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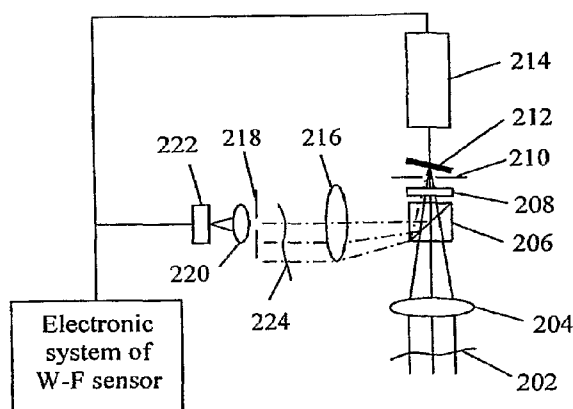
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(54) Title: SEQUENTIAL WAVEFRONT SENSOR

200



(57) Abstract: A sequential wavefront sensor comprises a light beam scanning module (212), a sub-wavefront focusing lens (220), a detector (222) with more than one photosensitive area and a processor for calculating the sequentially obtained centroids of a number of focused light spots from the sub-wavefronts to determine the aberration of the input wavefront. A sequential wavefront sensing method comprises the steps of: sequentially projecting a number of sub-wavefronts onto a sub-wavefront focusing lens and a detector with more than one photosensitive areas, calculating the centroid of the focused light spot from each sub-wavefront, and processing the centroid information to determine the aberration of the wavefront. In particular, a method for auto-focusing and/or auto-astigmatism-correction comprises the steps of sequentially projecting a number of sub-wavefronts around an annular ring of a wavefront to a sub-wavefront focusing lens and a detector, calculating the centroid of focused light spot from each sub-wavefront to figure out the centroid trace and hence the defocus and/or astigmatism, adjusting the focus and/or astigmatism of the optical imaging system before the wavefront sensor so that the measured defocus and/or astigmatism is minimized.



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