

Key Specifications

		TAS7500IM Terahertz Imaging System	TAS7500SL Terahertz Spectroscopic System Low-Frequency Coverage	TAS7500SP Terahertz Spectroscopic System	TAS7500SU Terahertz Spectroscopic System Wide-Band Coverage
Primary measurement applications ^(*)		Tablet imaging and analysis	Spectroscopy (transmission/reflectance modes)	Spectroscopy (transmission/reflectance/ATR/ transmission polarization analysis modes)	Spectroscopy (transmission/reflectance/ATR modes)
Analytical object		Pharmaceutical tablets	Dielectric material, other reagents and chemical materials	Pharmaceutical tablets, pharmaceutical products (powder, liquid), other reagents and chemical materials	
Specimen dimensions		Imaging and analysis mode: Round tablet, Oval tablet, Oblong tablet Diameter: 5 to 20 mm or less, Thickness: 2.5 to 8.5 mm or less, Weight: 2 g or less (only in case of no engraved marks or score lines ^(**))	Transmission/reflectance mode: Horizontal dimensions: 20 to 30 mm, Vertical dimensions: 10 mm or less	Transmission/reflectance mode: Horizontal dimensions: 5 to 30 mm, Vertical dimensions: 10 mm or less ATR mode: Powder/Liquid: Sample boat horizontal dimensions: Less than 5 mm Solid: Horizontal dimensions: 5 to 20 mm, Vertical dimensions: less than 10 mm	
Imaging function	Spatial resolution	Less than 0.3 mm (2 THz)	—	—	—
	Min. scanning resolution:	0.05mm	—	—	—
	Coating thickness measurement range:	30 µm and higher	—	—	—
	Automatic measurement:	Max.10 tablets on a dedicated cassette, measures automatically	—	—	—
Analysis/display function		Point display (reflection intensity, reflection spectrum), Tomographic image display, 3D mapping display (thickness, surface reflectance, interface reflectance, FCSI) *FCSI: Film Coating Strength Index	Spectral display (transmittance, reflectance, phase difference, absorbance, absorption coefficient, complex refractive index, complex permittivity), Time response display (electric field strength), Quantitative analysis ^(**)	Spectral display (transmittance, reflectance, ATR, phase difference, absorbance, absorption coefficient, complex refractive index, complex permittivity), Time response display (electric field strength), Quantitative analysis ^(**)	
Measurement performance	Frequency range ^(***)	0.1 to 4 THz	0.03 to 2 THz	0.1 to 4 THz	Transmission/ reflectance mode: 0.5 to 7 THz ATR mode: 0.5 to 6.5 THz
	Frequency accuracy ^(***)	Max. ±10 GHz (1.4 THz)	Max. ±10 GHz (0.56 THz)	Max. ±10 GHz (1.4 THz)	
	Frequency resolution	30.4GHz	7.6GHz		
	Dynamic range ^(***)	70 dB or higher	60 dB or higher	70 dB or higher	Transmission/ reflectance mode: 70 dB or higher ATR mode: 65 dB or higher
	Throughput	<15 min (32 x 32 points, integrate 32 times)	8ms / scan		
Purge		Built-in dry air unit (external air supply required)			
Controller		Standard (OS: Windows7 Pro. 64 bits)			
Data file format		Binary format, JCAMP-DX, SPC, CSV			
General specifications	Usage environment	Temperature range: +10 to +30 ° C, Relative humidity: 80% or less (no condensation)			
	Storage environment	Temperature range: -10 to +50 ° C, Relative humidity: 80% or less (no condensation)			
	Power	Analysis unit: AC100V (100-120) / 200V (220-240) ± 10%, 50/60 Hz, 160 VA Measurement unit (TAS7500IM) : AC100V (100-120) / 200V (220-240) ± 10%, 50/60Hz, 180 VA Measurement unit (TAS7500SL/SP/SU) : AC100V (100-120) / 200V (220-240) ± 10%, 50/60Hz, 150 VA (Does not include analysis PC)			
	Size/weight	Analysis unit: Approx. 430 (W) x 540 (D) x 330 (H) mm/28 kg or less Measurement unit: Approx. 500 (W) x 490 (D) x 410 (H) mm/48 kg or less (TAS7500IM), 40 kg or less (TAS7500SL/SP/SU)			

(*) When purchasing a terahertz spectroscopic system, user must select at least one measurement accessory (transmission, reflectance, ATR, transmission polarization analysis)

(**) Please contact us for analysis of tablets with engraved marks or score lines

(***) Option

(***) Under peak frequency, at temperatures of 23°C ± 5°C