

# Graded-Index Multimode Optical Fibre. Type: 62.5 / 125 $\mu\text{m}$

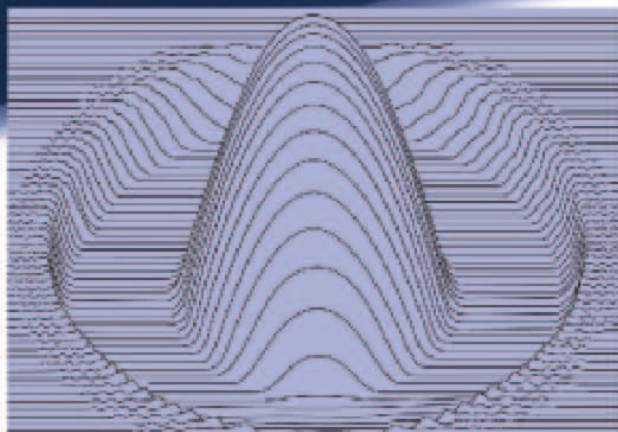


Product code: 459

Dual Layer Primary Coating (DLPC9)

Issue date: 11 / 04

Supersedes: 06 / 03



## Fibre.

This graded-index 62.5/125  $\mu\text{m}$  multimode fibre, product code 459, has a 62.5  $\mu\text{m}$  core diameter and a 125  $\mu\text{m}$  cladding diameter. The fibre is designed for use at 850 nm and/or 1300 nm.

This 62.5/125  $\mu\text{m}$  fibre is suitable for use in premises wiring applications, like Local Area Networks (including backbone, riser and horizontal) with video, data and/or voice

services using LED, VCSEL and Fabry-Perot laser sources at 850 nm or 1300 nm. This multimode fibre assures full compatibility with legacy systems, like Ethernet, FDDI, ATM and Fibre Channel. Because of the nature of the Plasma-activated Chemical Vapour Deposition (PCVD) manufacturing process, this fibre offers the highest bandwidth available in the market.

The fibre complies with or exceeds the IEC 60793-2-10 type A1b Optical Fibre Specification.

## Coating.

The multimode fibre is coated with a dual layer UV curable acrylate, type DLPC9. Designed for more stringent tight-buffer cable applications, the fibre also performs perfectly in loose tube buffer constructions and demonstrates a high resistance to microbending.

The coating offers an excellent stable coating strip force over a wide range of environmental conditions and coating stripping leaves no residues on the bare glass fibre. In tight buffer applications the entire coating construction (tight buffer and primary coating) can in general very easily be stripped off.

The DLPC9 coated fibres show unique high and stable values for the dynamic stress corrosion susceptibility parameter ( $n_1$ ), which offers a greatly improved mechanical protection to the optical fibre when used in harsh environments.

## Process.

This multimode fibre is manufactured using the PCVD process. Because of the inherent high quality of the graded refractive index profile, multimode fibres, manufactured with the PCVD process, show excellent modal bandwidth performance.

## Draktel Optical Fibre

Brasil:

Tel: + 55 15 3212-6801

Fax: +55 15 3212-681

Email: [draktelsales@draktel.com.br](mailto:draktelsales@draktel.com.br)

Website: [www.draktel.com.br](http://www.draktel.com.br)

# Specifications

## Graded-Index Multimode Optical Fibre.

### Type: 62.5 / 125 $\mu\text{m}$

Product code: 459  
 Dual Layer Primary Coating (DLPC9)  
 Issue date: 11/04  
 Supersedes: 06/03

Characteristics	Conditions	Specified Values			Units
<b>Optical Characteristics</b>					
Attenuation Coefficient	850 nm	$\leq 2.7$	$\leq 2.8$	$\leq 3.0$	[dB/km]
	1300 nm	$\leq 0.5$	$\leq 0.6$	$\leq 0.7$	[dB/km]
Minimum Modal Bandwidth [1,2]	850 nm	160 to > 300			[MHz.km]
	1300 nm	500 to > 1000			[MHz.km]
Numerical Aperture		0.275 $\pm$ 0.015			
Chromatic Dispersion		FDDI Spec			
Backscatter Characteristics [3] Step [4]	1300 nm	$\leq 0.1$			[dB]
		$\leq 0.1$			[dB]
Irregularities over fibre length Reflections		Not allowed			
Group Index of Refraction (Typical)	850 nm	1.496			
	1300 nm	1.491			
<b>Geometrical Characteristics</b>					
Core Diameter		62.5 $\pm$ 2.5			[ $\mu\text{m}$ ]
Core Non-Circularity		$\leq 5$			[%]
Core / Cladding Concentricity Error		$\leq 1.5$			[ $\mu\text{m}$ ]
Cladding Diameter		125.0 $\pm$ 1.0			[ $\mu\text{m}$ ]
Cladding Non-Circularity		$\leq 1.0$			[%]
Coating Diameter		242 $\pm$ 7			[ $\mu\text{m}$ ]
Coating Non-Circularity		$\leq 5$			[%]
Coating Concentricity Error		$\leq 10$			[ $\mu\text{m}$ ]
Length		Standard lengths up to 17.6			[km]
<b>Environmental Characteristics</b>					
Temperature Dependence Induced Attenuation	850 nm, 1300 nm -60°C to +85°C	$\leq 0.1$			[dB/km]
Temperature and Humidity Cycling Induced Attenuation	850 nm, 1300 nm -10°C to +85°C, 90% R.H.	$\leq 0.2$			[dB/km]
Water-soak Dependence Induced Attenuation	850 nm, 1300 nm 20°C for 30 days	$\leq 0.2$			[dB/km]
Damp Heat Dependence Induced Attenuation	850 nm, 1300 nm 85°C, 85% R.H., 30 days	$\leq 0.2$			[dB/km]
<b>Mechanical Characteristics</b>					
Proof Test	off line	$\geq 8.8$ $\geq 1.0$ $\geq 100$ $\geq 0.7$			[N] [%] [KPSI] [GPa]
Bending Dependence Induced Attenuation	850 nm, 1300 nm 100 turns, 75 mm diameter	$\leq 0.5$			[dB]
Dynamic Stress Corrosion Susceptibility Parameter (Typical)		$\geq 27$			
Coating Strip Force	Typical average force	1.7			[N]
	Peak force	$\geq 1.3$	$\leq 8.9$		[N]

1. The modal bandwidth is linearly normalised to 1 km, according to IEC 60793-2-10.

2. Dual window bandwidth specifications are selectable; possibilities are:

850 nm	1300 nm
160	500 MHz.km
200	600 MHz.km
250	800 MHz.km

3. OTDR measurement with 0.5  $\mu\text{s}$  pulse width.

4. Mean of bi-directional measurement.