

24TH INTERNATIONAL INVENTION, INNOVATION & TECHNOLOGY EXHIBITION 9-11 MAY 2013 KUALA LUMPUR CONVENTION CENTRE

A Novel Optical Wavelength Filter

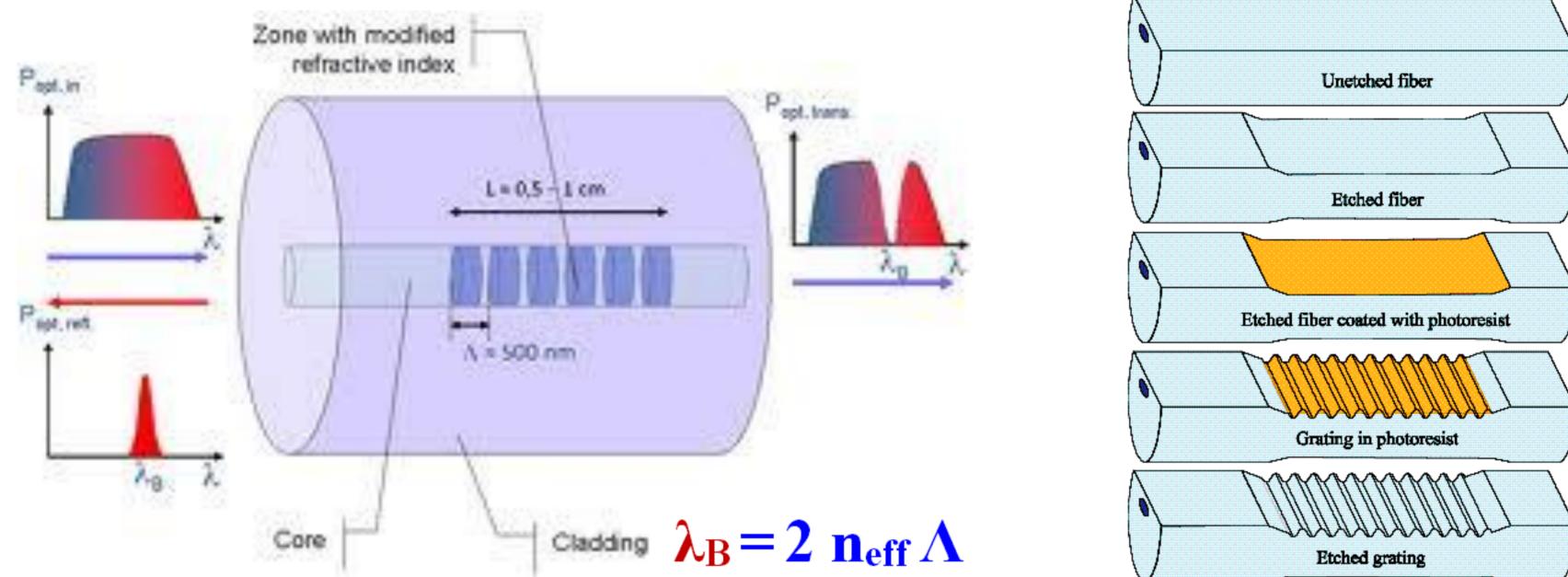
(THE FABRICATION OF THE SURFACE-RELIEF FIBER BRAGG GRATING FILTER)

Taiwan Invention Patent, Pat. No. 1390262

The invention proposed a process to rapidly replicate the optical wavelength filter with surface-relief Bragg grating by using holographic interference techniques, soft Lithography, and micro molding.

The optical wavelength filter can act as a temperature sensor which can be applied in high-energy gamma-ray irradiation, nuclear power plant

environment.



Tradition process: photosensitive optical fiber by Excimer laser
Our Invention: surface-relief grating fabricated by MEMs
Advantage: low cost, rapid replicate process



Experimental results show that, there is no change of device characteristics after the high-energy gamma-ray irradiation.
The reflected optical wavelength varies with the surrounding temperature

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