What is claimed is:

1. An optoelectronic module having optical channel, the module comprising:

a support on which is mounted an optoelectronic device arranged to emit or detect light at a particular one or more wavelengths;

a cover including an optically transmissive portion over the optoelectronic device, wherein the optically transmissive portion is surrounded laterally by sections of the cover that are substantially non-transparent to the one or more wavelengths, the cover having a thickness of no more than 150 μm, and the transmissive portion of the cover having a same thickness as the non-transparent sections;

a passive optical element on a surface of the optically transmissive portion; and

a spacer separating the support from the cover.

2. The optoelectronic module of claim 1 wherein a combined height of the support, the cover and the spacer is no more than 750 μm.

3. The optoelectronic module of any one of the previous claims wherein the non-transparent sections of the cover are composed of a PCB, polymer or ceramic layer having a coating of a non-transparent material on a least one side.

4. The optoelectronic module of claim 3 wherein the non-transparent material of the coating is a metal or polymer.

5. The optoelectronic module of claim 3 or 4 including a non-transparent material coating on both sides of the PCB, polymer or ceramic layer.

6. The optoelectronic module of any one of claims 3 - 5 wherein the thickness of the coating is no more than 20 μm.

7. The optoelectronic module of any one of claims 3 - 5 wherein the thickness of the coating is no more than 1 μm.

providing an optics wafer that includes optically transmissive portions surrounded laterally by sections that are substantially non-transparent to the one or more wavelengths, each of the transmissive portions including a respective passive optical element on its surface, wherein the non-transparent sections have a thickness of no more than 150 μm; and

attaching the support wafer to the optics wafer by way of a spacer to form a wafer stack.

14. The method of claim 13 further including separating the wafer stack into multiple optoelectronic modules each of which includes a light emitting channel and a light detecting channel.

15. The method of any one of claims 13 or 14 wherein a combined height of the support wafer, the optics wafer and the spacer is no more than 750 μm.

16. The method of any one of claims 13 - 15 wherein the non-transparent sections of the optics wafer are composed of a PCB, polymer or ceramic layer having a coating of a non-transparent material on a least one side.

17. The method of claim 16 wherein the non-transparent material of the coating is a metal or polymer.

18. The method of any one of claims 16 or 17 wherein both sides of the PCB, polymer or ceramic layer include a non-transparent material coating.

19. The method of any one of claims 16 - 18 wherein the thickness of the coating is no more than 20 μm.

20 The method of any one of claims 16 – 18 wherein the thickness of the coating is no more than 1 μm.

21. The method of claim 13 wherein the non-transparent sections of the optics wafer are composed of a non-transparent metal or polymer material sandwiched between first and second layers of a PCB, polymer or ceramic material.

22. An optoelectronic module having an optical emission channel and an optical detection channel, the module comprising:

a support on which are mounted a light emitting device and a light detecting device;

a cover including a first optically transmissive portion over the light emitting device and a second optically transmissive portion over the light detecting device, wherein the optically transmissive portions are surrounded laterally by sections of the cover that are substantially non-transparent to one or more wavelengths of light emitted by the light emitting device and detectable by the light detecting device, and wherein the non-transparent sections of the cover are composed of a PCB, polymer or ceramic layer having a coating of a non-transparent material;

a lens on a surface of the first optically transmissive portion, and a lens on a surface of the second optically transmissive portion; and

a spacer separating the support from the cover.

23. The optoelectronic module of claim 22 wherein the cover has a thickness of no more than 150 μm, and the coating has a thickness of no more than 20 μm.

24. The optoelectronic module of any one of claims 22 – 23 wherein the coating comprises a metal or polymer.

25. The optoelectronic module of any one of claims 22 – 24 wherein the module has a height of 750 μm or less.

26. The optoelectronic module of any one of claims 22 – 25 wherein the coating is composed of a material selected from a group consisting of: copper, chrome, poly(methyl methacrylate), phenol formaldehyde resin, and an epoxy based photoresist.