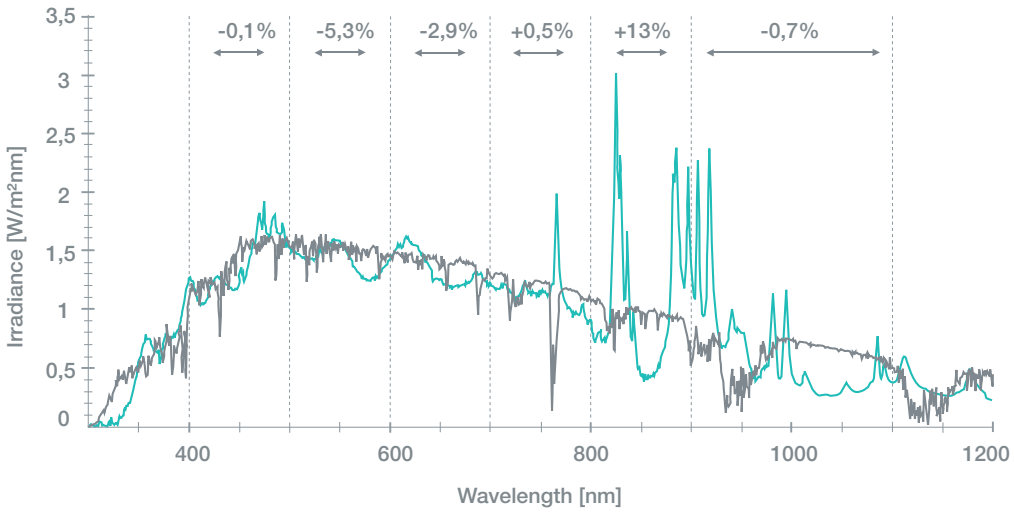
neonsee

:: smart by nature

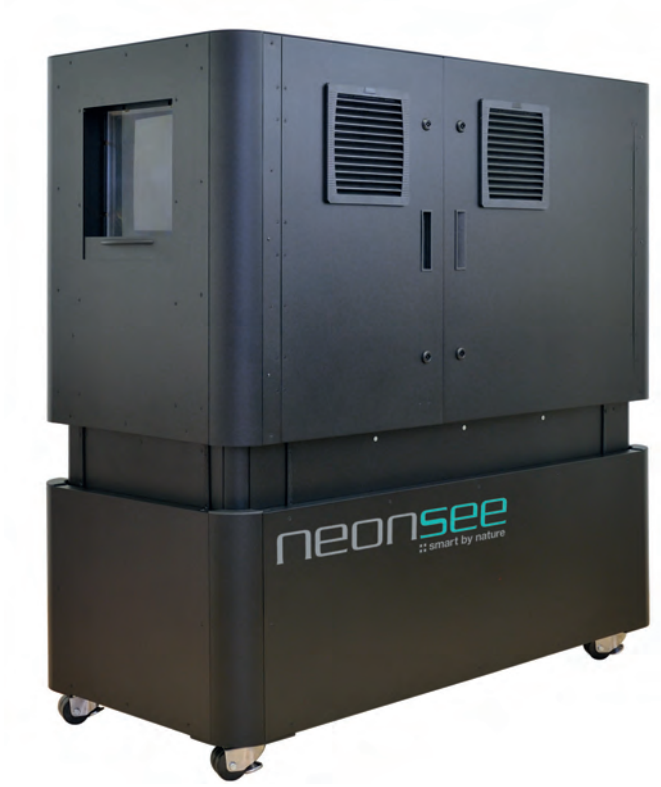
Custom Tailored Solar Simulation

CUSTOM TAILORED SOLAR SIMULATION

neonsee offers customized solar simulation solutions exceeding Class A requirements. Our unique system architecture enables the continuous adjustment of light intensity over the entire intensity range (0-100%) while remaining compliant with Class A requirements with regard to spectrum, homogeneity and temporal stability of irradiance as per IEC 60904-9 and ASTM E 927. We offer customized features including automated intensity control and user defined spectral output.



Comparison of AM1.5G spectrum (IEC 60904-3:2008, ASTM G 173-03) and neonsee single source solar simulator spectrum. Deviations from standards are denoted within corresponding intervals.

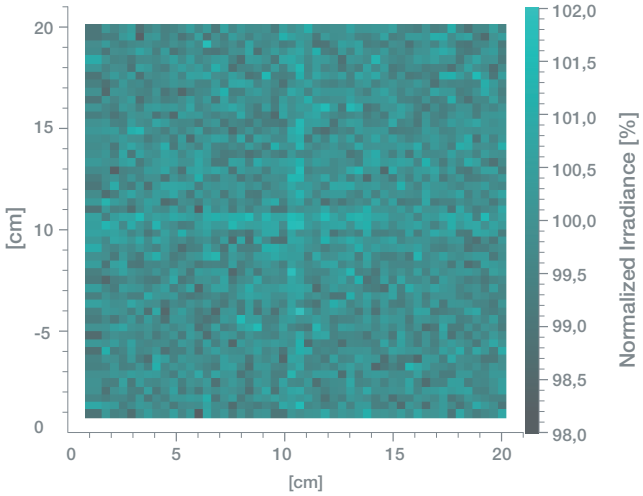


KEY FEATURES

- Fully custom tailored
- Continuous full range intensity control
- Large area, highly collimated illumination
- Full remote controllability
- Energy- and space efficient design

CAPABILITIES

- Turn key and open frame solutions
- Customized housing
- Continuous & automated irradiance stabilization
- Multi-source configurations
- Collimation up to ± 0,3°
- Flash mode with exposure times down to 40ms
- Light emitting plasma lamp technology for enhanced lamp lifetime
- Full remote controllability
- Filter wheels and automated spectral tuning



Spatial uniformity distribution of solar simulator irradiance in test plane.

APPLICATION AREAS

SOLAR CELL CHARACTERIZATION

- IV measurement
- QE measurement
- CPV optics & module testing

AUTOMOTIVE

- System Reliability
- Functionality
- Accelerated age testing

LIFE SCIENCE

- Light therapy
- Cosmetic science
- Clinical use

MATERIAL SCIENCE

- UV resistance
- Material stability
- Color fastness

TECHNICAL SPECIFICATION

General Optical Properties		
	Illuminated Area	50x50 - 300x300mm²
	Light Source	Xenon Short Arc / Light Emitting Plasma
	Operating Mode	Continuous
	Lamp Lifetime	> 1000h (Xe) / > 25000h (LEP)
	Short-Term Instability of Irradiance (IEC 60904-9, ASTM E 927)	< 0.5 % (Class A)
	Long-Term Instability of Irradiance (IEC 60904-9, ASTM E 927)	< 1.5 % (Class A)
	Non-Unifomity of Irradiance (IEC 60904-9, ASTM E 927)	< 1.5 % (Class A)
Sun Simulator		
	Spectrum (IEC 606904-3, ASTM G 173)	AM1.5G, AM1.5D, or customized
	Spectral Distribution (IEC 60904-9, ASTM E 927)	Class A
	Range of Light Intensity	0 – 1200 W/m² (continuously variable)
	Collimation	Up to ± 0,3°
	Concentration	1 – 500x (with reduced area)
Remote Controllability		
	Irradiance	
	Lamp On/Off	
	Lamp Status	
	Lamp Voltage Monitor	
	Lamp Current Monitor	
	Lamp Temperature Monitor	
	Safety Interlock	
General		
	Power Supply	1 Ph, 110/230VAC, 47-63Hz
	Wattage	Model Dependent
	Conformity	CE
	Warranty	1 year

We are looking forward to customize our systems to your requirements. Please contact us and request a tailored offer.

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