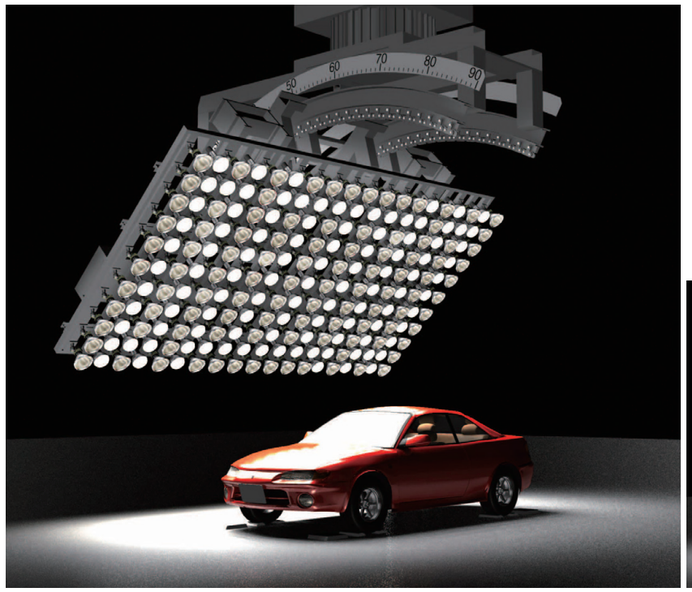
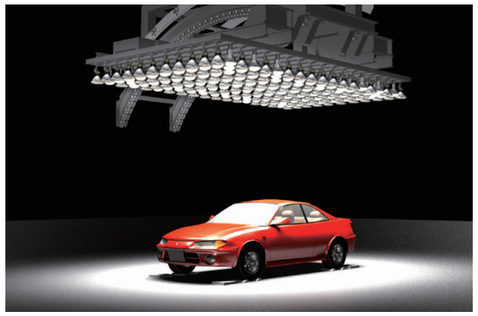
Movable Solar Simulation Array Systems



EYE APPLIED OPTIX™ produces movable solar simulation arrays that replicate the movement of the sun during an individual day. The movable solar arrays are available with either full spectrum or IR heat loading light sources.



Light Source Selection

Full Spectrum Options

- EYE Solarlux™ standard lamp
- EYE Solarlux™ UV-plus lamp

Heat Loading Options

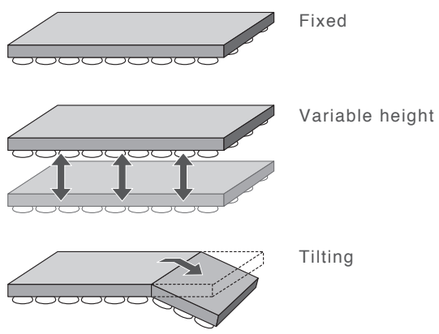
- EYE™ infrared lamp
- EYE™ halogen lamp

Array moving Options

The lighting array is designed for controlled movement to replicate the changing position of the sun for evaluating the effect of solar radiation on the front, side or rear of the test vehicle.

Movement options include:

- Fixed position
- Variable height control
- Full, or partial, array tilt



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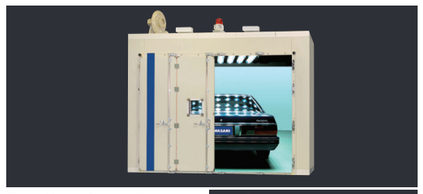
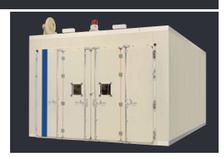
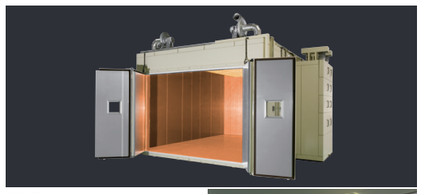
EYE APPLIED OPTIX™

SOLAR SIMULATION & HEAT LOADING SYSTEMS

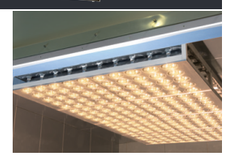


Full Spectrum Solar Simulation Vehicle Test Chamber





IR Solar Heat Loading Vehicle Test Chamber

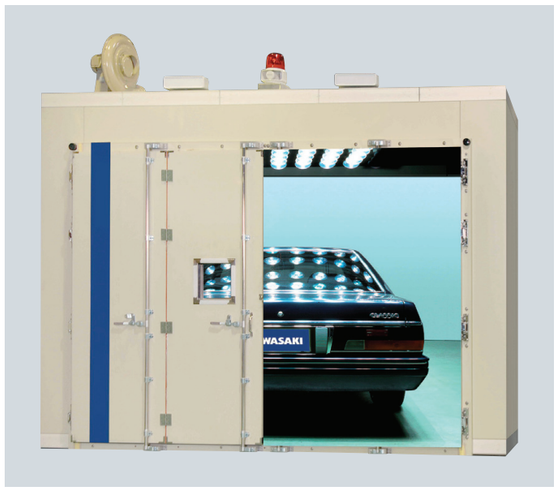


Movable Solar Simulation Array Systems

Solar Simulation and Heat Loading Systems

EYE APPLIED OPTIX™ offers a variety of indoor testing options for simulating solar radiation during individual day or annual periods.

Full Spectrum Solar Simulation Vehicle Test Chamber



This large interior volume full spectrum test chamber can accommodate a full-size passenger vehicle. The chamber is equipped with a full spectrum solar simulator that generates UV, Visible and IR spectrum radiation that closely matches natural sunlight, and also features a wide ranging temperature control system.

EYE APPLIED OPTIX™ Full Spectrum Vehicle Test Chamber features:

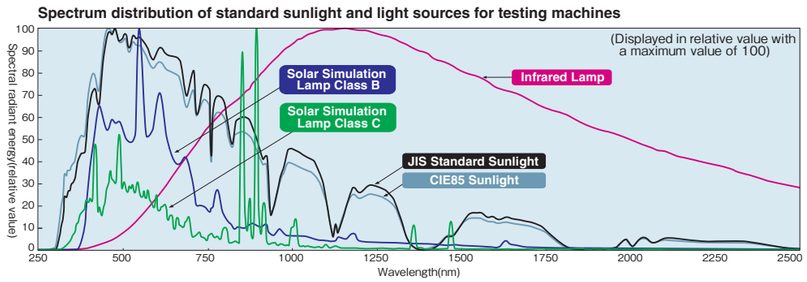
- Sunlight simulating target irradiation ranging across the UV B, UV A, Visible, and Infrared spectrum.
- Spectral distribution and radiation is compliant with appropriate IEC, EPA and ASTM standards.
- Electronically controlled solar radiation between 350 – 1150 W/m².
- Programmable temperature control ranging from -40°C to +80°C (0°C to +80°C during solar simulation).
- Temperature sensors with PID controller ensure precise management of test vehicle temperature during test.

Testing purpose

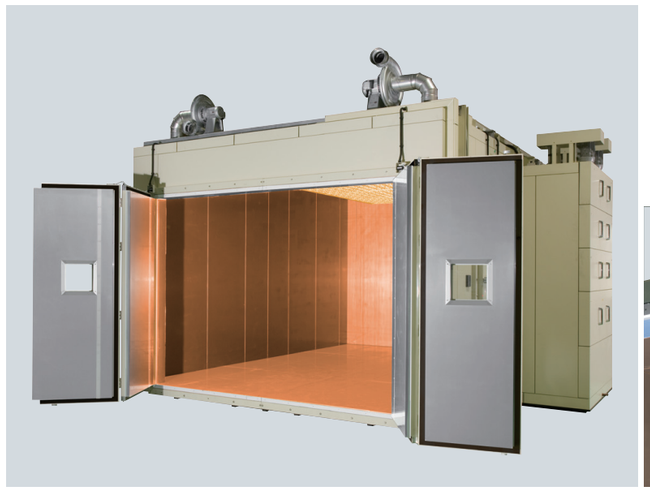
- Vehicle air conditioning system and solar sensor testing
- Full spectrum and UV radiation resistance testing of entire vehicle

Full Spectrum Solar Simulation Vehicle Test Chamber Spectrum Distribution

Solar spectrum distribution comparison between natural sunlight and the various light sources available with the Full Spectrum and IR Heat Loading test chambers.



IR Solar Heat Loading Vehicle Test Chamber



This large interior volume heat loading test chamber can accommodate a full-size passenger vehicle. The chamber is equipped with an infrared (IR) Solar simulator, and also features a wide ranging temperature control system.

EYE APPLIED OPTIX™ IR Solar Heat Loading Vehicle Test Chamber features:

- Electronically controlled solar radiation between 0 – 1150 W/m².
- Programmable temperature control ranging from -40°C to +80°C (0°C to +80°C during solar simulation).
- Temperature sensors with PID controller ensure precise management of test vehicle temperature during test.

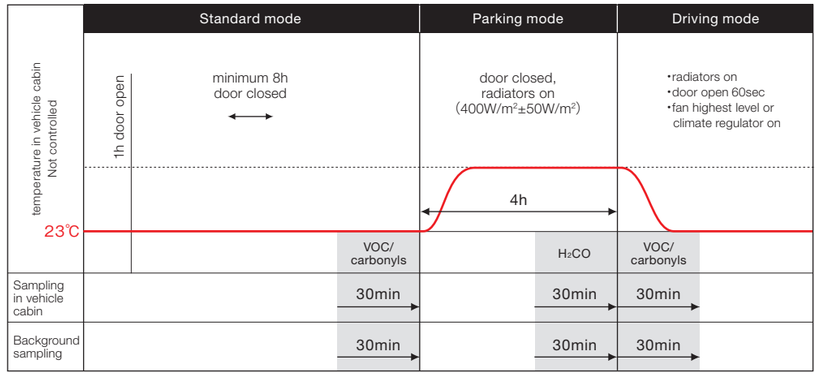
Testing purpose

- VOC testing
- Heat cycle testing
- Vehicle interior heat resistance testing
- Battery performance testing

Vehicle interior Air VOC Test

EYE APPLIED OPTIX™ IR Solar Heat Loading Vehicle Test Chamber is fully compliant with all aspects of the ISO 12219-1 “Interior Air of Road Vehicles” test procedure.

VOC test mode



ISO12219-1
temperature:23℃±2℃ humidity:50%RH±5%
intensity:400W/m²±50W/m²
background concentration:each material 20μg/m³
TVOC 200μg/m³