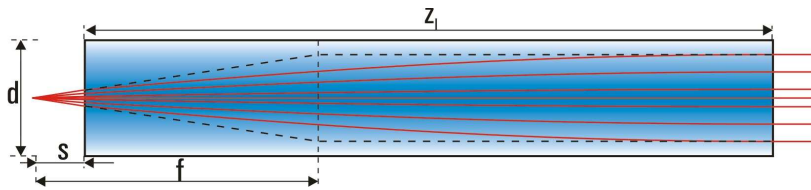


NEW: GRIN Rod Lenses – Numerical Aperture 0.2 – for high-performance collimation

Diameter 1.80 mm:

with optimized gradient index profile for compensation of higher-order spherical aberrations and better beam quality



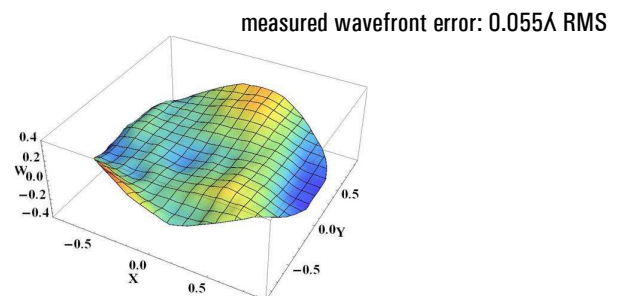
- Working distance, design wavelength and lens length deviating from these standards on request
- 8° angled facet is available on request

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: 1.8 mm								
0.25	0	0.19	11.06	4.62	0.142	1.524	670	GT-LFRL-180-025-20-CC (670)
0.24	0.28	0.19	10.63	4.63	0.142	1.524	670	GT-LFRL-180-024-20-CC (670)
0.25	0	0.19	11.08	4.64	0.142	1.521	810	GT-LFRL-180-025-20-CC (810)
0.24	0.28	0.19	10.65	4.65	0.142	1.521	810	GT-LFRL-180-024-20-CC (810)
0.25	0	0.19	11.13	4.68	0.141	1.515	1310-1550	GT-LFRL-180-025-20-CC (1550)
0.24	0.28	0.19	10.71	4.69	0.141	1.515	1310-1550	GT-LFRL-180-024-20-CC (1550)

GT-CFRL-180-xxx-20-CC (xxxx) / all dimensions equivalent to standard GT-LFRL-180-xxx-20-CC (xxxx)

optimized GT-CFRL-180-xxx-20-CC (xxxx)

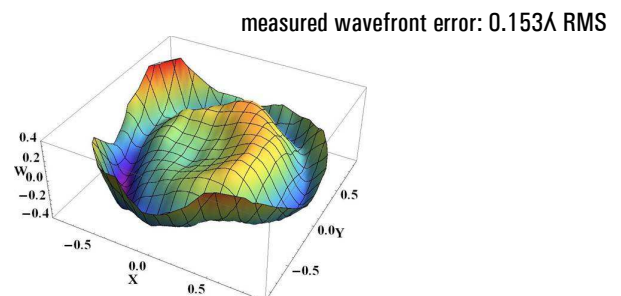
- **Wavefront RMS @ 635 nm < 0.07**
- diffraction limited properties
- higher order spherical aberrations are corrected
- for high-performance applications (e.g. collimators with M² < 1.1)



for comparison:

standard GT-LFRL-180-xxx-20-CC (xxxx)

- suitable for most common telecom applications
- **Wavefront RMS @ 635 nm < 0.2**
- residual aberration: higher order spherical aberrations



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. 10 %)
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: ± 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.