locations, and combinations with antireflective coatings with the black matrix further reduce undesirable reflections.

[0068] As described above with reference to **FIG. 2**, the electronics section of the assembled display device may include connecting plates **132** which form electrical connections to individual row or column electrodes across the area of the display. **FIGS. 9, 10** and **11** illustrate an exemplary manner in which these connections may be made. **FIG. 9** is a front plan view of an exemplary display device with the connecting plates **132** shown as dashed line boxes. The insulating layer **130** has been removed for clarity. **FIG. 9** also includes two row electrodes **128**A and **128**B and two column electrodes **122**A and **122**B. Column electrode **122**A is shown as being connected to connecting plate **132**A through the vias **914**. Column electrode **122**B is shown as being connected to connecting plate **132**D through the vias **916**. Row electrodes **128**A and **128**B are coupled to the respective connecting plates **132**B and **132**C through the vias **910** and **912** respectively.

[0069] **FIGS. 10 and 11** show cutaway views of a portion of the electronic section shown in **FIG. 9** along the lines F**10** and F**11** respectively. **FIGS. 10 and 11** include the insulating layer **130** which was omitted from **FIG. 9**. As shown in **FIG. 9**, the connections **916** to the column electrodes **122**B are made on a region of the display device which is between active pixel elements. Thus, **FIG. 10** shows only the float glass substrate **120**, the column electrodes **122**, the insulating layer **130**, and the connecting plates **132**D and **132**E. The via **916** between the connecting plate **132**D and column electrode **122**B is made through the opening **131** in the insulating layer **130**. This connection may be made for example, when the connecting plate is printed on the electronics section by allowing the silver paste or ink used in the printing process to flow through the opening **131** and make contact with the column electrode **122**B.

[0070] **FIG. 11** illustrates an exemplary method for making connections to the row electrodes. As shown in **FIG. 9**, the connections to the row electrodes are made on a portion of the display containing the active pixel elements **124**. The segment of the display shown in **FIG. 11** includes the glass substrate **120**, transparent column electrodes **122** display material **124** and row electrode **128**B. As shown in **FIG. 9**, the connecting plate **132**B makes connection with the row electrode **128**B using the vias **910**. This connection is made through the openings **131** in the insulator **130**. As shown in **FIG. 11**, there are several openings such that connection between the connecting plate **132**B and row electrode **128**B may be made at several locations. These multiple openings provide redundancy which increases yield in the completed display devices. Although not shown in **FIG. 10**, the connections to the column electrodes **122** are also made at a plurality of locations along the connecting plates. Referring to **FIG. 9**, for example, there are three vias **916** representing connections between the connecting plate and **132**D and the column electrode **122**B.

[0071] Because ITO is not as good a conductor as aluminum or silver, there may be resistive voltage drops along the column electrodes from the locations at which the electronics module **134** is connected to the column electrode. To reduce the magnitude of these resistive voltage drops, it may be desirable to connect the electronics module to each column electrode at several spaced points along the column electrode. Because these points are desirably not adjacent, it may be desirable to allocate two or even three connecting plates **132** for each column electrode **122**. Thus, the number of connecting plates **132** and connecting pads **134** may be greater than the sum of the number of row electrodes and column electrodes. Alternatively, it may be desirable to form a metallic conductive trace which is in contact with the ITO electrode along the length of the display device. The conductive trace is desirably masked from view by a dark-colored material or is desirably thin to prevent specular reflections from these traces from interfering with the displayed image.

[0072] As set forth above, a structure commonly found in both tiled and non-tiled displays is a black matrix. A black matrix may be fabricated from black lines. The black matrix is typically positioned between the active portions of the pixels to absorb ambient light in these areas in order to increase the display contrast. Black matrix lines may be found, for example between the phosphors on the front screen of a CRT or between the pixel positions defined for a liquid crystal display. In tiled displays, black matrix lines are typically smaller than mullions and are typically placed in the plane of the pixels. Because the black matrix lines are periodic and placed between the pixels, they do not tend to break the continuity of the image.

[0073] The present invention employs an optical structure that may be incorporated in a tiled display to make the physical gaps between the tiles indistinguishable from the black matrix and, thus, invisible to the viewer. This integrating structure may also be used for a non-tiled display to add a black-matrix to a display device which does not have a black matrix in the plane of the emissive pixel materials.

[0074] An illustration of this structure is shown in **FIGS. 12 and 12**A. **FIG. 12** is a cut-away perspective drawing of a partially assembled tiled display device. **FIG. 12A** shows details of a portion of the display device shown in **FIG. 12**. The main components of the display device are a frame **1214**, a transparent sheet **1220** of, for example, glass or plastic, a plurality of black lines **2010** that form a black matrix and the tiles **100** which form the display. The key feature of the optical integrator structure is a pattern of black lines **1210** which are like black matrix lines in that they have equal widths and a spacing equal to the pixel pitch. These black lines **1210** may be aligned to lie between all pixels in the display, including those pixels on either side of the gaps **1212** between the tiles **100**. The optical integrator pattern of black lines also serve as mullions in that some of the black lines in the optical integrator structure lie on top of the gaps **1212** between the display tiles **100** and block the visibility of the gaps. As assembled, the glass substrates **120** of the tiles **100** are positioned adjacent to the black lines **1210** on the back surface of the transparent sheet **1220**, which forms the integrating structure.

[0075] Unlike a conventional black matrix, the disclosed optical structure for integrating display tiles is placed above the plane containing the pixels (like mullion structures), on the viewer-side of the tiles **100**, with the black line pattern being in contact with the display tiles. Unlike mullions, the black lines on the optical integrator structure **1220** are relatively narrow, so that the black lines which cover the joints between tiles are essentially the same width as the black lines which form the black matrix. Thus, the disclosed