SIMTRUM

Product Line Card Light Analysis

2025 V1

For customized projects please Contact us:

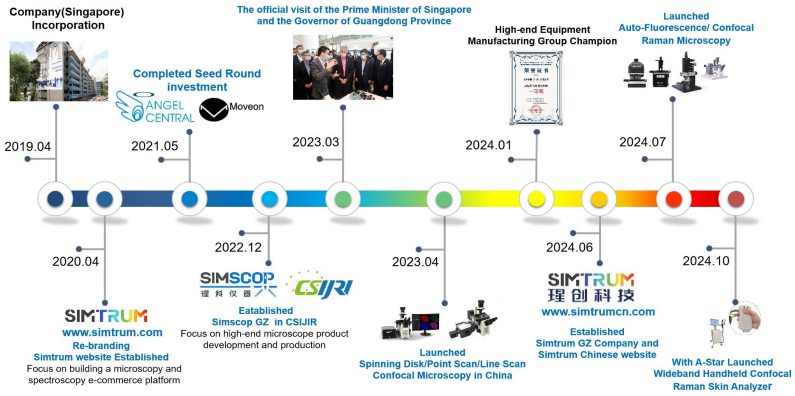
info@simtrum.com

Company Profile

Established in Singapore in 2019, SIMTRUM Group specializes in innovation and applications within microscopy and spectroscopy. Its core team brings decades of optical technology expertise. In 2022, the company partnered with the CSIJRI in Guangzhou to establish a joint R&D laboratory for microscopy with independent research capabilities. The team now includes multiple Ph.D. graduates from the National University of Singapore (NUS), and has grown to dozens of members.

SIMTRUM has collaborated with leading institutions such as Nanyang Technological University (NTU), NUS, A-Star, and Xiamen University to develop high-end microscopy systems. In March 2023, the company's Guangzhou R&D center was visited by former Singapore Prime Minister Lee Hsien Loong and the Governor of Guangdong Province. Later that year, SIMTRUM won first prize in the startup category of the Guangzhou Technology Innovation and Entrepreneurship Competition and secured multiple technology patents.

Vision: To be a leading photonics technology company that truly understands and adds value to our customers.
Mission： Driven by innovation, we deliver exceptional services and precise products to global photonics users, empowering customer success and advancing industry transformation.

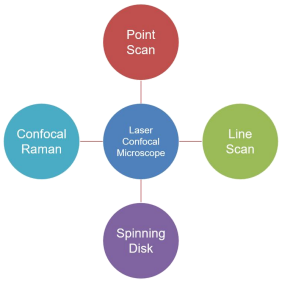


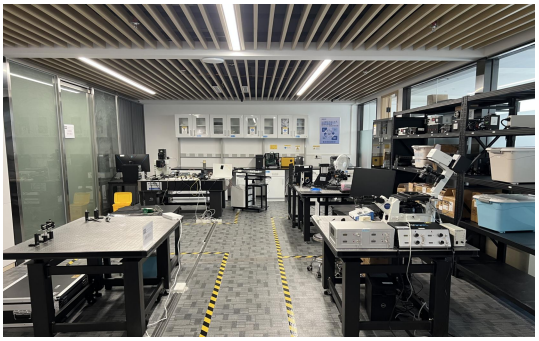
Company Milestones

Optical R&D Laboratory

We have established a fully-owned optical laboratory in Guangzhou operating as a subsidiary of Simscop Instruments. This facility specializes in the R&D and manufacturing of high-end microscope systems and critical equipment components.

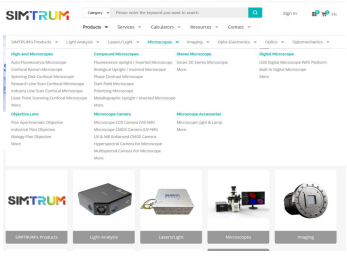
Our proprietary microscope systems include confocal laser microscopes and wide-field microscopes, along with core components such as detection modules, photomultiplier tubes (PMTs), silicon photomultipliers (SiPMs), multi-channel lasers, and motorized filter wheels. Additional products are currently under development.





Real scene of optical R&D laboratory

Focus on microscopy and spectroscopy e-commerce platform



E-commerce platform website:www.simtrum.com

Simtrum is a specialized e-commerce platform dedicated to microscopy and spectroscopy, serving scientific research, industrial, and healthcare fields with high-quality products and aiming to be a trusted partner in the sector.

The platform features seven major product categories: Microscopes, Light Analysis, Lasers/Light sources, Imaging, Opto-Electronics, Optomechanics, and Optic, offering over 4,000 products in total. Each category is equipped with a product line card to facilitate efficient selection.

As a supply chain-integrated systems provider, Simtrum employs a rigorous testing system where every product undergoes professional inspection and performance verification before launch. This ensures reliability and delivers a ready-to-use, worry-free experience for customers.

With 10 years of expertise, we support 3,000+ customers with 30+ tailored solutions.
Trust Simtrum for your microscopy and spectroscopy needs.

Spectrometers(220nm-4.2um)

Fiber Spectrometers
(200 nm - 5 μm)

Raman Spectrometer
(532/785/1064 nm)

FT Infrared Spectrometer
(900-1600 nm)

Monochromators & Spectrographs

THz time domain spectrometer

Products	Wavelength Range	Resolution
Fiber Spectrometers	200 -2500 nm	<1nm
Raman Spectrometer	532/785/1064 nm	< 6 cm^(-1)
FT Infrared Spectrometer	900-16000 nm	<0.5 cm^(-1)
Monochromators & Spectrographs	200-2500 nm	< 0.03 nm
THz time domain spectrometer	0.1-5 THz	> 5GHz

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Line Scan Hyperspectral Camera(220nm-4.2um)

UV Hyperspectral Imaging Camera
Blue eye (220 - 380 nm)

VIS-NIR Hyperspectral Imaging Camera
Green eye (400 – 1000 nm)

VIS-NIR Hyperspectral Imaging Camera
Orange eye (580 – 1000 nm)

NIR Hyperspectral Imaging Camera
Red eye (950 – 1700 nm)

MIR Hyperspectral Imaging Camera
Black eye (2900 - 4200 nm)

Types	Spectral Range	Resolution
UV Hyperspectral Imaging Camera Blue eye	220-380 nm	2048×2048 1056×1027
VIS-NIR Hyperspectral Imaging Camera Green eye	400-1000 nm	1312×1082
VIS-NIR Hyperspectral Imaging Camera Orange eye	580-1000 nm	1312×1082
NIR Hyperspectral Imaging Camera Red eye	950-1700 nm	320×256 640×512
MIR Hyperspectral Imaging Camera Black eye	2900-4200 nm	320×256

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Multi-Spectral Camera(400-1000nm)

Snapshot Multispectral Camera

Multispectral Drone Cameras

Multispectral Imaging Systems

Multispectral Camera for Microscope

Types	Number of Band	Wavelength Choice(nm)	Band Width	Image Resolution
Snapshot Multispectral Camera	<8	474, 495, 526, 546, 578, 602, 621, 640, 720,760, 800, 840, 860, 900, 940, 980 nm Customized Wavelength availabl	20 to 120nm	<512*512
Multispectral Drone Cameras	<8		20 to 70nm	<512*512
Multispectral Imaging Systems	<8		20 to 70nm	<2048 x 512
Multispectral Camera for Microscope	<4		20 to 70nm	<5472 x 3648

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X-Ray/XUV/VUV Spectrometers (1-300nm)

VUV Spectrometers
(80-300nm)

VUV Spectrometers
(40-200nm)

XUV Spectrometers
(30-250nm)

XUV Spectrometers
(5-80nm)

VUV Mini Spectrometer
(104-1100nm)

XUV CCD Cameras
(1-100nm)

VUV CCD Cameras
(50-300nm)

Product Model	Wavelength (nm)	Resolution
VUV Spectrometers	80-300 nm	0.1 nm
VUV Spectrometers	40-200 nm	0.05 nm
XUV Spectrometers	30-250 nm	0.1 nm
XUV Spectrometers	5-80 nm	0.028 nm
VUV Mini Spectrometer	104-1100 nm	0.25 nm
XUV CCD Cameras	1-100 nm	1024×255
VUV CCD Cameras	50-300 nm	1024×255

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Single Photon Detector (SPD) (200-1700nm)

Si-APD Ultra-sensitive photodetector (200-1060nm)

NIR Single Photon Detector (900-1700nm)

Super Conducting Nanowire System (780-1625nm)

Visible Photon Counter OEM (350-900nm)

Model	Wavelength Range	QE
Si-APD Ultra-sensitive photodetector	200-1060 nm	65%@700nm
NIR Single Photon Detector	900-1700 nm	10%/15%/20%(default) 25%
Super Conducting Nanowire System	780-1625 nm	up to 90%
Visible Photon Counter OEM	350-900 nm	35%@500 nm

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Photodiode Detector (PD) (200 nm-12 μm)

High-speed Photodetector

Low-noise Amplified Photodetector

Balanced Amplified Photodetector

High-speed Balanced Photodetector

Avalanche Photodetector

Model	Wavelength Range	QE
High-speed Photodetector	GaAs:700-900 nm InGaAs:1000-1700 nm	10/20/40/50/70 GHz
Low-noise Amplified Photodetector	InGaAs:1000-1700 nm Si:320-1000 nm	~2 GHz
Balanced Amplified Photodetector	900-1700 nm	200/350/400 MHz 1/1.6 GHz
High-speed Balanced Photodetector	1000-1620 nm 1525-1575 nm	10/20/40 GHz
Avalanche Photodetector	InGaAs:1000-1700 nm Si:400-1000 nm	~1 GHz

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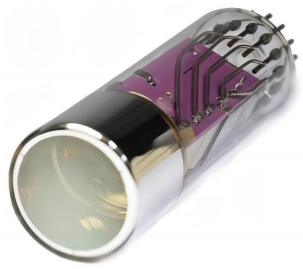
Photodetectors



Photomultiplier Tube
(Tube Only)
(160-900nm)

Photomultiplier Tube
(Module)
(900-1700nm)

Silicon photomultiplier(SIPM)
(300-950nm)

Pyroelectric Infrared Detectors
(2-12μm)

Single-Photon Avalanche Diode
Array(400-900nm)

Model	Wavelength Range	QE
Photomultiplier Tube(Tube Only)	160-900 nm	12%~28%
Photomultiplier Tube (Module)	900-1700 nm	up to 45%
Silicon photomultiplier(SIPM) (300-950nm)	300-950 nm	18%~47%
Pyroelectric Infrared Detectors	2~12 μm	/
Single-Photon Avalanche Diode Array	400-900 nm	50%~55%@520 nm

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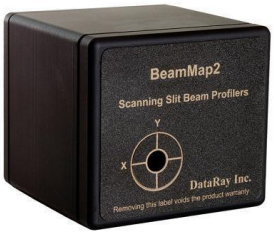
Laser Beam Profilers

UV-VIS Beam Profiler
(190-1100nm)

VIS-NIR Beam Profiler
(350-1750nm)

Mid-infrared Beam Profiler
(2-16μm)



Scanning Slit Beam Profiler
(190-2500nm)

Compact Beam Profiler
(190-1100nm)

Terahertz Beam Profiler
(3-20THz)

Model	Wavelength Range	Resolution
UV-VIS Beam Profiler	190-1100 nm	Up to 4096*3072
VIS-NIR Beam Profiler	350-1750 nm	Up to 1920*1080
MIR Beam Profiler	2-16 μm	540*480
Terahertz Beam Profiler	3-20 THz	Up to 2048*2048
Scanning Slit Beam Profiler	190-2500 nm	/
Compact Beam Profiler	190-1100 nm	Up to 1920*1080

Optical Power Meter (Photodiode)

Thermoelectric laser power meter (0.19-25μm)

Photoelectric laser power meter (200-1100nm)

USB multi-channel laser power meter (0.19-25μm)

Handheld thermoelectric laser power meter (0.19-25μm)

Photodiode Power Sensors (250-2500nm)

Power Meter Console

Integrating Spheres (10-100mm)

Model	Wavelength Range	Power Range
Thermoelectric laser power meter	0.19-25 μm	2 mW-300 W
Photoelectric laser power meter	200-1100 nm	1 nW-1000 mW
USB multi-channel laser power meter	0.19-25 μm	100μW-200 W(Thermoelectric type) 1 nW-1000 mW(Photoelectric type)
Handheld thermoelectric laser power meter	0.19-25 μm	10 mW-50 W
Photodiode Power Sensors	250-2500 nm	/
Power Meter Console		/
Integrating Spheres	10-100 mm	2 μW-100 W

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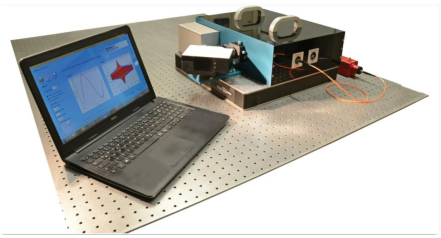
Measurement System

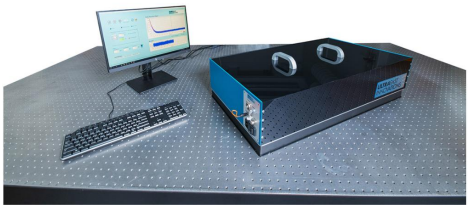
Laser Diode Characterization System LIV100 (Pulse Testing Only)

Laser Diode Characterization System LIV120 (Pulsed, QCW and CW testing including burn-in)

Laser Doppler Vibrometer (0.1Hz to 5Mhz)



White Light Interferometer



Optical Coating CRD Reflectrometer

Model	Description
Laser Diode Characterization System LIV100 (Pulse Testing Only)	Maximum currents：250mA-600 A,Rise time：50ns/500ns/1μs
Laser Diode Characterization System LIV120 (Pulsed, QCW and CW testing including burn-in)	Maximum currents：250mA-1200A,Rise time：5μs
Laser Doppler Vibrometer (0.1Hz to 5Mhz)	Measurement point：Single-point/ Multi-point ， Frequency measurement range：0.1Hz-250KHz (Analog) up to 5 MHz (Digital)
White Light Interferometer	Wavelength range：250-1060 nm/900-2400 nm
Optical Coating CRD Reflectrometer	Corresponding to < 99.9 % reflectivit