

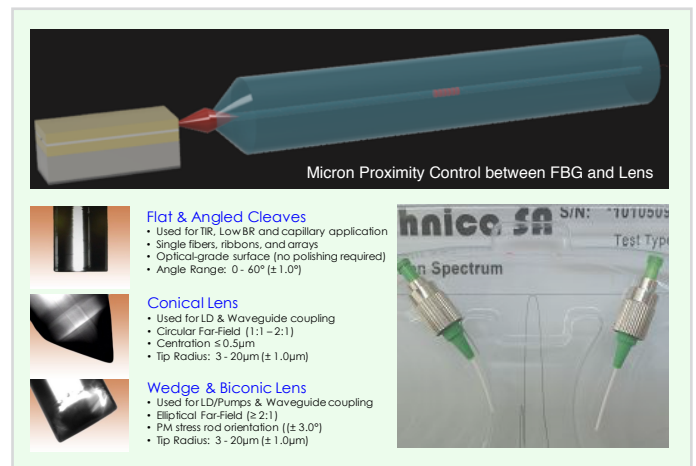
## Description

The **T55 Lensed Fiber Bragg Grating (FBG)** is a splice-free pigtail assembly used for external cavity semiconductor lasers, fiber lasers, DFB lasers, and optical sensors. The T55 integrates world-class FBG and lensing technologies into a single robust device designed to maximize laser performance.

Lensed Fiber Bragg Gratings are optimized for the specific laser chip to which they are coupled. The splice-free design of the T55 eliminates splice loss, break points and bulky splice sleeves, while maximizing coupling efficiency between the fiber and the laser.

Designed to be a reliable plug-in component for fiber lasers and for pump lasers, our T55 is compliant with the requirements of many international standards bodies. In addition to meeting ROHS and exceeding Telcordia compliance requirements, the T55 FBGs pass other standards as well. Inquire about compliance with standards within your application, industry, and/or country.

The Lensed FBG specifications listed herein represent the most popular configurations. Many optical and physical variations are available.



T55 Lensed FBGs manufactured and sold by Technica under International License from OpTek Systems.

## Key Features

**Excellent wavelength control.** Technica manufactures the T55 line of Lensed FBGs by using its wide collection of phase masks to ensure excellent accuracy and repeatability during volume production as well as for making research type runs. Phase mask technology is the manufacturing process of choice when ultimate built-in repeatability and low-polarization sensitivity is required.

**High side lobe suppression ratio (SLSR).** The T55 is produced using high-accuracy feedback control so that each grating is ideally exposed for yielding the required specifications.

**Optimal Coupling Efficiency.** The lensing technology used on the T55 utilizes proprietary far-field matching algorithms to ensure high coupling efficiencies are achieved with minimal alignment sensitivity.

**Turnkey Packaging.** The T55 can be incorporated into hermetic feed-thru packaging that is non-intrusive to the FBG performance.

**Low cost and long lifetime.** The T55 series of FBGs are designed as a core element for industrial lasers, telecom, sensing, test and measurement instrumentation, and research environments that require both the availability of low-cost FBGs in volume and stable operation for highly accurate measurements over the long-term.

**Proven field performance.** The T55 is an industrial grade component and has received excellent customer feedback.

Parameter	Specifications
Center Wavelength	820nm - 1680 nm or custom, +/-0.25nm
Lens Shaping	Cylinder, Taper, Cone, Angled cleave, Flat cleave
Reflectivity %	0.5% to 99.9%
Bandwidth (FWHM)	0.05 nm to 2.2 nm, +/-0.01
Grating Profile	Uniform w SLSR>10dB, or Apodised w SLSR>25dB
Tensile Strength	> 150 kpsi
Fiber length	2.0 m, or custom
Fiber Type	Corning HI980/PM980, Corning HI1060, Corning SMF-28 / Panda PM, or equivalents
Fiber Coating	Acrylate or Polyimide
Fiber Bend Radius	>17mm, or custom
Optical Connector	FC/APC, LC/APC, custom

## Applications in Industrial Lasers, Telecom, Sensing, Test & Measurement, and Research

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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