

a spring disposed between and urging together the shells;
 an emitter pad fixedly attached to the first shell and configured to retain the emitter assembly;
 a detector pad fixedly attached to the second shell configured to retain the detector assembly;
 a detector aperture defined within the detector pad and adapted to pass optical radiation to the detector assembly; and
 a contour defined along the detector pad and generally shaped to conform to a fingertip positioned over the detector aperture.

2. The physiological sensor according to claim 1 further comprising a guide defined along, and raised from, the detector pad,

wherein the guide narrows from a first pad end to an opposite second pad end so as to increasingly conform to a fingertip inserted from the first pad end to the second pad end.

3. The physiological sensor according to claim 2 further comprising a stop raised from the detector pad and adapted to block the fingertip from extending beyond the second pad end.

4. The physiological sensor according to claim 3 further comprising:

a plurality of emitter pad flaps disposed along both sides of the emitter pad;

a plurality of detector pad flaps disposed along both sides of the detector pad,

wherein the emitter pad flaps and the detector pad flaps are configured to interleave so as to block ambient light from the detector assembly.

5. The physiological sensor according to claim 4 further comprising a plurality of isolating notches defined along the emitter pad and along the detector pad and adapted to mechanically decouple shell attachment areas from the remainder of the emitter pad and the detector pad.

6. The physiological sensor according to claim 5 further comprising a cavity defined within the detector pad so as to accommodate a shoe that contains the detector assembly.

7. The physiological sensor according to claim 6 wherein the spring is configured so as to create a pivot point along a finger gripped between the shells that is substantially behind a fingertip.

8. A physiological sensor comprising:

a first shell;

a second shell hinged to the first shell;

a spring disposed between and urging together the shells,

the spring configured so as to create a pivot point along a finger gripped between the shells that is substantially behind a fingertip; and

a pad configured to position the fingertip.

9. The physiological sensor according to claim 8 wherein the spring comprises:

a first leg pressing against a grip portion of the first shell; and

a second leg extending along a clip portion of the second shell.

10. The physiological sensor according to claim 9 further comprising a plate that slidably anchors the second leg to the clip portion of the second shell distal a grip portion of the second shell.

11. The physiological sensor according to claim 10 further comprising a contour defined along the pad and generally shaped to conform to the fingertip.

12. The physiological sensor according to claim 11 further comprising a guide raised from, and defined along, the pad and adapted to increasingly conform to a fingertip inserted along the pad.

13. The physiological sensor according to claim 12 further comprising a stop raised from the pad and adapted to block the fingertip from extending beyond the contour.

14. A physiological sensor method comprising:

providing a plurality of housing elements comprising pads and shells;

mounting a sensor assembly within the housing elements; positioning a fingertip relative to the sensor assembly with a plurality of pad features; and

urging the housing elements against the fingertip so as to removably attach the sensor assembly to the fingertip.

15. The physiological sensor method according to claim 14 wherein the positioning comprises guiding a fingertip to a detector of the sensor assembly.

16. The physiological sensor method according to claim 15 wherein the positioning further comprises stopping the fingertip at the detector.

17. The physiological sensor method according to claim 16 wherein the positioning further comprises conforming to the fingertip at the detector.

18. The physiological sensor method according to claim 17 wherein the urging comprises pivotably gripping behind the fingertip with the housing elements.

19. The physiological sensor method according to claim 18 wherein the gripping comprises anchoring an extended spring leg to one of the shells distal the detector.

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