

[0183] FIG. 23D is a schematic representation of light output from the subpixel structures contained in one pixel structure in the CLC-based spectral filtering structure of FIG. 23A;

[0184] FIG. 24A is a perspective schematic representation of a fourteenth illustrative embodiment of the CLC-based spectral filtering structure shown in FIG. 2, wherein the subpixel structures of each pixel structure therein are arranged in a 2x2 array;

[0185] FIG. 24B is a schematic representation of one pixel structure in the first (i.e. bottom) CLC layer of the CLC-based spectral filtering structure of FIG. 24A, showing the 2-D spatial layout of the individual subpixel structures contained therein;

[0186] FIG. 24C is a schematic representation of one pixel structure in the second (i.e. top) CLC layer of the CLC-based spectral filtering structure of FIG. 24A, showing the 2-D spatial layout of the individual subpixel structures contained therein;

[0187] FIG. 24D is a schematic representation of light output from the subpixel structures contained in one pixel structure in the CLC-based spectral filtering structure of FIG. 24A;

[0188] FIG. 25 is a fifteenth illustrative embodiment of the CLC-based spectral filtering structure shown in FIG. 2 which is polarization independent, and wherein each blue subpixel structure therein is realized by a green-band RHCP reflecting region in the first CLC layer, a red-band RHCP reflecting region in the second CLC layer, a green-band LHCP reflecting region in the third CLC layer, and a red-band LHCP reflecting region in the fourth CLC layer, wherein each green subpixel structure therein is realized by a blue-band RHCP reflecting region in the first CLC layer, a red-band RHCP reflecting region in the second CLC layer, a blue-band LHCP reflecting region in the third CLC layer and a red-band RHCP reflecting region in the fourth CLC layer, and wherein each red subpixel structure therein is realized by a blue-band RHCP reflecting region in the first CLC layer, a blue-band RHCP reflecting region in the second CLC layer, a green-band LHCP reflecting region in the third CLC layer, and a red-band LHCP reflecting region in the fourth CLC layer;

[0189] FIG. 26 is a sixteenth illustrative embodiment of the CLC-based spectral filtering structure shown in FIG. 2 which is polarization independent, and wherein each red subpixel structure therein is realized by a clear (i.e. non-reflecting) region in the first CLC layer, a blue-green-band RHCP reflecting region in the second CLC layer, a clear non-reflecting region in the third CLC layer, and a blue-green band LHCP reflecting region in the fourth CLC layer, wherein each blue subpixel structure therein is realized by a green-red band RHCP reflecting region in the first CLC layer, a clear non-reflecting region in the second CLC layer, a green-red band LHCP reflecting region in the third CLC layer, and a clear non-reflecting region in the fourth CLC layer, and wherein each green subpixel structure therein is realized by a red-band RHCP reflecting region in the first CLC layer, a blue-band RHCP reflecting region in the second CLC layer, a red-band LHCP reflecting region in the third CLC layer, and a blue-band LHCP reflecting region in the fourth CLC layer, and wherein a inter-subpixel "white"

reflective matrix-like pattern is integrally-embodied within the spectral filtering structure, between neighboring red and blue subpixel regions by virtue of (i) the spatially-overlapping green-red band RHCP reflecting regions in the first CLC layer and the blue-green band RHCP reflecting regions in the second CLC layer, (ii) the spatially-overlapping blue-green band RHCP reflecting regions in the second CLC layer and the green-red band LHCP reflecting regions in the third CLC layer, and (iii) the spatially-overlapping green-red band LHCP reflecting regions in the third CLC layer and the blue-green band LHCP reflecting regions in the second CLC layer, between the red and blue subpixel regions, and between neighboring blue and green subpixel regions by virtue of (i) the spatially-overlapping green-red band RHCP reflecting regions in the first CLC layer and the blue band RHCP reflecting regions in the second CLC layer, (ii) the spatially-overlapping blue band RHCP reflecting regions in the second CLC layer and the green-red band LHCP reflecting regions in the third CLC layer, and (iii) the spatially-overlapping green-red LHCP band reflecting regions in the third CLC layer and the blue band LHCP reflecting regions in the second CLC layer;

[0190] FIG. 27 is a seventeenth illustrative embodiment of the CLC-based spectral filtering structure shown in FIG. 2 which is polarization independent, and wherein each blue subpixel structure therein is realized by a red-band RHCP reflecting region in the first CLC layer, a green-band RHCP reflecting region in the second CLC layer, a red-band LHCP reflecting region in the third CLC layer, and a green-band LHCP reflecting region in the fourth CLC layer, wherein each red subpixel structure therein is realized by a blue-band RHCP reflecting region in the first CLC layer, a green-band RHCP reflecting region in the second CLC layer, a blue-band LHCP reflecting region in the third CLC layer and a green-band RHCP reflecting region in the fourth CLC layer, and wherein each green subpixel structure therein is realized by a blue-band RHCP reflecting region in the first CLC layer, a red-band RHCP reflecting region in the second CLC layer, a blue-band LHCP reflecting region in the third CLC layer, and a red-band LHCP reflecting region in the fourth CLC layer;

[0191] FIG. 28 is an eighth illustrative embodiment of the CLC-based spectral filtering structure shown in FIG. 2 which is polarization independent, and wherein each blue subpixel structure therein is realized by a green-band RHCP reflecting region in the first CLC layer, a red-band RHCP reflecting region in the second CLC layer, a green-band LHCP reflecting region in the third CLC layer, and a red-band LHCP reflecting region in the fourth CLC layer, wherein each green subpixel structure therein is realized by a blue-band RHCP reflecting region in the first CLC layer, a red-band RHCP reflecting region in the second CLC layer, a blue-band LHCP reflecting region in the third CLC layer and a red-band RHCP reflecting region in the fourth CLC layer, and wherein each red subpixel structure therein is realized by a blue-band RHCP reflecting region in the first CLC layer, a blue-band RHCP reflecting region in the second CLC layer, a green-band LHCP reflecting region in the third CLC layer, and a red-band LHCP reflecting region in the fourth CLC layer;

[0192] FIG. 29 is a cross-sectional view of a portion of a second illustrative embodiment of the generalized LCD panel assembly shown in FIG. 2;