

Those fibres display an endlessly single mode behavior and do not exhibit a high order mode cut off. They are therefore ideally suited for excellent mode delivery in the visible and above. Our new ESM-20-250-PM also exhibits record high Brillouin threshold for high power single frequency laser delivery. Custom design or solar hardened material are available on request.

## MAIN CHARACTERISTICS

- Singlemode over the whole wavelength range
- PM and no PM versions
- High Brillouin Threshold

## APPLICATIONS

- Singlemode light delivery
- Delivery of high-power single frequency lasers

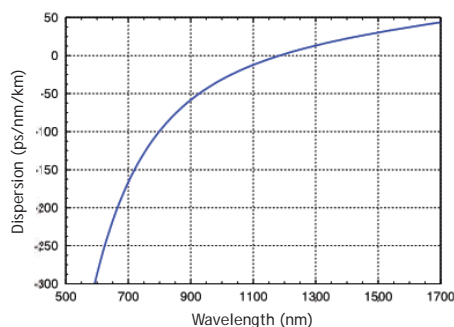
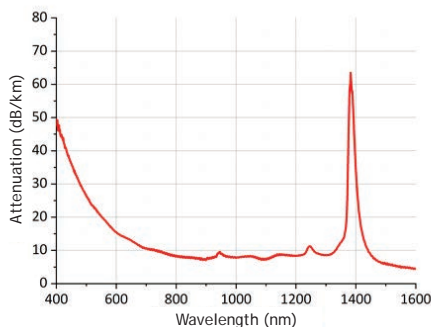
Product line **PERFAS**

FIBRE SPECIFICATIONS	ESM-5-125	ESM-5-125-PM	ESM-10-125	ESM-10-225-PM	ESM-20-250-PM
<b>Optical Parameters</b>					
LP <sub>11</sub> cut-off wavelength (nm)				None	
Numerical Aperture @ 1064 nm <sup>(1)</sup>	0.2 typical	0.2 typical	0.1 typical	0.1 typical	0.06 typical
Mode Field Diameter @ 1064 nm (μm) <sup>(1)</sup>	4.5 +/- 0.5	4.5 +/- 0.5	8.8 +/- 1.0	8.8 +/- 1.0	16.7 +/- 1.5
Effective Area @ 1064 nm (μm <sup>2</sup> ) <sup>(1)</sup>	14 typical	16 typical	60 typical	60 typical	212 typical
Background Loss @ 532 nm (dB/km)	< 50	< 38	< 40	< 38	- <sup>(2)</sup>
Background Loss @ 1060 nm (dB/km)	< 20	< 20	< 12	< 15	< 32
Background Loss @ 1550 nm (dB/km)	< 15	< 30	< 5	< 10	< 25
Birefringence (x 10 <sup>-4</sup> )	N/A	> 1.8	N/A	> 1.4	> 1.1
<b>Physical/Material Parameters</b>					
Material	Pure Silica				
Core Diameter (μm)	5 +/- 0.3	5 +/- 0.3	10 +/- 0.6	10 +/- 0.6	20 +/- 1.2
Cladding Diameter (μm)	125 +/- 3	125 +/- 3	125 +/- 5	225 +/- 5	241 +/- 6
Cladding Non- Circularity (%)	< 2	< 7.5	< 2	< 2	< 2
Coating Outside Diameter (μm)	245 +/- 10	240 +/- 10	250 +/- 10	355 +/- 10	359 +/- 10
Coating Type	Dual coat high index coating acrylate				
Proof- Testing (kpsi)	> 20				

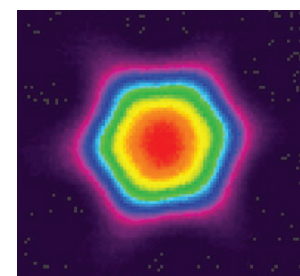
<sup>(1)</sup> Calculated value from simulation

<sup>(2)</sup> Not applicable - guided light starting from 750nm wavelength

## Typical measured attenuation and dispersion for ESM-10-225-PM



## Measured fundamental mode profile of the ESM-5-125-PM@532nm



Multiple options and configurations are available. Please contact Photonics Bretagne to find the best fit.

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