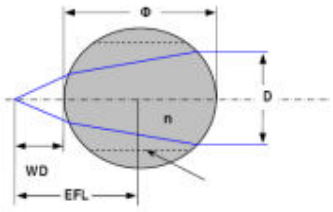
rods cylindrical lenses

Cylindrical rod lenses are highly polished small diameter rods made of optically transparent homogeneous materials. A carefully controlled manufacturing process produces rods (or fibers) with precise diameters and unsurpassed surface quality.

When illuminated sideways, these rods (or fibers) act as cylindrical lenses whose numerical aperture is proportional to their refractive index. The rods are cut to desired length and can be ground on top and/or bottom relative to the direction of the optical axis in order to facilitate packaging and orient AR coating. The round cross-section of these lenses results in a large field of view and a simple and cost-effective alignment where most of the positioning errors result in simple focusing errors.

In order to accommodate a small emitter pitch, the edge of the lens may be ground to a desired width.

WEBCODE:	D122-xxx	
LENS DRAWING		
		
SPECIFICATIONS	SYMBOL	VALUE
Lens Type		CYLINDRICAL
Material		BK7 FUSED SILICA S-TIH53
Available Diameter	Φ	from 0.1 to 20 mm (for larger radius please refer to our double-convex cylindrical lenses)
Height	H	typically H = Φ
Central Thickness	CT	CT = Φ
Length	L	custom
Dimensions tolerance	Δ	+/- 0.05 mm
Effective focal length	**EFL**	EFL = (Φ / 4) x n / (n-1)
Working distance	WD	WD = (Φ / 4) x (2 - n) / (n - 1)
AR coating	AR	2S-VIS : broad band 2 side AR coating @ 600 – 900 nm 2S-NIR : broad band 2 side AR coating @ 750 – 1100 nm
Note		other custom dimensions and custom AR coating are available upon request