

art photonics offers standard Polycrystalline fiber cables for a power delivery of CO2 laser radiation. Fiber cables are available with a variety of standard fiber diameters terminated with SMA-905 with free standing fiber ends and Special Micro Anti-Reflection Treatment. Cables are packaged using different kinds of protective sheathing.

Standard product features

Optical Fiber Type	Polycrystalline Step Index Multimode
Wavelengths range	optimised for 9.2 μm and 10.6 μm
Fiber Core/Cladding Sizes (μm)	see table below
Effective Numerical Aperture (NA)	0.10 - 0.20 depending of the cable length
Minimum bending radius depending on protective sheathing	- <u>PEEK tubing</u> 130mm - <u>metal PVC coated tubing</u> 80mm - <u>stainless steel tubing</u> 80mm - <u>stainless steel silicone coated tubing</u> 130mm
Connectors	- SMA-905 with Titanium ferrule and free standing fiber end
Temperature range	-50°C to + 80°C
Length	$\leq 5\text{m}$

* see spectra below to check transmission vs wavelength

Customized design on request.

Standard fiber core/clad diameters and power threshold

Code	Type	core diameter, μm	cladding diameter, μm	coating	CO2 laser power threshold, W	Minimum Elastic Bending Radius, mm
PIR 400/500	Step Index Multimode	400 \pm 10	400+0/-15	no	10	70
PIR 600/700	Step Index Multimode	600 \pm 15	700+0/-15	no	20	100
PIR 900/1000	Step Index Multimode	860 \pm 20	1000+0/-20	no	35	130

