fig1a XXX.txt

9 files, each containing calculated mode and index distributions for the step profile fibre tapered to an outer diameter of XXX µm:

r (µm), ψ(r), n(r)

Used for Fig. 1(a).

fig1b XXX.txt

9 files, each containing calculated mode and index distributions for the log profile fibre tapered to an outer diameter of XXX µm:

r (µm), ψ(r), n(r)

Used for Fig. 1(b).

fig2 log rod.txt

MFD calculations for the log profile fibre and a uniform glass rod tapered to different sizes:

taper ratio (= outer diameter/125 µm), MFD of log profile fibre (µm), MFD of uniform rod (µm)

Used for Fig. 2, red and grey curves.

fig2 step.txt

MFD calculations for the step profile fibre tapered to different sizes:

taper ratio (= outer diameter/125 µm), MFD (µm)

Used for Fig. 2, blue curve.

fig3.txt

Index profile n2 of a log profile fibre, for schematic purposes:

R, n2

Used for Fig. 3.

fig4.txt

Calculated normalised fundamental-mode field distributions:

R, ψ(R) of log profile fibre, ψ(R) of step profile fibre

Used for Fig. 4.

fig5 design.txt

Index profile of design fibre, as an offset from the index of undoped silica:

radius as a fraction of outer boundary, n

Used for Figs. 5 and 10(a, c) (red curve).

fig6a left.JPG, fig6a right.JPG

Optical micrographs of cross-sections of log-profile and step-profile fibres respectively.

Used for Fig. 6(a).

fig6b left upper.png, fig6b left middle.png, fig6b left lower.png

Near-field images at the output of 30 m of log-profile fibre with different lateral offsets at the input.

Used for Fig. 6(b), left column of smaller images.

fig6b right.png

Near-field image at the output of log-profile fibre spliced to step-profile fibre at the input.

Usded for Fig. 6(b), larger image on the right.

fig7.txt

Measured losses of short tapers:

row 1: losses of 20 tapers in log-profile fibre (dB)

row 2: losses of 20 tapers in step-profile fibre (dB)

Used for Fig. 7.

fig8a log.JPG, fig8a step.JPG

Optical micrographs of short tapers made with the log-profile and step-profile fibres respectively.

Used for Fig. 8(a).

fig8b.xlsx

Diameter profiles of tapered fibres, as extracted from images:

z (µm) for log profile fibre, D (µm) of log profile fibre, z (µm) for step profile fibre, D (µm) of step profile fibre

Used for Fig. 8(b).

fig9 log XXX.png

5 files, each a near-field image at the output of a tapered log-profile fibre cleaved at diameter XXX µm.

Used for Fig. 9, top row.

fig9 step XXX.png

5 files, each a near-field image at the output of a tapered step-profile fibre cleaved at diameter XXX µm.

Used for Fig. 9, bottom row.

fig10a.txt

Index distribution of the log profile fibre of this paper, as measured using IFA-100 profiler. The file starts with a header block of instrument parameters, followed by:

radius (µm), n at 633 nm, n at 656.9 nm, n at 682.7 nm, n at 710.4 nm

The paper uses the data at 656.9 nm, for consistency with the stress measurements.

Used for Figs. 5 and 10(a,c) with the uniform addition of 0.003 as described in the text (solid black curve).

fig10a old.txt

As fig10a.txt but for the log profile fibre of [13].

Used for Fig. 10(a,c) with the uniform addition of 0.003 as described in the text (broken curve).

fig10b.txt

Stress distribution of the log profile fibre of this paper, as measured using IFA-100 profiler. The file starts with a header block of instrument parameters, followed by:

radius (µm), stress (MPa) at 656.9 nm

Used for Fig. 10(b,c) (solid black curve).

fig10b old.txt

As fig10b.txt but for the log profile fibre of [13].

Used for Fig. 10(b,c) (broken curve).