

LENSED TAPER IMOTAP (Pigtail)

Integrated micro optic-taper-fibre technology has been developed by EFOQUARZ. Lens taper and fibre are sealed hermetically and centred in a metal housing. The optical adjustment and parallel beam guidance is achieved by the integrated micro optic with a taper.

SPECIFICATION OF MICROLENS:

Lens diameter	min.	0,6	mm
	Max.	2,0	mm
Lens diameter tolerance	±	0,02	mm
Lens radius (R)	min	0,5	mm
	Max.	5,0	mm
Tolerance of curvature		1/10	λ
Focal length tolerance	(f')	± 2	%
Surface quality		60/40	
Surface accuracy		1/10	λ
Centring tolerance		0,1	arc.min.
Meas. Wavelength	λ	633	nm
Lens material		SiO ₂	

SPECIFICATION OF TAPER:

Taper/lens diameter T _D	min.	0,6	mm
	Max.	2,0	mm
Taper diameter tolerance	±	0,02	mm
Taper length	T _L =	f' (NA, n ₁)	
Taper length tolerance		0,1	mm
Taper material		SiO ₂	

SPECIFICATION OF FIBRE:

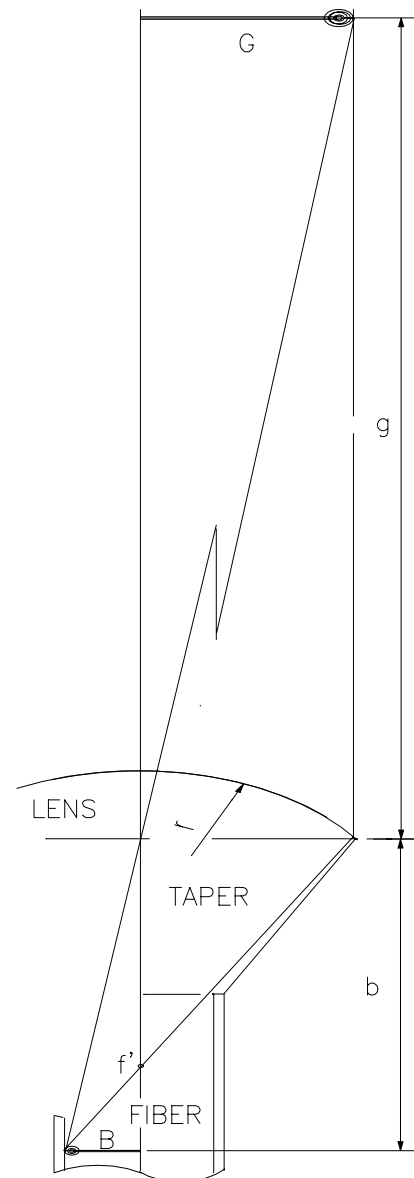
Numerical aperture	min.	0,11	
	max.	0,28	
Core diameter n ₁	min.	9	µm
	max.	100	µm
Cladding diameter n ₂	min.	96	µm
	max.	140	µm
Jacket diameter	min.	100	µm
	max.	250	µm
Loss @ 860nm	min.	3,0	db/ km
	max.	5,0	db/ km
Operating temperature	min.	77	°K
	max.	1000	°K
Fibre length (pigtail)		200	mm

Material:

Core:	High purity synthetic silica
Cladding:	Doped silica
Jacket:	Polyimide

Non standard IMOTAP available upon request.
Specifications are subject to change without notice.

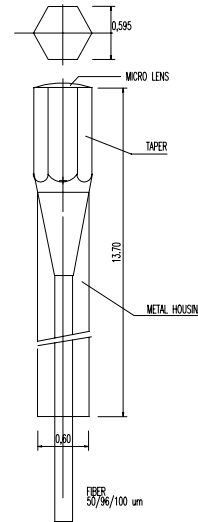
INDEX:
g = object distance
b = image distance
R = radius of curvature
T_D = taper diameter
T_L = taper length
f/f' = focal length
n_o = index of refraction air
n₁ = index of refraction core
n₂ = index of refraction cladding



INTEGRATED MICRO OPTIC TAPER IMOTAP (Pigtail)

SPECIFICATION OF MICROLENS:

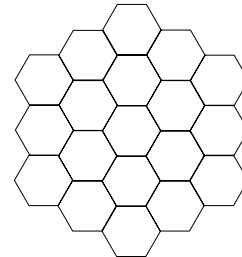
Lens diameter SK	0,598	mm
Lens diameter tolerance ±	0,02	mm
Lens radius (R)	2,0	mm
Tolerance of curvature	1/10	λ
Focal length tolerance (f')	± 2	%
Surface quality	60/40	
Surface accuracy	+/-10	λ
Centring tolerance	0,1	arc.min.
Meas. wavelength λ	633	nm
Lens material	S _i O ₂	



SPECIFICATION OF TAPER:

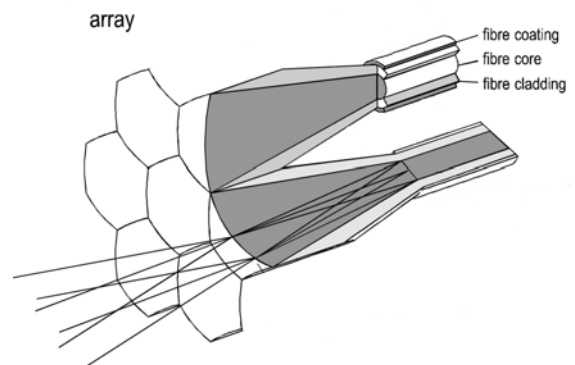
Taper/lens diameter SK	0,598	mm
Taper diameter tolerance	±0,02	mm
Taper length	6,25	mm
Taper length tolerance	0,1	mm
Taper material	S _i O ₂	

The tapered fibre lens geometry is very suitable for the forming of a dense package



SPECIFICATION OF FIBRE:

Numerical aperture NA	0,11	
Core diameter	50	μm
Cladding diameter	96	μm
Jacket diameter	100	μm
Loss @ 860nm	3,0	db/ km
Operating temperature	77 to 600	°K
Material:		
Core:	High purity synthetic silica	
Cladding:	Doped silica	
Jacket:	Polyimide	
Fiber length (pigtail)	200	mm



Non standard IMOTAP available upon request.

Specifications are subject to change without notice.