



Laser Disks TD 12/20/25-7

	TD 12-7 HD	TD 20-7	TD 25-7
Material:	Yb:YAG	Yb:YAG	Yb:YAG
Doping concentration:	7 %	7 %	7 %
Thickness:	0.215 mm	0.215 mm	0.215 mm
Shape unpumped:	spherical	spherical	spherical
Radius of curvature:	typically around - 10 m, concave; the disk shape is changed in laser operation mainly due to the bending of the heat sink, which is convex. The rule of thumb is a change of refractive power of - 0,05 m ⁻¹ per 100 W for pump spot diameter of > 4 mm or - 0,1 m ⁻¹ per 100 W for pump spot diameter of about 3 mm		
Wedge:	0.1° (between reflected beams), parallel surface available on request		
Free aperture:	diameter 8 mm	diameter 15 mm	diameter 20 mm
AR coating:	R@1030 nm < 0.1 %		
HR coating:	R@1030 nm, 0° > 99.9 % R@940 nm, optimized for use with TDM 1.0	R@940 nm, optimized for use with TDM 30	
Optical axis of the disk:	orthogonal to base +/- 0.5°, depends on wedge orientation		
Maximum pump power:	4 kW/cm ² for pump spot diameters ≤ 3 mm and 2 kW/cm ² for larger pump spot diameters (with top-hat pump profile and in fluorescence mode only; in laser operation as a rule of thumb, the damage threshold increases by the actual extracted laser power with respect to the pump spot area.		
Standard pump spot diameter:	3.2 mm	n.a.	n.a.
Damage threshold:	> 4.7 – 7.6 J/cm ² (10 ns pulses, for 10k pulses, tested by Institute of Technical Physics (DLR), only tested for HD version)		



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