



Institute for Photonics & Advanced Sensing (IPAS)

Microstructured Tellurite Fibre

www.ipas.edu.au

IPAS specialises in producing high-quality tellurite microstructured optical fibres for high nonlinearity applications (e.g. supercontinuum generation) and laser applications. The glasses are melted under a controlled atmosphere to ensure high-purity and low water content. The preforms are produced by extrusion, which allows greater flexibility in the transverse structure, including:

1. Suspended core wagon wheel fibre with core size 1-5µm
2. Microstructured or photonic crystal fibres (PCF)

For pricing and availability, please contact [Luis Lima-Marques](#).



COMPOSITION

73TeO₂ - 20ZnO - 5Na₂O - 2La₂O₃ (mol%)*

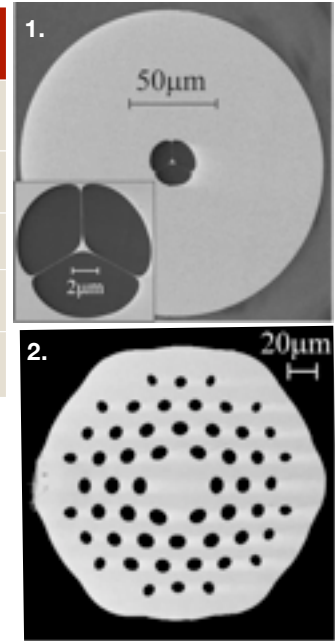
PROPERTIES		TELLURITE GLASS
Optical	Transmission range	0.4~4.0µm
	Refractive index at 1550nm	1.98
Thermal	glass transition temperature	315°C
	Thermal expansion	170x10 ⁻⁷ /°C
Physical	Density	5.35g/cm ³

The Institute for Photonics & Advanced Sensing (IPAS)

IPAS brings together physicists, chemists and biologists to pursue a new transdisciplinary approach to science.

We are developing novel photonic, sensing and measurement technologies that are changing the way science is done within traditional discipline areas, stimulating the creation of new industries, and inspiring a new generation of scientists to be engaged in solving real-world problems.

IPAS research targets applications in four key market areas: defence and national security, environmental monitoring, preventative health, food and wine. We have world leading facilities for the production of novel soft and silica fibres, surface functionalisation and sensor development.



*M.R. Oermann, H. Ebendorff-Heidepriem, Y. Li, T.-C. Foo, T.M. Monro, "Index matching between passive and active tellurite glasses for use in microstructured fiber lasers: Erbium doped lanthanum-tellurite glass", Optics Express 17 (18), 15578-15584, August 2009.