

- a light-receiving end configured to accept a light projected by an optical light-generating device configured to illuminate as a function of a state of the circuit; a light propagation region configured to support propagation of the light for a given length; and a light-emitting end to output the light at the mating location of the connector component at a second angle relative to the edge of the circuit board, other than at the first angle, to associate light output by the light-emitting end with the state of the circuit on the circuit board.
2. The apparatus of claim 1, wherein the mounting features are configured to be press-fitted into the circuit board to position the light-receiving end above a surface-mounted optical light emitting diode (LED).
  3. The apparatus of claim 2, wherein the LED is a multi-color LED.
  4. The apparatus of claim 1, wherein the propagation region is defined by at least one geometric structure supporting propagation of the light.
  5. The apparatus of claim 4, wherein the at least one geometric structure includes multiple geometric structures configured to be parallel to each other and further including at least one support between adjacent geometric structures.
  6. The apparatus of claim 4, wherein the at least one geometric structure causes the light to be redirected substantially offset from and along a longitudinal axis of a surface plane of the circuit board.
  7. The apparatus of claim 4, wherein the at least one geometric structure is constructed of clear plastic.
  8. The apparatus of claim 1, wherein the connector component includes a standard Small Form-Factor Pluggable (SFP) cage.
  9. The apparatus of claim 1, wherein the light-emitting end includes a textured surface through which the light is outputted.
  10. The apparatus of claim 1, wherein the light-emitting end is configured to output light through a front panel coupled to the circuit board.
  11. A method for providing optical indications about a state of a circuit on a circuit board, the method comprising:
    - accepting light projected by an optical light-generating device configured to illuminate as a function of a state of a circuit on a circuit board, including a connector component coupled to a circuit board to accept a mating connector component at a mating location at a non-perpendicular first angle relative to an edge of the circuit board;
    - supporting propagation of the light for a given length; and
    - outputting the light at a second angle relative to the edge of the circuit board, other than the first angle, to associate light output by a light-emitting end with the state of the circuit on the circuit board.
  12. The method of claim 11, wherein accepting the light includes accepting the light above a surface-mounted optical light emitting diode (LED).
  13. The method of claim 12, wherein accepting the light includes accepting multiple colors of light.
  14. The method of claim 11, wherein in supporting propagation of the light includes containing the light within at least one geometric structure for at least a portion of the given length.
  15. The method of claim 14, wherein supporting propagation of the light includes multiple geometric structures configured to be parallel to each other and further including at least one support between adjacent geometric structures.
  16. The method of claim 14, wherein supporting propagation of the light includes redirecting the light to travel substantially offset from and along a longitudinal axis of a surface plane of the circuit board.
  17. The method of claim 14, wherein supporting propagation of the light includes at least one geometric structure constructed of clear plastic.
  18. The method of claim 11, wherein accepting the light includes a standard Small Form-Factor Pluggable (SFP) cage.
  19. The method of claim 11, wherein emitting the light includes outputting the light through a textured surface.
  20. The method of claim 11, wherein emitting the light includes configuring the light-emitting end to output the light through a front panel coupled to a circuit board.
  21. A method of manufacturing a circuit board assembly, comprising:
    - coupling a connector component to a circuit board to accept a mating connector component at a mating location at a non-perpendicular first angle relative to an edge of the circuit board;
    - coupling a light generating device to the circuit board and a circuit on the circuit board to illuminate the light generating device as a function of a state of the circuit; and
    - mounting an optical light transmission element with at least three mounting features to the circuit board to accept light generated by the light generating device, support propagation of the light for a given length, and output the light at the mating location of the connector component at a second angle relative to the edge of the circuit board, other than at the first angle, to associate light output by the light-emitting end with a state of the circuit on the circuit board.
  22. The method of claim 21, wherein mounting the optical light transmission element to the circuit board includes press-fitting the at least three mounting features into the circuit board.
  23. An apparatus for providing optical indications about a state of a circuit on a circuit board, comprising:
    - an optical light transmission element with at least three mounting features to couple to a circuit board with a circuit, the optical light transmission element including:
      - a light-receiving end configured to accept a light projected by an optical light-generating device configured to illuminate as a function of a state of the circuit;
      - a light propagation region configured to support propagation of the light for a given length; and
      - a light-emitting end to output the light in a manner associating light output by the light-emitting end with the state of the circuit on the circuit board.
  24. The apparatus of claim 23, wherein the mounting features are configured to be press-fitted into the circuit board to position the light-receiving end above a surface-mounted optical light emitting diode (LED).
  25. The apparatus of claim 23, wherein, in a state of coupling with the circuit board, the light-emitting end is isolated and vertically offset at an edge of a circuit board from a connector component at the edge of the circuit board and angularly offset from the connector component.