**XC-HYDRA**

**MEDICAL PHOTON COUNTING DETECTOR**

The XC-Hydra series is the world’s first commercially available photon counting detector using direct conversion technology that is dedicated to medical applications. Developed around the Direct Conversion group’s powerful CdTe-CMOS hybrid sensor, the XC-Hydra sets new standards in sensitivity making it a leader in low dose imaging. And with market defining energy resolution and dual energy discrimination the XC-Hydra provides unparalleled performance.

### Imaging Parameters and Performance

- **Pixel Technology**
  Photon Counting
- **Energy Discrimination**
  Single / Dual Energy
- **Sensor material and thickness**
  Cadmium Telluride (CdTe): 0.75mm
- **Pixel size**
  100 μm
- **Pixel Fill Factor**
  100%
- **Tile Gap**
  100 μm
- **X-ray Energy range**
  10kVp to 160kVp
- **Active sensor area**
  6mm wide
  100mm to 700mm length
- **Count Rate Range**
  Up to 200 Mcps per mm²
- **Imaging speed**
  10,000lines/s + (full resolution)
- **Maximum Frame rate**
  Up to 300 fps
- **MTF**
  80 % @ 2lp/mm, 45 % @ 5lp/mm,
  DQE @ 0
  >80% (RQA5 spectra, 6μGy, SID 1m)
- **Lag**
  0% (after X-ray 6μGy)
- **Ghosting**
  <0.1% 1min after X-rays (6μGy)

### Electrical Interface

- **Data interface**
  Gigabit Ethernet
- **Power supply**
  12VDC
- **External Trigger**
  Opto coupled 5V, 12-24V with external resistor

### Environmental Conditions

- **Operating temperature range**
  +10 to +30°C @30% - 75% humidity
  +30 to +35°C @30% - 55% humidity
  +35 to +40°C @30% - 45% humidity
  (non-condensing)
- **Temperature control**
  Internal Peltier temperature control + PWM controlled fan system
- **Storage temperature range**
  +5 to +50°C @10% - 95% humidity
- **Housing**
  IP20
- **X-ray window**
  Carbon Fibre

### Software

- **Software GUI included**
- **Fully flexible SDK included**
- **Supported operating systems**
  Windows 7 onwards

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