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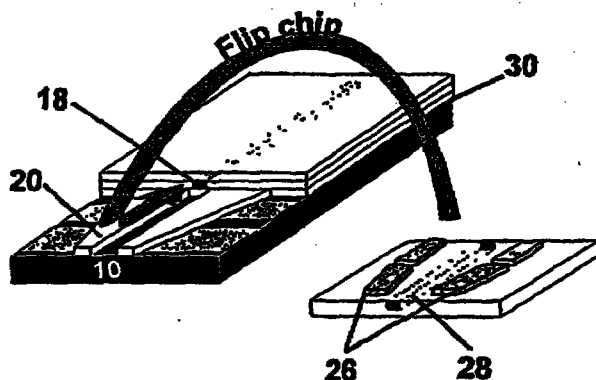
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(54) Title: HYBRID INTEGRATION OF ACTIVE AND PASSIVE OPTICAL COMPONENTS ON AN SI-BOARD



(57) Abstract: The present invention relates to an assembly structure and a method for assembling active and passive photonic and/or optoelectronic devices on a silicon board. The invention relates in particular to an assembly structure and a method for aligning the photonic devices during the assembling procedure. According to the present invention, the assembly structure comprises one or more alignment features comprising tapered side surface parts in directions at least substantially parallel to an optical axis. By providing a tapering in a direction at least substantially parallel to the first optical axis, any inaccuracies primarily affects the non-critical positioning in the direction along the optical axis, whereas the critical positioning transverse to the optical axis merely depends on the symmetry of alignment features. The errors from the inherent inaccuracy of the position and shape of alignment features are thereby minimised. Also, the devices to be aligned are preferably arranged on top of the alignment features which forms part of the basic structure on the silicon board. All alignment features can thereby be defined in a single mask step together with the structures with which the alignment is to be carried out, resulting in an improved accuracy of the assembly structure. The resulting components will be used especially for broadband telecommunication components.

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