

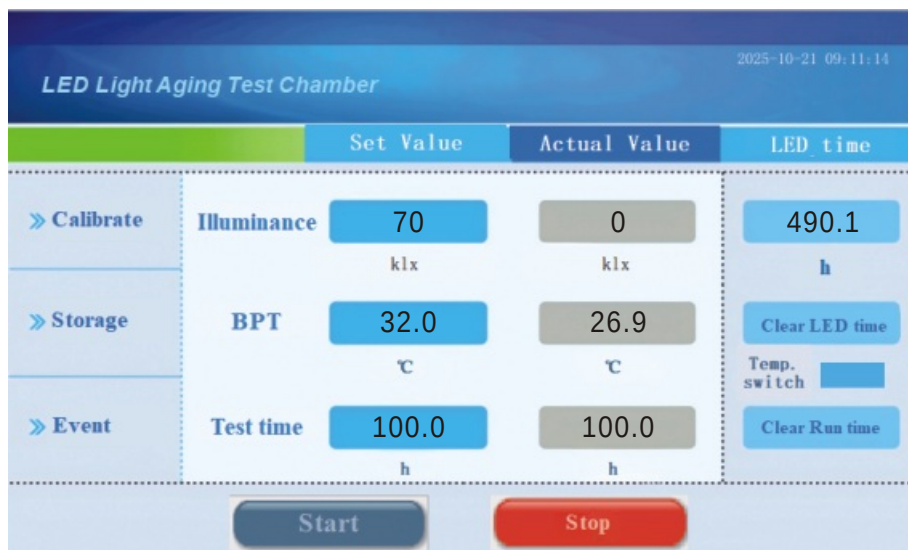
LED Light Aging Test Chamber

For materials that are exposed to LED light for extended periods such as plastic components in LED fixtures (e.g., housings, buttons), automotive interiors (e.g., dashboards, center console panels), and supermarket plastic packaging it is essential to evaluate whether their performance degrades under prolonged LED exposure. Traditional laboratory accelerated aging light sources, such as xenon arc lamps or fluorescent UV lamps, contain significant UV wavelengths and do not accurately simulate real-world LED lighting conditions, as LED light typically peaks at **450 nm** in the spectral energy distribution.

The **BGD 870 LED Light Aging Test Chamber**, pioneered by Biuged in China, is specifically designed to assess the lightfastness of materials under LED illumination. This equipment complies with **ISO/TS 5733** (*Plastics Test Method for Exposure to White LED Light*) and features the following:

- ◆ Siemens controller with comprehensive detection and protection functions, capable of automatically executing user-defined programs while recording and displaying alarm messages.
- ◆ 7-inch touchscreen for intuitive operation.
- ◆ Automatic current output control to adjust LED irradiance precisely.
- ◆ High-precision irradiance sensor for real-time UV energy measurement, feeding data back to the automatic control system, which calculates and adjusts based on set vs. measured values.
- ◆ High-accuracy PT100 thermometer embedded in a high-durability metal black panel, utilizing PID control for precise temperature regulation.
- ◆ Multi-level protection systems, including LED overheat protection, irradiance out-of-range protection, door interlock protection, and black panel overheat protection.
- ◆ Chamber interior: SUS316 stainless steel mirror panel; exterior: corrosion-resistant steel plate with powder-coated finish.





Operation Menu

Main Technical Parameters:

- ★ Light Source: 84 high-power 5W white LED chips arranged across 3 PCB boards (28 LEDs per board).
- ★ Max. Light Source Power: 420W.
- ★ LED Life time: 50,000 hours (at full power).
- ★ Adjustable Irradiance Range: 20150 klx (lux unit: lumens per square meter).
- ★ Black Panel Temperature Range: Ambient +5°C to 45°C (tested at 25°C ambient, 70 klx irradiance).
- ★ Exposure Area: 1,000 cm²
- ★ Sample Capacity: Holds 9 standard samples (150mm × 70mm) simultaneously (5 sample racks included).
- ★ Dimensions (L × W × H): 950mm × 570mm × 540mm.
- ★ Net Weight: 93 kg.
- ★ Rated Power: 600W.
- ★ Power Supply: 220V, 50Hz/60Hz; max current 8A.
- ★ **Ordering Information:** BGD 870 LED Light Aging Test Chamber.