

COMPACT OPTO-ELECTRONIC MODULES AND FABRICATION METHODS FOR SUCH MODULES

ABSTRACT OF THE DISCLOSURE

Various optoelectronic modules are described and include one or more optoelectronic devices. Each optoelectronic module includes one or more optoelectronic devices. Sidewalls laterally surround each optoelectronic device and can be in direct contact with sides of the optoelectronic device or, in some cases, with an overmold surrounding the optoelectronic device. The sidewalls can be composed, for example, of a vacuum injected material that is non-transparent to light emitted by or detectable by the optoelectronic device. The module also includes a passive optical element. Depending on the implementation, the passive optical element can be on a cover for the module, directly on a top surface of the optoelectronic device, or on an overmold surrounding the optoelectronic device. Methods of fabricating such modules are described as well, and can facilitate manufacturing the modules using wafer-level processes.

Figure 14