

**simulates the effects
of sunlight with
ultraviolet rays using
UV fluorescent
lamps**

UV-BOX 636

**reproduces
also dew and rain
using moisture
condensation
and water spray**



testing equipment for quality management

ERICHSEN
since 1910

Technical Description

- **New compact and functional design**
- **High connectivity 4.0**
- **Customizable sample holder**

Meets international and industry specifications

UV-Box for accelerated UV Testing

The accelerated UV aging test reproduces the damage caused by **sunlight**, **rain** and **dew**. In a few days or weeks of exposure of the samples inside the **UV BOX 636**, damages occurring in months or years of outdoor exposure can be reproduced.

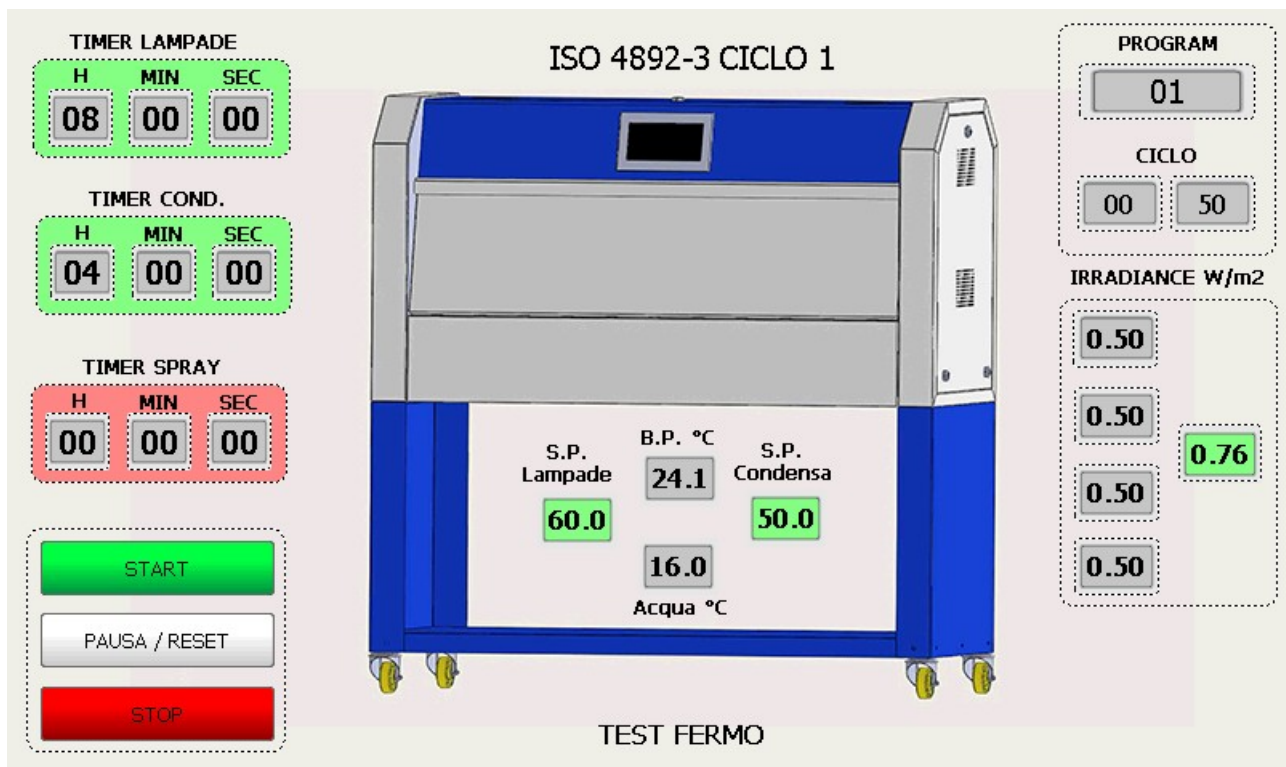
To simulate aging due to external atmospheric agents, **UV BOX** subjects the materials to alternating cycles of UV radiation and humidity at controlled high temperatures. The instrument simulates the effects of sunlight through the use of special **UV fluorescent lamps** and the simulation of the effect of dew and rain occurs through condensation or a spray of water (**Spray** option).

UV radiation is responsible for almost all the processes of photo degradation of durable materials exposed to the external environment. The fluorescent lamps used in the **UV BOX 636** simulate critical UV short waves and realistically reproduce the damage caused by sunlight. The types of damage that can be simulated with the **UV BOX** are the following: color change, loss of gloss, chalking, cracking, cracks, blistering, veiling, brittleness, loss of strength and oxidation.

Dew is mainly responsible for most of the moisture that occurs during outdoor exposure, much more than rain. The condensation system of the **UV BOX 636** realistically simulates dew and amplifies its effect through the use of high temperatures.

The condensation process automatically purifies the network water used in the system. This is because the process of evaporation and condensation of water on samples is actually a distillation process, which allows to remove all impurities.

UV BOX can accommodate up to **48 standard samples** (75 mm x 150 mm), it is possible to create special sample holders according to customer specifications.



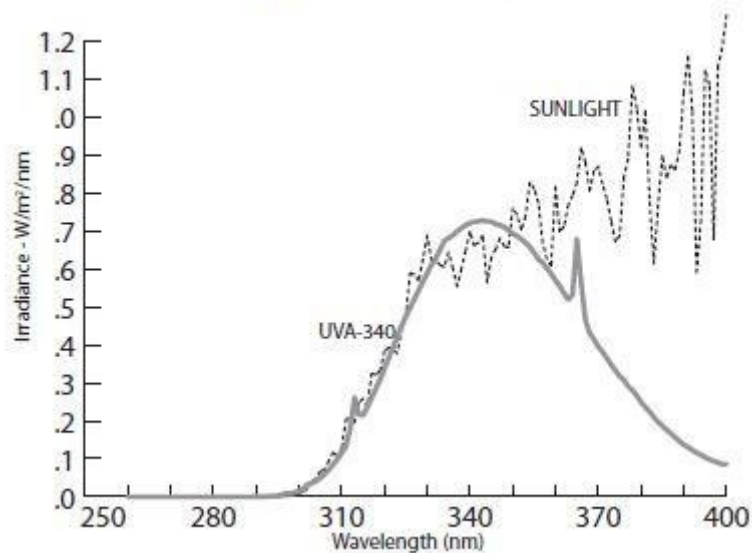
UV lamps

UV fluorescent lamps are more stable than other types of lamps, including xenon arc lamps. The spectral distribution (SPD) is not changed with the aging of the lamp, even after thousands of hours of operation, and this feature involves in more reproducible results, less frequent lamp replacements and a reduction in operating costs.

Lamps UVA-340:

UVA-340 lamps offer the best simulation of sunlight in the critical wavelength region from 365 nm up to the solar cut-off value of 295 nm.

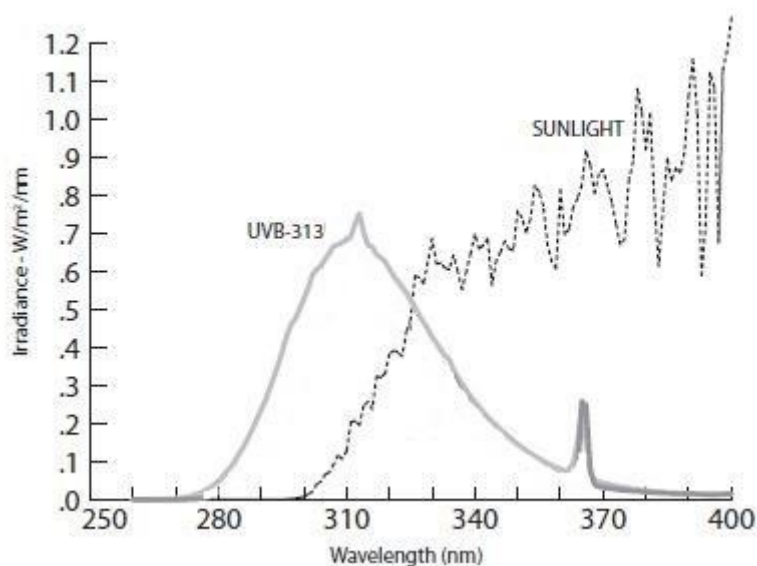
UVA-340 Lamps vs. Sunlight



Lamps UVB-313:

UVB-313 lamps maximize acceleration through the use of the most aggressive UV short waves compared to those normally arriving on the earth's surface. As a result, for some materials these lamps can produce too severe and unrealistic results.

UVB Lamps vs. Sunlight



UV BOX meets a wide range of international and industry specifications, ensuring the reliability and reproducibility of the tests.

Technical data

Model UV BOX 636 – Enhanced	
Electrical requirements	
Mains voltage	230 Vac 10%, 50/60 Hz.
Mains connection	1/N/PE
Current consumption	10 A (max.)
Measures and weight	
Dimensions (WxDxH)	1300 x 700 x 1500 mm.
Weight	120 Kg.
Standard Specimen Capacity	48
Features	
Lamp UV (UVA or UVB)	8
Adjustment and control of irradiance level	yes
Display of current irradiance level	yes
Irradiance:	min 0.35 W/m ² (UVA, UVB) – max 1.55 W/m ² (UVA)
BPT black panel temperature range	Stage UV 35-80°C – stage condensation 35-60°C
Microprocessor control	yes
Control panel touch screen	yes
Test report	yes
Storing various test conditions, free programming of tests standards	yes
Calibration sensor program	yes
Connectivity	Ethernet yes – WiFi optional
Water for condensation stage	Pressure 2-3 bar – water demineralized
Water for spray stage (optional)	Pressure 2-6 bar – conductivity <5µS/cm
Standards	ASTM D4329, D4587, D4799, D5208, D6662, G53, G154, G151 ISO 4892-3, 11507, 11895, 11997-2, 16474-3 EN 927-6, 1297, 12224, 13523-10, 1898, pr 1062-4 SAE J2020 – AATCC TM186

Order Information	
Ord.-No.	Product Description
06360151	UV-BOX 636 Operation via touch screen panel, incl. basic specimen holder, without UV lamps.

The right of technical modifications is reserved.

TBE 636 – V/2020