

Title (en)  
THERMALLY SHIELDED MULTI-CHANNEL TRANSMITTER OPTICAL SUBASSEMBLY AND OPTICAL TRANSCEIVER MODULE INCLUDING SAME

Title (de)  
OPTISCHE BAUGRUPPE FÜR EINEN WÄRMEABGESCHIRMTE MEHRKANALSENDER UND OPTISCHES SENDE-/EMPFANGSMODUL DAMIT

Title (fr)  
SOUS-ENSEMBLE OPTIQUE D'ÉMETTEUR À CANAUX MULTIPLES THERMIQUEMENT ISOLÉ, ET MODULE ÉMETTEUR-RÉCEPTEUR OPTIQUE INCLUANT CE DERNIER

Publication  
**EP 2954628 A4 20160928 (EN)**

Application  
**EP 14749420 A 20140204**

Priority  
• US 201313760533 A 20130206  
• US 2014014607 W 20140204

Abstract (en)  
[origin: WO2014123866A1] A thermally shielded multi-channel transmitter optical subassembly (TOSA) may be used in a multi-channel optical transceiver. The multi-channel TOSA generally includes an array of lasers optically coupled to an arrayed waveguide grating (AWG) to combine multiple optical signals at different channel wavelengths. A plurality of laser array thermal shields are thermally coupled to a temperature control device, such as a thermoelectric cooler (TEC), and thermally shield the respective lasers in the laser array in separate thermally shielded compartments. Each of the lasers may also be individually thermally controlled to provide a desired wavelength, for example, using a heater and/or cooler located in each thermally shielded compartment. The optical transceiver may be used in a wavelength division multiplexed (WDM) optical system, for example, in an optical line terminal (OLT) in a WDM passive optical network (PON).

IPC 8 full level  
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CPC (source: EP)  
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Citation (search report)  
• [E] US 2014161457 A1 20140612 - HO I-LUNG [US], et al  
• [Y] WO 03056734 A1 20030710 - REDFERN BROADBAND NETWORKS INC [US], et al  
• [Y] US 4976527 A 19901211 - HORIKAWA KAZUO [JP], et al  
• [Y] US 4727554 A 19880223 - WATANABE HIDEO [JP]  
• [Y] US 2011058771 A1 20110310 - LEE JOON KI [KR], et al  
• [Y] EP 1006683 A2 20000607 - NIPPON ELECTRIC CO [JP]  
• [Y] US 2003206740 A1 20031106 - LEE CHANG HEE [KR], et al  
• [Y] WO 03032021 A2 20030417 - INFINERA CORP [US]  
• See references of WO 2014123866A1

Designated contracting state (EPC)  
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