

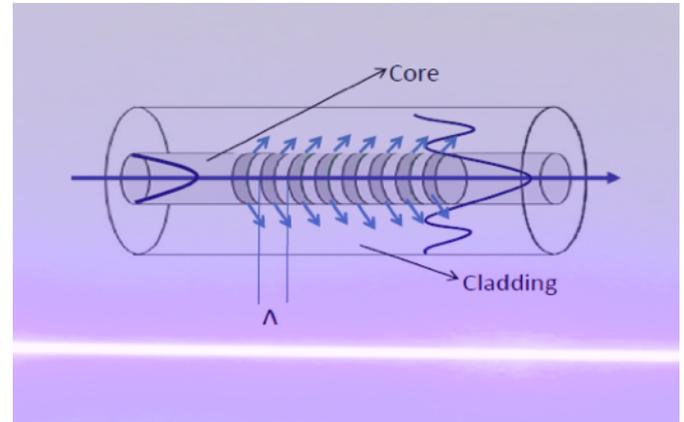
Description

The T30 Long Period Grating (LPG) is available in a wide range of optical specifications.

LPGs operate in transmission mode and their large modulation period allows light coupling between co-propagating modes of the optical fiber. LPGs have a unique advantages over FBGs that include low insertion loss and polarization independence.

The T30 LPG is very sensitive to changes in temperature, strain, torsion and bending and, as such, are an excellent core element for specialized ultra-sensitive industrial sensors. Also useful as bandpass filters, and gain flattening filters (GFFs), though in these cases special care must be taken to avoid interference from external factors.

T30 LPGs are also very sensitive to the refractive index of the surrounding external medium making them very useful as the core element for building chemical and bio-medical sensors. The change in the ambient index changes the effective index of the cladding mode and this in turn leads to wavelength shifts of the resonance dips in the LPG transmission spectrum that can be monitored and processed by test and measurement equipment.

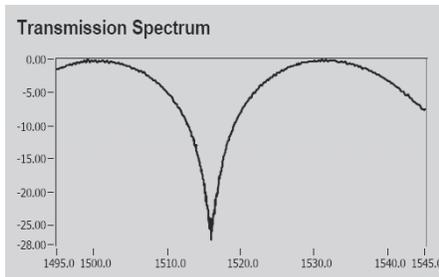


LPGs manufactured and sold by Technica under International License from United Technologies Corporation, Inc.

Key Features

Wide Range Period.

We produce and offer Long Period Gratings (LPGs) by inducing a periodic refractive index modulation in the fiber core with periods from 200 μm to 1200 μm . We use a proven optics platform for top quality LPGs.



Spectrally Selective Loss. Our unique manufacturing process yields spectrally selective loss during the light coupling from guide modes to cladding modes where the light is lost due to scattering and absorption. Inquire about special characteristic specifications.

Low cost and long lifetime. The T30 is designed as a core element for industrial and research environments that require both the availability of low-cost LPGs in volume and stable operation for highly accurate measurements over the long-term.

Proven field performance. The T30 has been in production for several years and has received excellent customer feedback.

Parameter	Specifications
Wavelengths	600 nm - 1700 nm
Reflectivity %	10% to 99.9%
Bandwidth (FWHM)	> 15 nm
Period	200 μm - 1200 μm
Tensile Strength	> 100 kpsi
LPG Length	\leq 30 mm
Fiber Type	SMF-28 and compatibles
Fiber Coating	Acrylate, polyimide, or custom
Fiber Termination	Bare fiber, FC/APC or custom

Applications in Biomedical and Chemical Sensing, and Core Element for Industrial Sensors

Technica undertakes a rigorous development process before products release. The company is also firmly committed to continuous improvements after release to insure performance to the highest standards, hence, specifications are subject to update without notice.

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