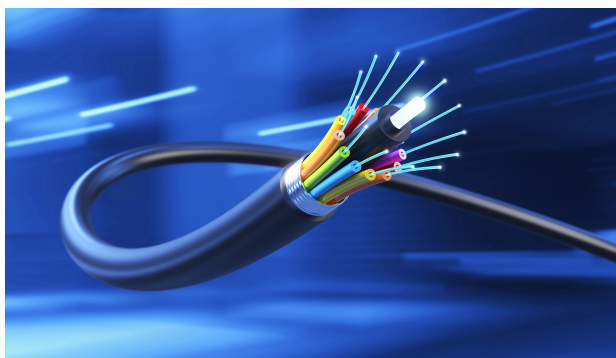


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## Fiber Bragg Grating for Temperature Sensing



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#### MEGA-TREND

- Innovative Technologies of The Future
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#### TECHNOLOGY READINESS LEVEL (TRL)

- TRL 3

#### PATENT/ GRANTED NUMBER

- PI 2013701341

### ▶ TECHNOLOGY OVERVIEW

The present invention provides a fiber Bragg grating made of boron co-doped germanium fiber, a Bragg grating part wherein chemically etched and thermally regenerated. By using an optical fiber diameter of 125 $\mu$ m, the grating is etched to core diameter of 4 to 8 $\mu$ m. Annealing is performed on the Bragg grating at a regeneration temperature of about 680C to induce thermal regeneration. The present invention successfully overcomes the problems of low measurement resolution by utilizing etched-core boron co-doped germanium fiber and low photosensitivity due to rapid decay of grating strength above 400C whereby thermal regeneration of grating refractive index occur at 680C. As such, the present invention can be applied in high temperature sensing of up to 700C

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## CONTACT US!

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