

Title (en)
GIRES-TOURNOIS ETALONS AND DISPERSION COMPENSATION

Title (de)
GIRES-TOURNOIS ETALON UND DISPERSIONSKOMPENSATOR

Title (fr)
ETALONS DE GIRES-TOURNOIS ETALONS ET COMPENSATION DE DISPERSION

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Abstract (en)
[origin: WO03096082A2] A first embodiment of the invention provides a Gires-Tournois etalon (DGTE) (20) comprising a cladding mode suppressed optical fibre (22), including an etalon section (24) in which a weakly reflective optical waveguide grating (26) and a strongly reflective optical waveguide grating (28) are provided. The two gratings (26, 28) are chirped fibre Bragg gratings (FBGs). The chirped FBGs (26, 28) are arranged to together define an etalon cavity. Another aspect of the invention provides a dispersion compensator (60) comprising two DGTEs (62, 64) according to the first embodiment of the invention. The DGTEs (62, 64) have a linearly varying dispersion over a selected optical bandwidth. The first DGTE (62) has a positive dispersion slope and the second DGTE (64) has a negative dispersion slope. The magnitudes of the dispersion slopes of the two DGTEs (62, 64) are substantially equal, so that the dispersion compensator (60) has a constant dispersion across the selected bandwidth. The DGTEs (62, 64) are optically coupled to one another via a four-port optical circulator (66).

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