

Title (en)

OPTICAL WAVELENGTH MULTIPLEXING DEVICE AND WDM OPTICAL TELECOMMUNICATION SYSTEM

Title (de)

OPTISCHE WELLENLÄNGENMULTIPLEXVORRICHTUNG UND OPTISCHES WELLENLÄNGENMULTIPLEX-NACHRICHTENÜBERTRAGUNGSSYSTEM

Title (fr)

DISPOSITIF DE MULTIPLEXAGE OPTIQUE EN LONGUEURS D'ONDES ET SYSTEME DE TELECOMMUNICATION OPTIQUE MLO

Publication

EP 1224493 A1 20020724 (EN)

Application

EP 00969536 A 20001020

Priority

- EP 00969536 A 20001020
- EP 0010428 W 20001020
- EP 99203458 A 19991021
- US 16137399 P 19991026

Abstract (en)

[origin: WO0129596A1] An optical multiplexing device (44; 45), for wavelength multiplexing a plurality M of optical channels (16) - with $M \geq 8$, said multiplexing device (44; 45) having N input ports (208, 208') - with $N \geq M$ - and one output port (233; 254) and comprising at least three optical couplers (202, 202', 205, 205', 207, 207', 206, 206', 213, 213', 217, 217', 225, 225', 231) having predetermined intrinsic losses and coupled together according to a tree topology, said tree topology having N inputs and one output corresponding to said N input ports (208, 208') and one output port (233; 254) characterized in that a) the intrinsic loss of each of said at least three optical couplers (202, 202', 205, 205', 207, 207', 206, 206', 213, 213', 217, 217', 225, 225', 231) is preselected; and b) said at least three optical couplers (202, 202', 205, 205', 207, 207', 206, 206', 213, 213', 217, 217', 225, 225', 231) are arranged in said tree topology so that, passing through said multiplexing device (44; 45), at least two of said plurality M of optical channels (16) are attenuated differently from each other. When included in a WDM transmission system, e.g. a system using in-line fibre amplifiers, the different channel attenuations of the transmission line can be equalised.

IPC 1-7

G02B 6/28; **G02B 6/34**; **H04J 14/02**

IPC 8 full level

H04J 14/00 (2006.01); **G02B 6/28** (2006.01); **G02B 6/34** (2006.01); **H04B 10/294** (2013.01); **H04J 14/02** (2006.01)

CPC (source: EP)

H04B 10/2941 (2013.01); **H04J 14/0208** (2013.01); **H04J 14/0209** (2013.01); **H04J 14/0213** (2013.01); **H04J 14/02216** (2023.08); **H04J 14/0279** (2013.01); **G02B 6/2932** (2013.01); **G02B 6/29394** (2013.01); **H04B 2210/258** (2013.01)

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

WO 0129596 A1 20010426; AU 7921900 A 20010430; CA 2385584 A1 20010426; EP 1224493 A1 20020724; JP 2003512795 A 20030402

DOCDB simple family (application)

EP 0010428 W 20001020; AU 7921900 A 20001020; CA 2385584 A 20001020; EP 00969536 A 20001020; JP 2001532131 A 20001020