

Title (en)  
HIGH-SPEED OPTICAL TRANSMITTER WITH A SILICON SUBSTRATE

Title (de)  
OPTISCHER HOCHGESCHWINDIGKEITSENDER MIT EINEM SILICIUMSUBSTRAT

Title (fr)  
ÉMETTEUR OPTIQUE À HAUTE VITESSE DOTÉ D'UN SUBSTRAT DE SILICIUM

Publication  
**EP 3414609 A1 20181219 (EN)**

Application  
**EP 17750673 A 20170208**

Priority

- US 201662292633 P 20160208
- US 201662292675 P 20160208
- US 201662292636 P 20160208
- US 201715426823 A 20170207
- US 201715426366 A 20170207
- US 201715426375 A 20170207
- US 2017016958 W 20170208

Abstract (en)  
[origin: CN108885320A] A 400 Gb/s transmitter is integrated on a silicon substrate. The transmitter uses four gain chips, sixteen lasers, four modulators to modulate the sixteen lasers at 25 Gb/s, and four multiplexers to produce four optical outputs. Each optical output can transmit at 100 Gb/s to produce a 400 Gb/s transmitter. Other variations are also described.

IPC 8 full level  
**G02B 6/42** (2006.01); **G02B 6/12** (2006.01)

CPC (source: EP US)  
**G02B 6/12002** (2013.01 - US); **G02B 6/12004** (2013.01 - US); **G02B 6/12007** (2013.01 - US); **G02B 6/122** (2013.01 - US); **G02B 6/136** (2013.01 - US); **H01S 5/0202** (2013.01 - US); **H01S 5/021** (2013.01 - EP US); **H01S 5/02326** (2021.01 - EP); **H01S 5/026** (2013.01 - EP US); **H01S 5/028** (2013.01 - US); **H01S 5/0287** (2013.01 - EP); **H01S 5/141** (2013.01 - EP); **H01S 5/22** (2013.01 - US); **H01S 5/3013** (2013.01 - US); **H01S 5/343** (2013.01 - US); **H01S 5/4025** (2013.01 - US); **H01S 5/4087** (2013.01 - US); **H04B 10/505** (2013.01 - US); **H04J 14/0305** (2023.08 - EP US); **G02B 6/12** (2013.01 - EP); **G02B 6/42** (2013.01 - EP); **G02B 2006/12061** (2013.01 - US); **G02B 2006/12104** (2013.01 - US); **G02B 2006/12121** (2013.01 - US); **G02B 2006/12142** (2013.01 - US); **G02B 2006/12147** (2013.01 - US); **H01S 5/4037** (2013.01 - EP); **H01S 5/4062** (2013.01 - EP)

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
CN 108885320 A 20181123; CN 108886236 A 20181123; CN 108886236 B 20220225; EP 3414609 A1 20181219; EP 3414609 A4 20200219; EP 3414806 A1 20181219; EP 3414806 A4 20200304; EP 3414806 B1 20230621

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CN 201780018613 A 20170208; CN 201780019883 A 20170208; EP 17750673 A 20170208; EP 17750687 A 20170208