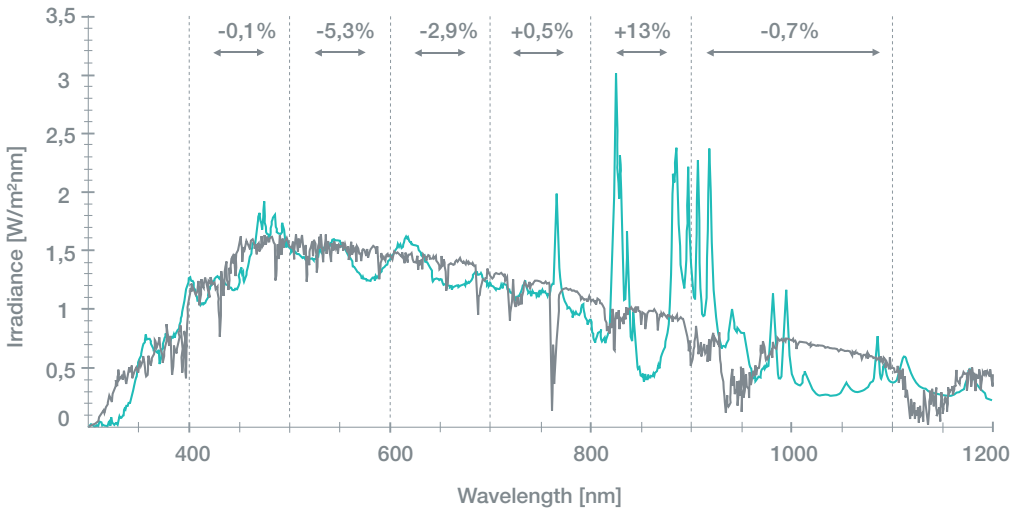
neonsee

:: smart by nature

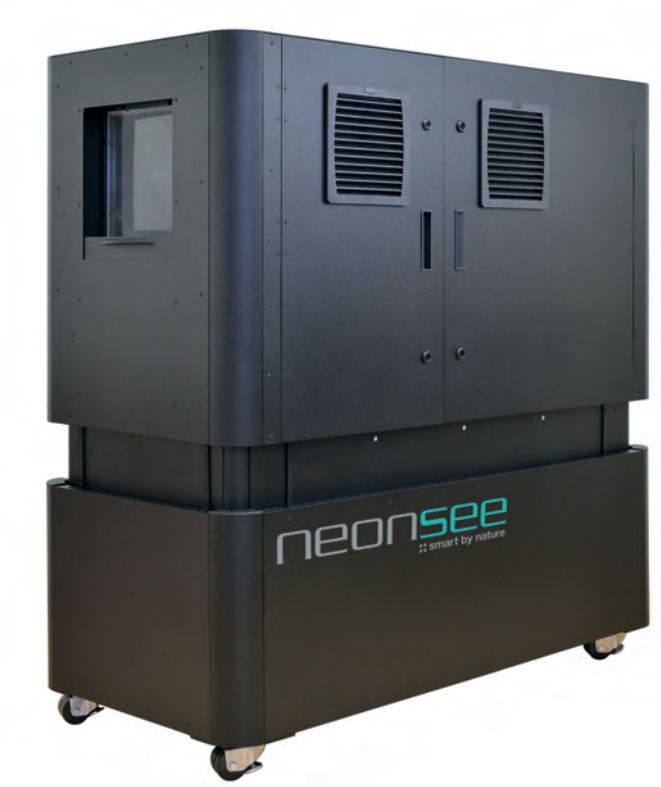
# Custom Tailored Solar Simulation

# 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.*

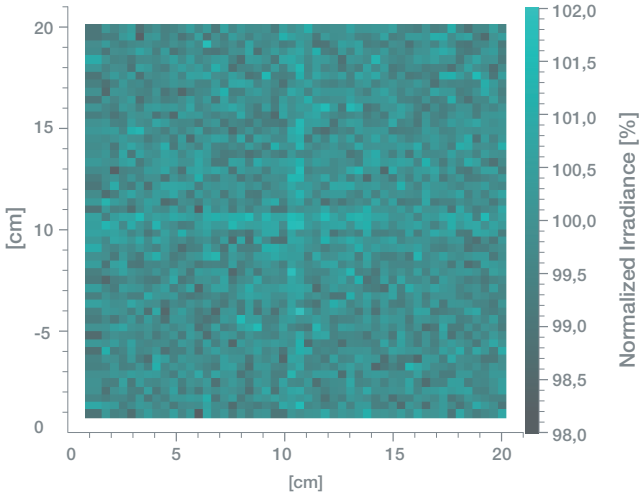



## KEY FEATURES

- 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 irrandiance 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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