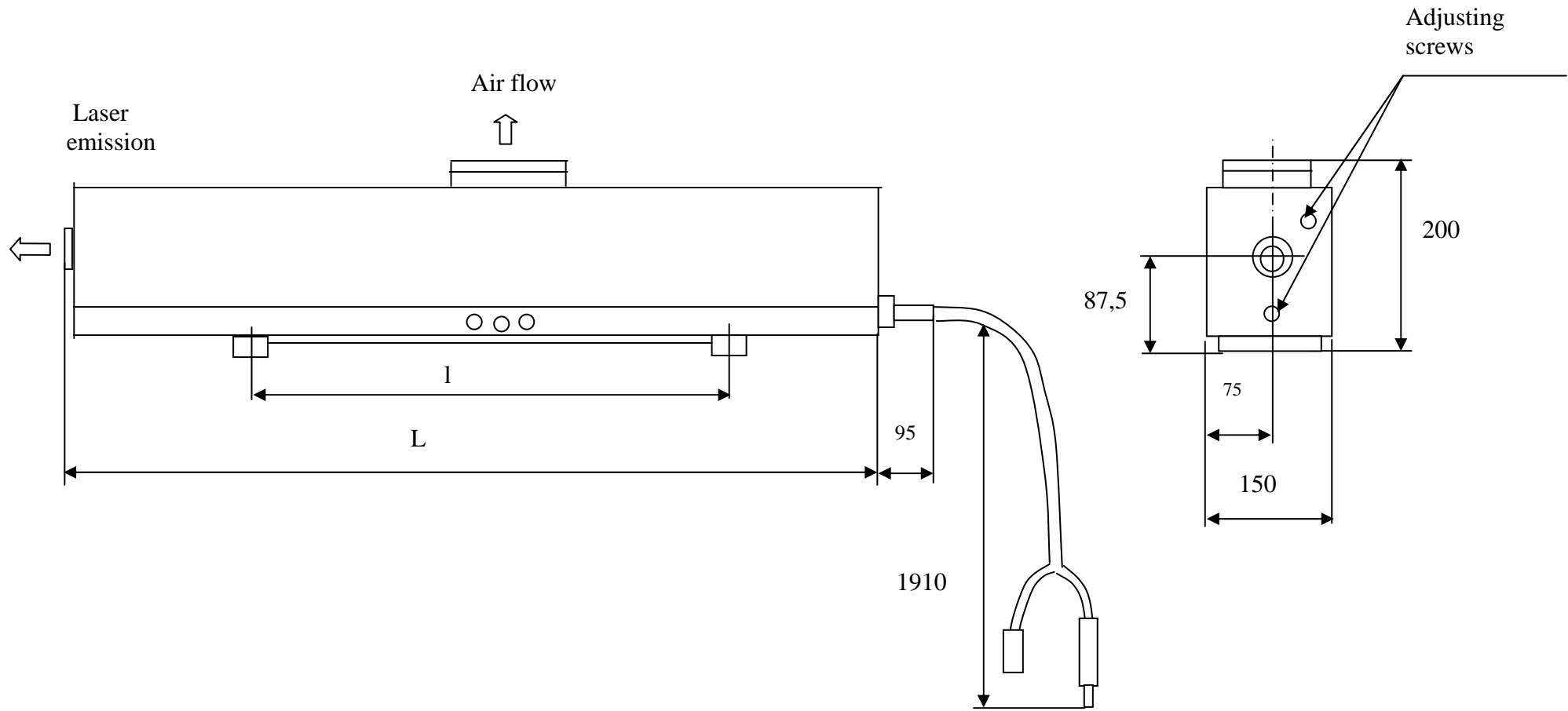
Parameters	HCL-50V	HCL-60V(I)	HCL-70VM(I)	HCL-100V	HCL-100V(I)
Wavelength, μm	0.442				
Emission power (typical), mW	60	80	100	100	150
Spectral structure	TEM ₀₀		TEM _{mn}	TEM ₀₀	
Polarization	100:1		1:1	100:1	
Beam diameter, mm, not more	1.6		2.0	2.1	
Beam divergence, mrad, not more	0.9		2.5	0.9	
Power consumption, W, not more	500			1000	
Dimensions of laser head, mm, not more	1015x150x200			1510x150x200	
Dimensions of power supply, mm, not more	365x380x150			405x380x150	
Mass, kg, not more (laser head/power supply)	11.0/8.0			20.0/10.0	
Warranty lifetime, h, not less	2000				
Mean life, h, not less	3000				

* Relative power instability $\pm 5\%$

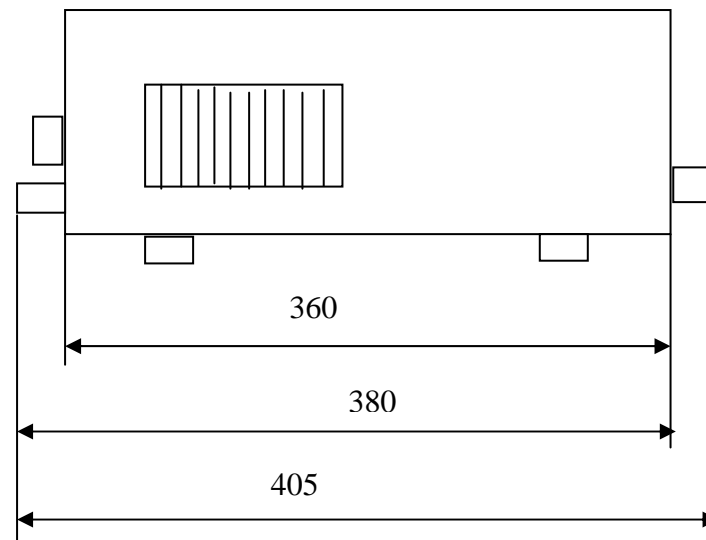
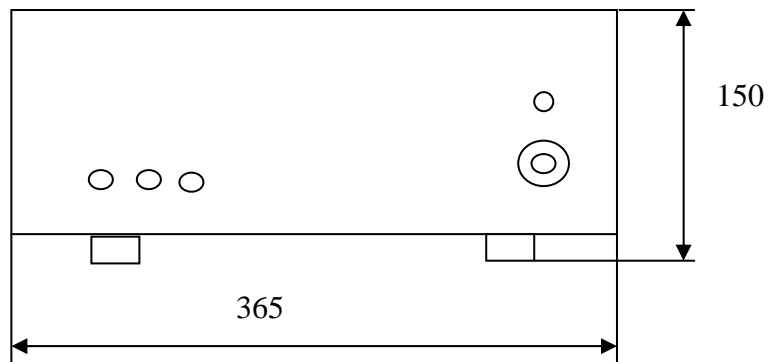
** Instability of directional pattern axis 0.25 mrad (during 3 hours)

*** Units with (I) index have coherence length 300 mm (without index – 100 mm)

Dimensional drawing of laser head



Dimensional drawing of power supply



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