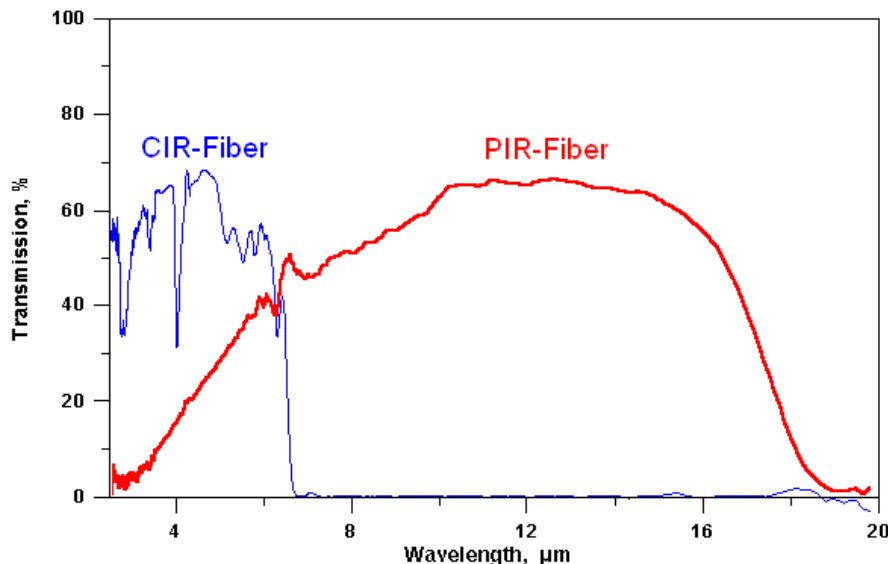


# Comparison of CIR- & PIR-Fibers

Typical transmission spectra of 1,5m long PIR-900/1000 fiber (red) versus CIR-750/850 fiber (blue) (includes reflection & coupling losses at fiber ends without AR-coating and some absorption bands of atmospheric moisture, etc.)



Ord. No.	Parameter	Typical value	
		CIR-Fiber	PIR-Fiber
1.	Transmission range	1,5 to 6,0μm or 1600 - 6500cm <sup>-1</sup>	3,0 to 18,0 μm or 550 - 3300cm <sup>-1</sup>
2.	Core/Clad structure materials	Chalcogenide As-S glasses	AgCl:AgBr solid solution crystals
3.	Specific Features	Toxic & Fragile, Non-hygroscopic	Non-toxic, Non-hygroscopic, very flexible - up to plastic deformation, UV-sensitive
4.	Core/Clad diameter	200-500/300-600 μm	400/500, 630/700, 700x700, 900/1000 μm
5.	Core refractive index	2,4	2,2
6.	Effective NA	0,28	0,25
7.	Optical losses	Minimum of 0,2 dB/m at wave-lengths 2-4 μm	Minimum of 0,2-0,3 dB/m at wave-lengths 10-12 μm
8.	Operation temperature range	From 270 to 370 K	From 4 to 420 K
9.	Max length of cable	Up to 50-100 meters	Up to 20-40 meters

Comparison of PIR- and CIR-Fibers Transmission Spectra for 1,5m length

