

Non-invasive real time imaging

SS-OCT system

IVS-1000, -2000, -4000

The system can be a default system suitable for initial development of your OCT system. Customizability and the ease of use save your development resources. The control software is LabVIEW based; the SubVI is available as an option. The probe configuration is customizable in terms of mechanical design and lateral spot size. The swept source specification is also widely customizable, selectable from the wide range of specifications offered in the santec's HSL series lasers.

Non-destructive testing is one of the key function in product quality control. In-line inspection to detect Void, Crack, Delamination and Defects can be realized by using OCT. The operation wavelength 1.7 μm system newly added to the lineup has small scattering, so the imaging depth improves and high-speed and accurate measurement is possible.

Features

- ▶ Custom order possible
- ▶ Wavelength band : 1060nm(IVS-1000), 1310nm(IVS-2000), and 1700nm(IVS-4000)
- ▶ Axial resolution : <math> < 9\mu\text{m}</math> (High resolution type)
- ▶ High speed measurement : max.100,000 line/sec
- ▶ Deep imaging depth : >12mm (Long imaging depth type)

Applications

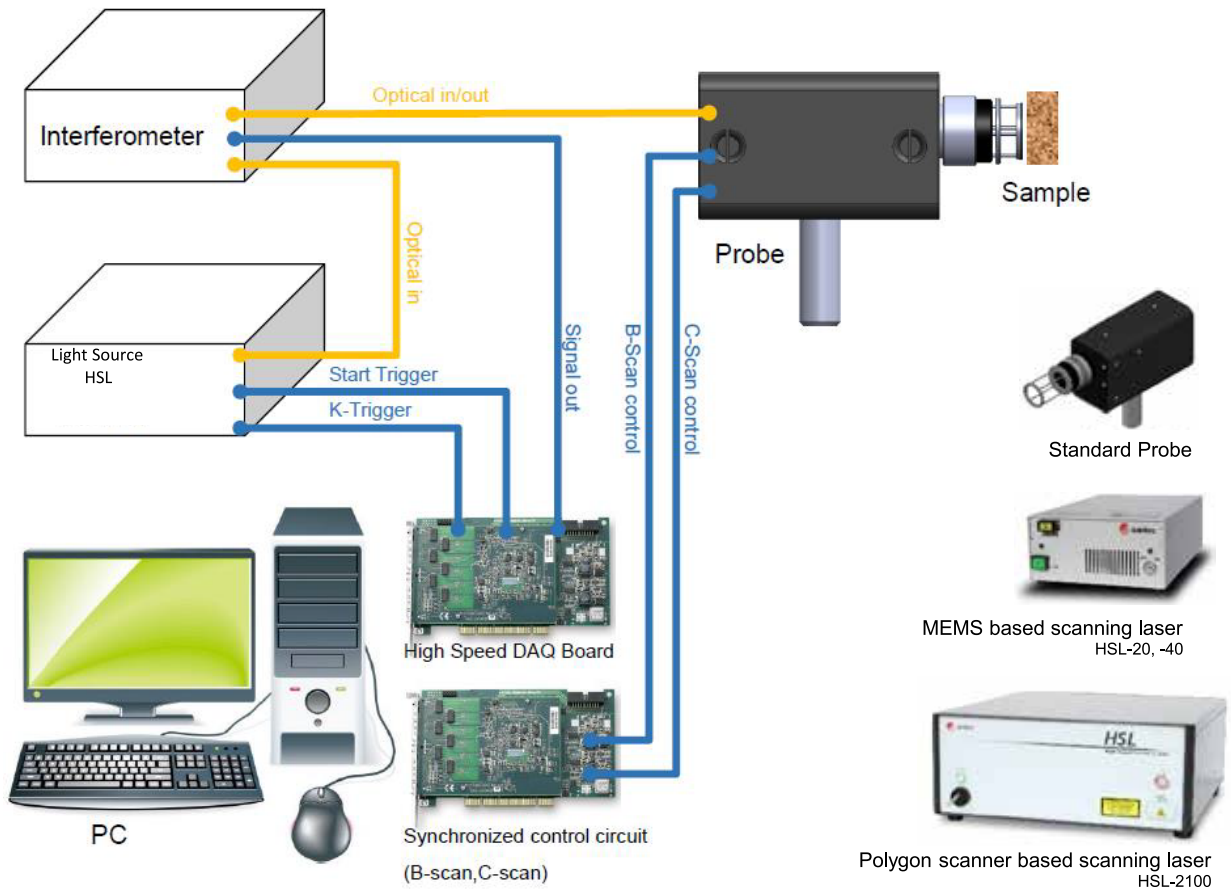
- ▶ Industrial non-destructive inspection
 - Defect inspection (resin, molded plastic, etc.)
 - Figuration (semiconductor, etc.)
- ▶ Thickness monitor
- ▶ Height, Depth measurement
- ▶ 3D surface profiler
- ▶ Spectroscopic
- ▶ Biology & Medical microscope



Specifications

Parameter	Specification				Note	
	IVS-4000-ST	IVS-2000-ST	IVS-2000-WR	IVS-2000-HS		
Scanning Laser Type	MEMS	Polygon Scanner		MEMS		
Wavelength range	Center	1665-1725nm	1315-1340nm	1290-1320nm	1280-1340nm	
	Range	$\geq 135\text{nm}$	$\geq 110\text{nm}$	$\geq 170\text{nm}$	$\geq 100\text{nm}$	
Axial resolution	<math> < 18\mu\text{m}</math>	<math> < 18\mu\text{m}</math>	<math> < 9\mu\text{m}</math>	<math> < 18\mu\text{m}</math>	In Air/FWHM	
Min. Lateral resolution (typ.)	F60 type : 11 μm	F40 type : 6 μm F60 type : 9 μm	F60 type : 9 μm	F60 type : 9 μm	Design guaranteed / FWHM	
Depth of Focus (typ.)	F60 type : 0.3mm	F40 type : 0.1mm F60 type : 0.3mm	F60 type : 0.3mm	F60 type : 0.3mm		
Image acquisition speed	90,000 lines/sec	20,000 lines/sec	20,000 lines/sec	100,000 lines/sec		
Imaging depth	>10mm	>4mm	>4mm	>10mm		
Optical output power at the probe	>4mW	>4mW	>4mW	>4mW	Peak Power <math> < 15.6\text{mW}</math>	
Operation temperature range	25 \pm 5degC				Temp should be maintained constant	
Storage temperature range	10~40degC					
Storage humidity range	$\leq 80\%$				No condensation	

System Configuration



Option

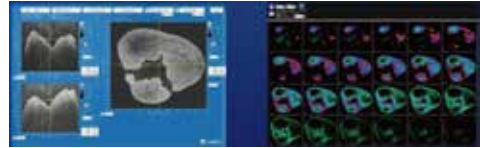


Microscope Stand

OCT Viewer Software



Multi Slice Viewer Software



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