SCHOTT® Image Assembler Systems for a Wide Field of View

Multi-leg fiber optics combine images for segmented or tiled viewing capability

Fiber optic image assemblers provide highly customized imaging solutions and situational awareness for demanding applications. Available in both rigid image conduit and flexible wound fiber bundle versions, these systems can be readily bent and shaped to conform to a prescribed light path.

Performance Characteristics

• Versatile imaging system transmits two or more views to one common sensor
• Flexible wound fiber bundle or rigid image conduit versions available
• Wide range of lenses available for one overlapping field of view, or individual discrete images
• Eliminates need for multiple cameras, power supplies, cables, multiplexers, pan / tilt heads, etc.
• Assembly can be bonded directly to a CCD / CMOS sensor, or use relay lens for quick disconnect and interchangeability
• Complete systems designs including lenses, housings, and camera packaging

Sample Applications

• Surveillance for defense including unmanned aerial vehicles, ground vehicles, and military installations
• 360 degree imaging systems for active or passive periscope applications
• Stereoscopic imaging with single camera solution
• Remote monitoring of critical aircraft / vehicle compartments, systems, and components
• Situational awareness for high crime areas, banks, convenience stores, and home security
• Process monitoring and production control
• Can be used to collect, detect, or measure light output from various sources including muzzle flash and rocket plume tests
### Product Specifications

<table>
<thead>
<tr>
<th></th>
<th>Rigid Image Conduit Version</th>
<th>Flexible Wound fiber Bundle Version</th>
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</thead>
<tbody>
<tr>
<td>Single Fiber Size</td>
<td>2.5, 4, 6, 12, 24, 50 and 100 µm</td>
<td>10 µm</td>
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<tr>
<td>Resolution</td>
<td>Up to 100 lp/mm with fused fibers</td>
<td>45 lp/mm</td>
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<tr>
<td>Transmission</td>
<td>80% @ 400 – 1000 µm (length dependent)</td>
<td>40 – 50% @ 400 – 1000 µm (length dependent)</td>
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<tr>
<td>Length</td>
<td>Up to 2m (longer custom applications available)</td>
<td>2 – 10 m</td>
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<tr>
<td>Field of View</td>
<td>Dependent on lens selection and position – many lens choices available</td>
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<tr>
<td>Camera / Housing</td>
<td>Can be designed to work with any camera. Custom housing designs also available</td>
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