

QE65000 Specifications

The following sections provide specification information for the CCD detector in the QE65000, as well as the QE65000 Spectrometer itself.

CCD Detector Specifications

Specification	Value
Detector	Hamamatsu S7031-1006, back-thinned FFT-CCD
Spectral range	200-1100 nm with window, VUV option available (150nm). VUV option includes purge port and window removal (no TE cooling). 200-925 nm with HC1 grating.
Active area	24.576 x 1.392mm
Pixel size	24.6 μm square
Pixel well depth	300K electrons each well, ~1.5M electrons column summing well
Dark Current	4000 e/pixel/sec @ 25 °C; 200 e/pixel/sec @ 0 °C
Dark noise	2.5 RMS counts
Readout noise	1.5 counts RMS (40 electrons)
Linearity	
Uncorrected	1% max. nonlinearity
Corrected	< 0.5% nonlinearity
Quantum efficiency	90% peak (see <i>Quantum Efficiency of Detector</i> graph below)