



Single-mode optical fiber with low water peak E3 (G657A1/G652D) is a fiber with a reduced sensitivity to bends. The fiber is produced by vapor axial deposition method (VAD) with a quartz core alloyed with Germanium. It complies with the recommendations ITU-T G.652d completely and ITU-T G.657A1 with the parameters of macrobend loss and attenuation. It is a product manufactured in the Russian Federation. Double acrylic coating provides its high strength and a long service life. The fiber works in a full spectral range of different access networks, including FTTH, and can be

applied in long distance communications. Fiber bending resistance and improved attenuation parameters give an advantage in the application for residential networks. The quality control system of the factory confirms plug compatibility with E3 fiber (G652d) manufactured by "Optic fiber Systems", JSC as well as with all standard SMF fibers. Fiber quality's compliance with Russian and international standards is confirmed by the Certificate № SSAQ 025.1.2.0126 issued by certification agency "Kabelsert" of JSC "VNIIEK" on 08.06.2018.

## Dimensional Specifications

Core-Clad Concentricity, $\mu\text{m}$	$\leq 0,5$
Cladding Diameter, $\mu\text{m}$	$125\pm 0,7$
Cladding Non-Circularity, %	$\leq 0,7$
Coating Diameter, $\mu\text{m}$	$242\pm 5$
Fiber Curl, m radius of curvature	$\geq 4$
Coating-Cladding Concentricity, $\mu\text{m}$	$\leq 12$
Length*, km	25,2 / 50,4

\*Supplies of other lengths are possible

## Optical Specifications

Maximum Attenuation\*, dB/km at wavelengths

1310 nm	$\leq 0,32$
1383 nm	$\leq 0,32$
1550 nm	$\leq 0,18$
1625 nm	$\leq 0,2$

Attenuation vs. wavelength

1285-1330 nm at wavelength 1310 nm	$\leq 0,03$
1525-1575 nm at wavelength 1550 nm	$\leq 0,02$

\*\* Attenuation coefficients in a wavelength range do not differ from attenuation coefficients at references more than indicated values

Point discontinuity, dB

1310 nm	$\leq 0,05$
1550 nm	$\leq 0,05$

Mode Field Diameter,  $\mu\text{m}$

1310 nm	$9,2\pm 0,4$
1550 nm	$10,4\pm 0,5$

Cable Cutoff wavelength, ( $\lambda_{cc}$ ), nm

	$\leq 1260$
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Dispersion, ps/nm·km

1550 nm	$\leq 18$
1625 nm	$\leq 22$

Zero-dispersion wavelength ( $\lambda_0$ ), nm

	1300-1324
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Zero dispersion slope, ps/nm<sup>2</sup>·km

	$\leq 0,092$
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Polarization Mode Dispersion (PMD), ps/ $\sqrt{\text{km}}$

Maximum Individual Fiber PMD	$\leq 0,2$
PMD Link Design Value	$\leq 0,14$

## Performance Specifications

Effective Group Index of Refraction

1310 nm/1383 nm	1,466
1550 nm	1,467
1625 nm	1,470

## Macrobend Loss

Winding Conditions	Wavelength, nm	Induced Attenuation, (max, dB)
1 turn around a mandrel of 10mm radius	1550	0,75
	1625	1,5
10 turns around a mandrel 15mm radius 15mm	1550	0,25
	1625	1,0

## Mechanical Specifications

Proof Test, (Other tension force on request)	GPa %	$\geq 0,69$ $>1\%$
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Coating Strip Force, N

Peak force	1 – 8,9
Typical average force	1 – 5

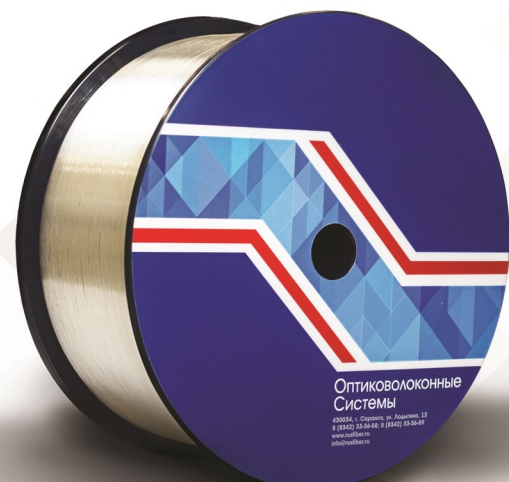
Dynamic Stress Corrosion Susceptibility Parameter (Nd)

	$\geq 20$
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## Environmental Characteristics

Induced Attenuation 1310 nm, 1550 nm & 1625 nm, dB/km

-60°C ~ +85°C Temperature dependence	$\leq 0,05$
+23°C Water Immersion	$\leq 0,05$
+85°C Heat Aging	$\leq 0,05$
+85°C/85% Damp Heat	$\leq 0,05$



This Specification offers promotional content. Specific characteristics of optical fiber to be determined in accordance with a contract and TU.