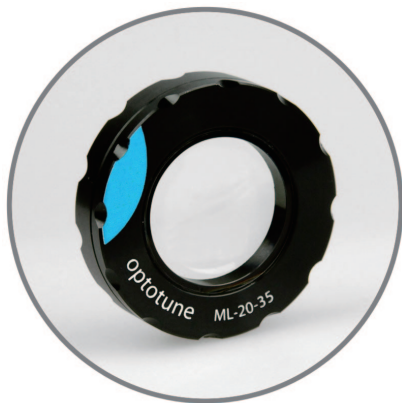


Manually Tunable Lens ML-20-35



Manually Tunable Lens ML-20-35

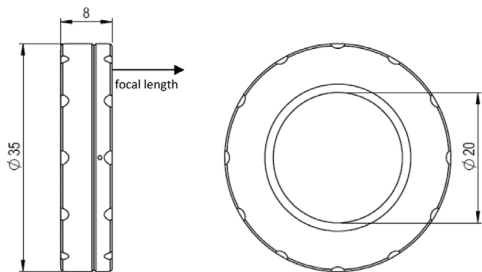
The curvature of the lens can be manually changed from convex to flat to concave by rotating the outer ring attached to the lens. The focal length is accordingly tuned to a desired value. Optotune currently offers three lens versions:

- ML-20-35-VIS-HR: High refractive index ($n_D = 1.559$), visible anti-reflection coating (400 – 700 nm)
- ML-20-35-VIS-LD: High Abbe number ($V = 100$), visible anti-reflection coating (400 - 700 nm)
- ML-20-35-NIR-HR: High refractive index ($n_D = 1.559$), visible anti-reflection coating (700 – 1100 nm)
- ML-20-35-NIR-LD: High Abbe number ($V = 100$), near infrared anti-reflection coating (700 – 1100 nm)

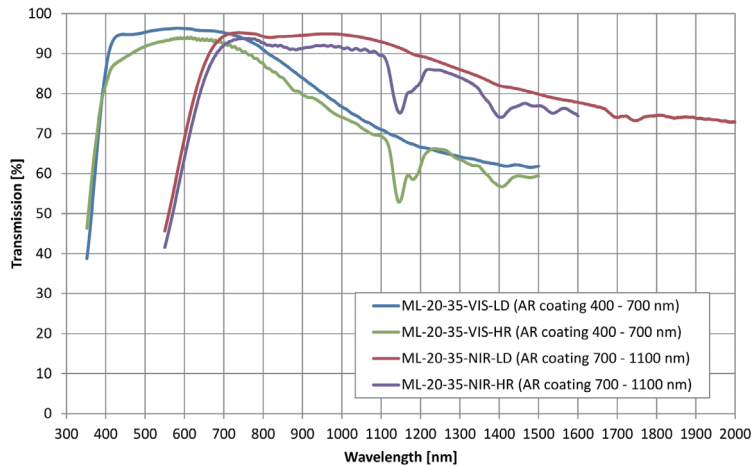
The following table gives the specification of our standard manual lens. Lens aperture, thickness and tuning range can be adapted on demand.

	ML-20-35-VIS-HR ML-20-35-NIR-HR	ML-20-35-VIS-LD ML-20-35-NIR-LD
Focal tuning range @ 525nm	-40 ... inf ... +40 mm	-80 .. inf .. 80 mm
Dispersion		
n_F (486.1nm)	1.572	1.302
n_D (589.3nm)	1.559	1.300
n_C (656.3nm)	1.554	1.299
Abbe number V	31	100
Mechanical specifications		
External diameter	35 mm	
Clear aperture ¹	20 mm	
Thickness	8 mm	
Weight	11.35 g	
Lifecycles	>100'000	
Optical specifications		
Lens type	from plano-convex to plano-concave	
Optical damage threshold @ 1064nm	10 kW/cm ²	
Polarization	Preserving	
Thermal specifications		
Storage temperature	[-40,+85] °C	
Operating temperature	[-20,+65] °C	
Test conditions		
Lens diameter used for characterization	80 % of clear aperture	
Temperature	20° C	

¹Recommended useful aperture is 80% of clear aperture



Mechanical drawing (unit: mm)



Transmission spectrum of the ML-20-35 with standard broad-band coatings