

COMPLEX ENVIRONMENT TEST EQUIPMENT

EYE 4D MULTI-Chamber

DIN/MIL-STD/IEC weather resistance standard test compliant

The DIN 75220 weathering test standard is one of the 50 items in the LV 124 standard, components to European and European automobile manufacturers. The test standard established by the German automobile manufacturers' association. It is widely used by automotive component manufacturers who sell components to European and European car manufacturers.

- DIN 75220 compliant
- MIL810G(H) compliant
- IEC 60068-2-5 compliant



Example specifications (test facilities)

| | |
|----------------------------|---|
| Dimensions inside the tank | 1100mm(W)×1000mm(D)×1020mm(H) |
| Irradiated area | 800mm(W)×800mm(D) Pointing down |
| Light source type | DIN 75220-compliant light source unit |
| Tank temperature control | Temperature range -45°C to +120°C Accuracy ±1°C |
| Tank humidity control | Temperature range 30% to 95% Accuracy ±5% |

⚠ Important safety information

- For your safety, be sure to observe the following.
- Read through the Operation Manual prior to use. Always operate in accordance with the Operation Manual.
- For optimum results, use only as directed and for the stated purpose.

Warning

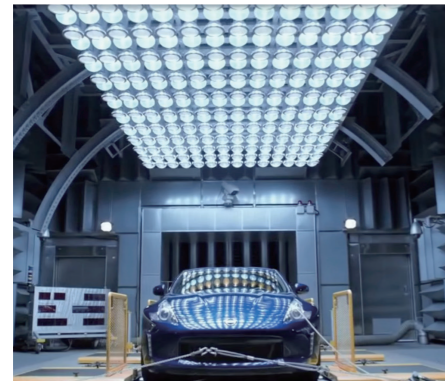
Improper usage could lead to serious injury or death.

- Always shut off the power before opening the lid or commencing inspection or maintenance procedures.
- Due to the risk of electric shock and injury, the mains power box should only be opened by suitably qualified operators.
- Irradiation can harm the eyes and cause skin inflammation. During inspection, do not look directly at the lamp or expose the skin to irradiation.
- Keep hands away from conveyors and other rotating parts to avoid injury.

Caution

Improper usage could lead to danger with potential for injury or damage.

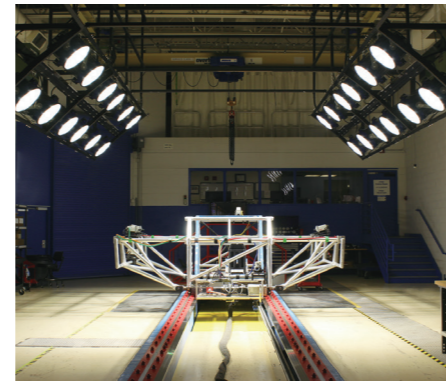
- The lamp becomes very hot during use. When replacing the lamp, wait until it has cooled down completely to prevent injury or burns.
- The power supply and self-ballasted irradiator must be properly earthed.
- Do not block external ventilation intake holes, which are used for internal ventilation of the system.
- Keep hands away from moving parts such as the ventilator fan and conveyor motor to avoid injury.
- Do not operate the system if the ambient temperature is 35°C or higher, as this may cause the cooling system to perform a safety shutdown. Contact Iwasaki Electric for advice.
- The operating environment should be relatively free of contaminants such as foreign gases and dust particles, which can cause corrosion or compromise system control.



Solar simulator



Light-Soaking System



Lighting system for high speed photography

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The information presented in this catalog is true and correct as of September 2023. Catalog No. SUVE7.23.09

EYE IWASAKI

Accelerated Weather Durability Tester General Catalog

EYE SUPER

XENON TESTER UV TESTER



IWASAKI ELECTRIC CO., LTD.

EYE SUPER XENON TESTER

new



High-intensity irradiation rotating drum

XER-W83-A



Standard irradiation rotating drum

Medium-intensity irradiation rotating drum

High-intensity irradiation rotating drum

new

SUV-W171



Handheld UV photometer



UVP365-03A
numerical management : UV illuminance 300~400nm
* JIS C 1613 : 2007 compliant High-energy ultraviolet irradiance meters for metal halide lamp-based testing machines.

SPECIFICATIONS

Specifications for EYE SUPER XENON TESTER

| Model | | XER-W85 | XER-W83-A |
|--|-----------------------------------|--|---|
| Light source | Lamp | Water-cooled 7.5kW xenon arc lamp | |
| | Filters | Inner | Quartz glass (option available) |
| | | Outer | Borosilicate glass (option available) |
| Test method | | Irradiation, irradiation and spray/dark cycle Combinations are possible. Shower available at any time during irradiation or before or after dark | |
| Irradiation intensity | Standard irradiation test | — | Control range: 20 to 70W(100W)/m ² Control system: Automatic Measured wavelength range: 300 to 400nm |
| | Medium-intensity irradiation test | — | Control range: 40 to 100W/m ² Control system: Automatic Measured wavelength range: 300 to 400nm |
| | High-intensity irradiation test | Control range: 60 to 180W/m ² Control system: Automatic Measured wavelength range: 300 to 400nm | Control range: 60 to 180W/m ² Control system: Automatic Measured wavelength range: 300 to 400nm |
| Uniformity | | 90% or higher | |
| Number of samples and effective irradiation area | Standard irradiation test | — | 108 samples [70mm × 150mm] 11340cm ² (including BPT panel)** |
| | Medium-intensity irradiation test | — | 90 samples [70mm × 150mm] 9540cm ² (including BPT panel)** |
| | High-intensity irradiation test | 54 samples [70mm × 150mm] 5670cm ² (including BPT panel)** | 54 samples [70mm × 150mm] 5670cm ² (including BPT panel)** |
| Temperature control range | Control range | Irradiation time: 40°C to 110°C (BPT)** | |
| Humidity control range | Control range | Irradiation time: 10% to 75%RH | |
| Power consumption | | 16kW (three-phase 3W, 200V, 50/60Hz), Input current: 65A | 19kW (three-phase 3W, 200V, 50/60Hz), Input current: 80A |
| External dimensions | | 1090mm (W) × 1490mm (D) × 1850mm (H) (not including protrusions) | 1400mm (W) × 1600mm (D) × 1850mm (H) (not including protrusions) |
| Weight | | Approx. 600kg | Approx. 800kg |

* Lamp life may be affected when 100W is used.
** BPT = Black panel thermometer

● Wet temperature control range depends on test conditions, etc.
● Please note that specifications may change due to continuous system improvement program.

FEATURES

- Pre-set Various Test Standards
- Natural Sunlight Correlation
- Stable Testing without Influence from Ambient Air
- Outstanding Reproducibility
- Capable with ASTM D 7869 (XER-W83A)

- Easy Operation and Monitoring



Touch-screen operating panel

Handheld UV photometer



UVP365-Xe01
numerical management : UV illuminance 300~400nm

UVP340-Xe01
numerical management : UV illuminance 340nm

UVP420-Xe01
numerical management : UV illuminance 420nm

SPECIFICATIONS

Specification for EYE SUPER UV TESTER

| Model | | SUV-W171 |
|----------------------------|--------------------------------------|--|
| Light source | | Water-cooled 6kW metal halide lamp |
| Test case | | Irradiation, condensation, darkness, showers |
| UV irradiation intensity | | 150mW/cm ² (maximum)* |
| Uniformity ratio | | 90% or higher |
| Temperature control range | Irradiation period (BPT)** | 50 to 85°C RH (room temperature: 20°C) |
| | In darkness (temperature in chamber) | 35 to 75°C RH (room temperature: 20°C) |
| Humidity control range | Irradiation | 40 to 70% RH (BPT 63°C)** |
| | Dark hour | 50 to 90% RH (tank temperature 50°C) |
| Effective irradiation area | | 96000mm ² (480mm × 200mm) |
| Power consumption | | 14kW (three-phase 3W, 200V, 50/60Hz) Input current: 50A |
| External dimensions | | 1350mm (W) × 1200mm (D) × 1800mm (H) (not including protrusions) |
| Weight | | Approx. 750kg |
| Interface | | USB flash drive |

* Value specified by the JIS standard (100mW/cm² for conventional photometer (UVP365-01)).
** BPT= Black panel thermometer

● Wet temperature control range depends on test conditions, etc.
● Please note that specifications may change due to continuous system improvement program.
● Contact us for other specifications. A "drain pan" for preventing water leakage is available.

FEATURES

- Automated UV Irradiation Control
- Easy to Maintain
- Simple Form, Intuitive Operation
- Reduces Running Costs
- Easy check of UV Irradiation
- Supports Diverse Irradiation Conditions

Providing correlated acceleration factors more than 10 times typical weatherometer systems, the EYE Super UV Tester greatly increases the efficiency of research and development, quality control, and process control in the development and manufacture of plastic, paint, ink, pigment, textiles and other materials. Uniform irradiation of high intensity ultraviolet light ensures accurate and fast weather durability assessment.

Example of color differences in paint (time required until reaching an identical value)

| | Hours | Days |
|------------------------|-------|------|
| EYE SUPER UV TESTER | 100 | 4 |
| Xenon | 1000 | 42 |
| Sunshine weather meter | 1000 | 42 |
| Outdoor exposure | 10000 | 420 |

30 times or greater UV irradiation intensity than conventional weathermeters. Unprecedented test speeds.

The EYE Super UV Tester uses a proprietary high output UV lamp that generates ultraviolet light very efficiently. Its UV irradiation intensity is 30 or more times greater than that of sunlight and conventional weathermeters. For even greater solar correlation, UV radiation below 295nm is removed from the light source by our custom-made filter.

Natural sunlight reaching the ground does not include wavelengths below 295nm. By eliminating wavelengths below 295nm, the system creates a test environment that approximates outdoor exposure and provides accelerated degradation results similar to those obtained under natural sunlight.

Ratio of energy to intensity by wavelength for different testers

