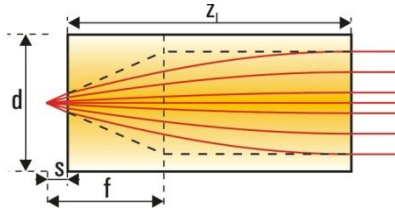


GRIN Rod Lenses – Numerical Aperture 0.5

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



Order example: GT-LFRL-100-025-50-CC (670)
 Design wavelength
 Coating Code
 NA: 0.5
 Pitch: 0.25
 Diameter: 1.0 mm
 Laser Focusing Rod Lens
 GRINTECH

- § Working distance, design wavelength and lens length deviating from these standards can also be produced
- § 8° angled facet / other diameters (0.60 and 0.85 mm) are available on request
- § ZEMAX files can be [DOWNLOADED](#) from our website

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
Diameter d: 0.35 mm								
0.25	0	0.56	0.77	0.30	2.032	1.629	670	GT-LFRL-035-025-50-CC (670)
0.23	0.04	0.56	0.70	0.31	2.032	1.629	670	GT-LFRL-035-023-50-CC (670)
0.25	0	0.55	0.78	0.31	2.019	1.624	810	GT-LFRL-035-025-50-CC (810)
0.23	0.04	0.55	0.71	0.31	2.019	1.624	810	GT-LFRL-035-023-50-CC (810)
0.25	0	0.54	0.78	0.31	2.004	1.616	1550	GT-LFRL-035-025-50-CC (1550)
0.23	0.04	0.54	0.72	0.31	2.004	1.616	1550	GT-LFRL-035-023-50-CC (1550)
Diameter d: 0.5 mm								
0.25	0	0.54	1.15	0.45	1.369	1.629	670	GT-LFRL-050-025-50-CC (670)
0.23	0.06	0.54	1.05	0.45	1.369	1.629	670	GT-LFRL-050-023-50-CC (670)
0.25	0	0.53	1.15	0.45	1.361	1.624	810	GT-LFRL-050-025-50-CC (810)
0.23	0.06	0.53	1.05	0.46	1.361	1.624	810	GT-LFRL-050-023-50-CC (810)
0.25	0	0.53	1.16	0.46	1.349	1.616	1550	GT-LFRL-050-025-50-CC (1550)
0.23	0.06	0.53	1.06	0.46	1.349	1.616	1550	GT-LFRL-050-023-50-CC (1550)
Diameter d: 1.0 mm								
0.25	0	0.55	2.25	0.88	0.697	1.629	670	GT-LFRL-100-025-50-CC (670)
0.23	0.12	0.55	2.05	0.89	0.697	1.629	670	GT-LFRL-100-023-50-CC (670)
0.25	0	0.54	2.27	0.89	0.693	1.624	810	GT-LFRL-100-025-50-CC (810)
0.23	0.12	0.54	2.06	0.90	0.693	1.624	810	GT-LFRL-100-023-50-CC (810)
0.25	0	0.53	2.29	0.90	0.687	1.616	1550	GT-LFRL-100-025-50-CC (1550)
0.23	0.12	0.53	2.08	0.91	0.687	1.616	1550	GT-LFRL-100-023-50-CC (1550)
Diameter d: 1.8 mm								
0.25	0	0.52	4.24	1.66	0.370	1.629	670	GT-LFRL-180-025-50-CC (670)
0.23	0.23	0.52	3.85	1.68	0.370	1.629	670	GT-LFRL-180-023-50-CC (670)
0.25	0	0.52	4.27	1.67	0.368	1.624	810	GT-LFRL-180-025-50-CC (810)
0.23	0.23	0.52	3.88	1.69	0.368	1.624	810	GT-LFRL-180-023-50-CC (810)
0.25	0	0.51	4.30	1.70	0.365	1.616	1550	GT-LFRL-180-025-50-CC (1550)
0.23	0.23	0.51	3.92	1.71	0.365	1.616	1550	GT-LFRL-180-023-50-CC (1550)
Diameter d: 2.0 mm								
0.25	0	0.51	4.85	1.89	0.324	1.629	670	GT-LFRL-200-025-50-CC (670)
0.23	0.25	0.51	4.42	1.91	0.324	1.629	670	GT-LFRL-200-023-50-CC (670)
0.25	0	0.51	4.88	1.91	0.322	1.624	810	GT-LFRL-200-025-50-CC (810)
0.23	0.25	0.51	4.45	1.93	0.322	1.624	810	GT-LFRL-200-023-50-CC (810)
0.25	0	0.50	4.92	1.94	0.319	1.616	1550	GT-LFRL-200-025-50-CC (1550)
0.23	0.25	0.50	4.50	1.96	0.319	1.616	1550	GT-LFRL-200-023-50-CC (1550)

GRIN rod lenses are offered with antireflection coatings (R < 0.5 % for the design wavelength and incidence angles of 0 ... 30° corresponding to measurements on a reference substrate)

Coating Code: NC: no coating (reflection loss approx. 12 %)
 C1: λ = 450 ... 690 nm
 C2: λ = 800 ... 960 nm
 C5: λ = 1310 ... 1550 nm

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

Tolerances:
 lens length z_l: ± 5% due to variations of the gradient constant
 working distance s: ± 0.02 mm
 diameter d: + 0 / -0.01 mm
 Please ask for tighter diameter tolerances

Surface quality:
 5 / 3 x 0.025; L 3 x 0.005; E 0 (defined by DIN ISO 10110-7:2000-02).
 The surface quality is defined within 90 % of the lens diameter. Outside of this area defects are allowed.

Please note our partnership with Inscopix as our exclusive distributor for the field of non-confocal, single photon epi-fluorescence imaging for neuroscience applications in non-humans (see page 11).

