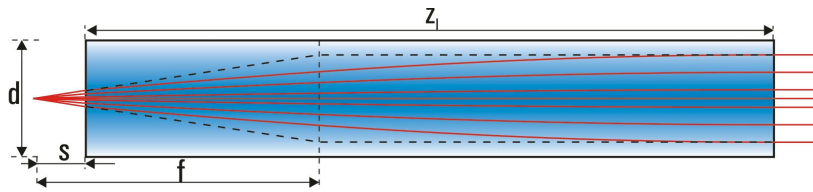


GRIN Rod Lenses – Numerical Aperture 0.2



Gradient index lenses for fiber coupling and beam shaping of laser diodes

Diameter (mm)	Pitch P	Working distance s (mm)	Numerical Aperture NA	Lens length z_l (mm)	Focal length f (mm)	Gradient constant g (mm ⁻¹)	Refractive index at the center of the profile n_0	Wavelength λ (nm)	Product code
0.50	0.25	0	0.20	3.05	1.28	0.515	1.524	670	GT-LFRL-050-025-20-CC (670)
	0.25	0	0.20	3.06	1.28	0.513	1.521	810	GT-LFRL-050-025-20-CC (810)
	0.25	0	0.20	3.07	1.29	0.511	1.515	1550	GT-LFRL-050-025-20-CC (1550)
	0.24	0.07 – 0.09*	0.20	2.94	1.28	0.511 - 0.515*	1.515 - 1.524*	670 - 1550	GT-LFRL-050-024-20-CC
1.00	0.25	0	0.20	6.12	2.56	0.257	1.524	670	GT-LFRL-100-025-20-CC (670)
	0.25	0	0.20	6.13	2.57	0.256	1.521	810	GT-LFRL-100-025-20-CC (810)
	0.25	0	0.20	6.16	2.59	0.255	1.515	1550	GT-LFRL-100-025-20-CC (1550)
	0.24	0.15 – 0.18*	0.20	5.89	2.57	0.255 - 0.257*	1.515 - 1.524*	670 - 1550	GT-LFRL-100-024-20-CC
1.80	0.25	0	0.20	11.15	4.66	0.141	1.524	670	GT-LFRL-180-025-20-CC (670)
	0.25	0	0.20	11.17	4.68	0.140	1.521	810	GT-LFRL-180-025-20-CC (810)
	0.25	0	0.20	11.22	4.72	0.139	1.515	1550	GT-LFRL-180-025-20-CC (1550)
	0.24	0.26 – 0.31	0.20	10.74	4.68	0.139 – 0.141*	1.515 - 1.524*	670 - 1550	GT-LFRL-180-024-20-CC

*: depending on wavelength

- Working distance, design wavelength and lens length deviating from these standards are available on request
- other diameters (0.25 mm and 0.35 mm) are available on request
- ZEMAX files can be [DOWNLOADED](#) from our website
- For tolerances, handling and storage see page 22

GRIN rod lenses are offered without antireflection coatings as standard.

Antireflection coatings ($R < 1.0\%$ for the design wavelength and incidence angles of $0 \dots 10^\circ$ corresponding to measurements on a reference substrate) can be offered:

Coating Code: NC: no coating (reflection loss approx. 12%) - standard
 C1: $\lambda = 450 \dots 690$ nm
 C2: $\lambda = 800 \dots 1000$ nm
 C5: $\lambda = 1310 \dots 1550$ nm

One - sided coatings are available on request.

Order example:

GT - LFRL - 100 - 025 - 20 - CC - (670)	
GT	GRINTECH
LFRL	Focusing Rod Lens
100	Diameter: 0.5, 1.0, 1.8 mm
025	Pitch: 0.25 or 0.24
20	NA: 0.20
CC	Coating Code: NC, C1, C2 or C5
(670)	Design Wavelength

Variations due to modifications of the production process are possible. It is the user's responsibility to determine suitability for the user's purpose.