SiX 650 HD-G / SiX 650 HD-E-G Detectors for Non Destructive Testing applications

THE OPTIMAL SOLUTION FOR NON DESTRUCTIVE TESTING

- SiX 650 HD-G and HD-E-G are new CMOS digital detectors designed by Thales for 2D and 3D Non Destructive Testing applications, in many industrial sectors, from automotive electronics to aerospace as well as control of electronic boards or mechanical parts of industry.

- The new-gen CMOS technology is behind the detector’s outstanding performance, with very low image noise, absence of artefacts, high sensitivity and low-power consumption.

- Thanks to its integrated internal shielding, the SiX 650 HD-G and HD-E-G detectors offer a very long lifetime and therefore can be used for the most demanding applications such as in-line inspection.
SiX 650 HD-G / HD-E-G
The optimal solution to cover 3D and 2D Industrial NDT

ROBUST AND TAILORED TO YOUR INDUSTRIAL NEEDS
In addition to the standard CsI versions, the SiX 650 HD-G & HD-E-G detectors offer the choice between two scintillators: Gadox standard or Gadox Plus. The SiX 650 HD-G & HD-E-G are suitable for high kV applications up to 250 kV. Two interfaces are available: Ethernet (GigE) or Camera Link.

HIGH SENSITIVITY AND LOW NOISE
The SiX 650 HD-G and HD-E-G produce minimal noise in the image (no artefacts) and offer a higher dynamic range up to 80 dB. Embedded is a dual gain feature for optimal image quality in 2D and 3d applications, for general radiology applications.

VERSATILE AND FAST
The SiX 650 HD-G & HD-E-G deliver a 145 x 118 mm image and this size can be easily reduced according to the area of interest. The detectors feature high speed image acquisition up to 40 fps in high resolution mode.

LIGHT, COMPACT, EASY TO USE, EASY TO INTEGRATE
The SiX 650HD-G & HD-E-G are light and easy to use as the distance from detector edge to sensing area is only 12mm. Mechanical interface and integrated passive cooling facilitate its integration in xray systems. The detector is delivered with a software development kit.

SiX SPECIFICATION

<table>
<thead>
<tr>
<th>Feature</th>
<th>SIX 650HD-G / SIX 650HD-E-G</th>
<th>SIX 650HD-GP / SIX 650HD-E-GP</th>
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</thead>
<tbody>
<tr>
<td>Scintillator</td>
<td>Gadox standard</td>
<td>Gadox Plus</td>
</tr>
<tr>
<td>Pixel size</td>
<td>150 µm</td>
<td>150 µm</td>
</tr>
<tr>
<td>Active image area</td>
<td>960 x 786 pixels</td>
<td>960 x 786 pixels</td>
</tr>
<tr>
<td>Sensing Area</td>
<td>144 x 118 mm</td>
<td>144 x 118 mm</td>
</tr>
<tr>
<td>DQE@0lp/mm,RQA5</td>
<td>&gt; 25 %</td>
<td>&gt; 30 %</td>
</tr>
<tr>
<td>MTF@1lp/mm, RQA5</td>
<td>&gt; 60 %</td>
<td>&gt; 55 %</td>
</tr>
<tr>
<td>Dynamic range</td>
<td>&gt; 76 dB (high gain)</td>
<td>&gt; 76 dB (high gain)</td>
</tr>
<tr>
<td>Max kV range</td>
<td>180 kV</td>
<td>250kV</td>
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<tr>
<td>A/D Conversion</td>
<td>14 bits</td>
<td>14 bits</td>
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MODES
Capture modes: Pulsed, Continuous
Frame rate: up to 40 fps (full image, full resolution)
ROI setting: Configurable size and position

OPERATING CONDITIONS
X-ray maximum linear dose: 2,1 - 3,2 µGy (high gain)
Temperature range: 10 - 40°C
Lifetime dose: 1000 Gy

INTERFACES
Power consumption: 7.5 W
Data interface: SIX 650HD-G: Camera link
SIX 650HD-E-G: GigE-vision (Gigabit Ethernet)
SDK: Detector management and calibration, image correction

MECHANICAL CHARACTERISTICS
Overall dimensions: 183 x 168 x 27 mm
Weight: 1.7 kg

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