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SPATIALLY VARIABLE FILTER LASER
WAVELENGTH MONITORING/CONTROL

ABSTRACT OF THE DISCLOSURE

A feedback controlled laser diode communication device is disclosed that, as
5 is common, has a laser diode that is modulated in response to an input signal to
generate an optical signal, encoding the input signal. Spatially variable passband
filter material, however, is arranged to receive at least a portion of the optical signal
generated by the laser diode, preferably from the rear facet, and at least one
detector is used to detect the thus filtered optical signal. Control circuitry then
10 controls a wavelength of the laser diode based upon the response of the detector(s)
to thus provide feedback control. As such, the device is particularly applicable to
maintaining the tight channel spacings found in wavelength division multiplexed
systems.