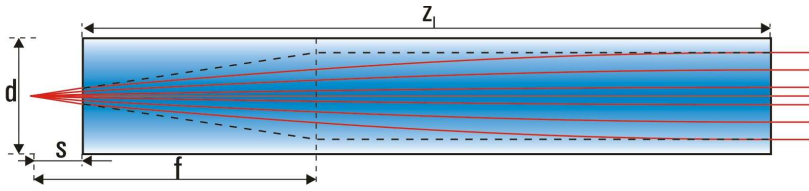


NEW: GRIN Rod Lenses – Numerical Aperture 0.2 – for high-performance collimation

Diameter 1.00 mm:

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



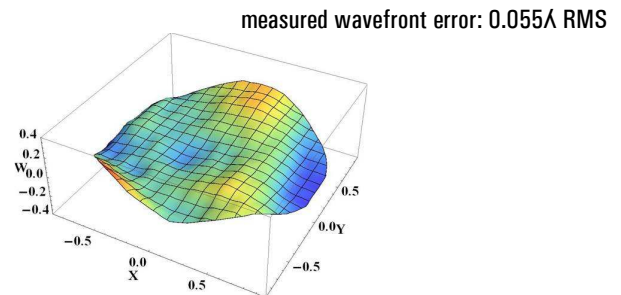
- Working distance, design wavelength and lens length deviating from these standards on request
- 8° angled facet is available on request

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: 1.0 mm								
0.25	0	0.20	6.04	2.52	0.260	1.524	670	GT-LFRL-180-025-20-CC (670)
0.24	0.16	0.20	5.80	2.53	0.260	1.524	670	GT-LFRL-180-024-20-CC (670)
0.25	0	0.20	6.05	2.53	0.260	1.521	810	GT-LFRL-180-025-20-CC (810)
0.24	0.16	0.20	5.81	2.54	0.260	1.521	810	GT-LFRL-180-024-20-CC (810)
0.25	0	0.19	6.08	2.55	0.258	1.515	1310-1550	GT-LFRL-180-025-20-CC (1550)
0.24	0.16	0.19	5.84	2.56	0.258	1.515	1310-1550	GT-LFRL-180-024-20-CC (1550)

GT-CFRL-100-xxx-20-CC (xxxx) / all dimensions equivalent to standard GT-LFRL-100-xxx-20-CC (xxxx)

optimized GT-CFRL-100-xxx-20-CC (xxxx)

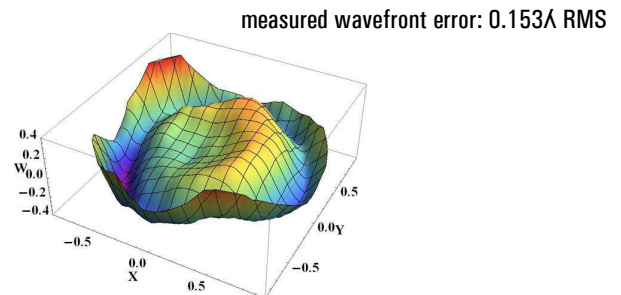
- **Wavefront RMS @ 635 nm < 0.07**
- diffraction limited properties
- higher order spherical aberrations are corrected
- for high-performance applications (e.g. collimators with $M^2 < 1.1$)



for comparison:

standard GT-LFRL-100-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 $0^\circ \dots 30^\circ$ corresponding to measurements on a reference substrate)

Coating Code: NC: no coating (reflection loss approx. 10 %)
C1: $\lambda = 450 \dots 690$ nm
C2: $\lambda = 800 \dots 960$ nm
C5: $\lambda = 1310 \dots 1550$ 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 : $\pm 5\%$ 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.