DelTa™ OCT Spectrometer

An ultra-high-resolution OCT spectrometer for precision biomedical and imaging systems

The DelTa™ spectrometer is designed for high-resolution, high-sensitivity optical coherence tomography (OCT) applications. Utilizing a fully transmissive Czerny–Turner (T–T–T) optical design with a volume phase holographic grating, it achieves ultra-high optical resolution down to 0.04 nm with excellent stability and low dispersion. Equipped with a 2048-pixel CMOS line-scan camera and high-speed acquisition up to 250 kHz, the DelTa™ delivers fast, precise spectral measurements for advanced imaging systems. USB 3.0 connectivity and SDK support enable seamless integration into OCT platforms and custom system architectures.



APPLICATIONS

- Optical Coherence Tomography (OCT) systems
- Ophthalmic imaging (retina, glaucoma)
- Dermatologic and tissue imaging
- Biomedical diagnostics
- Industrial metrology and non-destructive testing
- Semiconductor and surface inspection

KEY PERFORMANCE

Wavelength Range: NIRT1: 800 – 880 nm, NIRT26: 780 – 930 nm, NIRT29: 800 – 950 nm

Optical Resolution: NIRT1: 0.04 - 0.07 nm, NIRT26/NIRT29: 0.08 – 0.13 nm

Signal-to-Noise Ratio: 51 dB

Dynamic Range: 69 dB

Integration Dead Time: 0.6 µs

Interface: USB 3.0, Camera Link

DelTa™ Specifications

	DT102G	DT108G	DT113G	DT225GT / DT225C
Wavelength Range	800 nm – 880 nm (NIRT1) 780 nm – 930 nm (NIRT26) 800 nm – 950 nm (NIRT29)			
Sensor Type	CMOS			
Pixels	2048			
SNR	51 dB			
Dynamic Range	69 dB			
Readout Noise	55 e-			
Bit Depth	10 / 11 / 12 - bits			
Integration Dead Time	0.6 µs			
Operating Temperature	5°C to +40°C			
Grating	1800 lp/mm VPH @840nm 1208 lp/mm VPH @850nm			
Dimensions / Weight	NIRT1 Models		225.1 (L) × 150 (W) × 63.15 (H) mm	
	NIRT26 / NIRT29 Models		272.6 (L) × 135 (W) × 65 (H) mm	