Xenon Weather Meter

GX25

Overview

GX25 is designed to artificially reproduce indoor deterioration factors such as sunlight, temperature and humidity. GX25 exposes materials to these factors and accelerates the deterioration process to predict their lifespan in a relatively short period of time.

The light source is “2.5kW water-cooled xenon arc lamp” developed by SUGA closely resembling the sunlight and it can control the irradiance between 40W/m^2 and 60W/m^2 (at 300-400nm). GX25 conforms to light resistance tests for textiles, ISO, ASTM, and AATCC.

Feature

1.Wide range of control for temperature and humidity

GX25 conforms the option 2 and 3 of AATCC (American Association of Textile Chemists and Colorists) xenon arc test for textiles (AATCC TM169) which specifies the irradiance 40W/m^2 (at 300 to 400nm), BPT (Black Panel Temperature) 77℃ and relative humidity 70%(option 2), 27%(option 3). Xenon lamp and daylight filter are allowed for about 2000 hours of continuous use. GX25 can control simultaneously each of BPT and CAT (Chamber Air Temperature) used in a lot of test standards.

2.Established the Irradiance and Temperature Direct Control System on a Specimen Plane

The irradiance on the specimen plane and the black panel temperature are directly measured and controlled at the same position as the specimens as they rotate, maintaining repeatability and test reproducibility.

3.Vapor system

Vaporizer is adopted for humidity control to keep test specimens free from taints.

4.SUGA Air Blender

GX25 is capable to control humidity between 30 to 70%rh with “SUGA Air Blender”—the latest control system operating adequately the air heater for a minimum time. Using the air damper without a refrigerator, which enables energy saving operation(Current 43A).

Specification of GX25

Light source	Xenon-arc lamp WX2.5(2.5kW water-cooled type) Filter:Daylight filter (The other filters such as Window Glass, Extended UV, etc, are available as option.)
Test condition	Light-on, Light-off [Option:Light-on and surface spray, Light-off and back spray, Light-off and surface and back spray]
Irradiance	40 to 60W/m^2 (at 300 to 400nm) [Option(Measuring Wave length control):340nm, 420nm]
Temperature and humidity range	Light test:55 to 110±2℃ of Black Panel Temperature (BPT; depending on irradiance); 30 to 70±5%rh (at 63℃ of BPT and 42W/m^2) Dark test:38±2℃ of chamber air temperature, 95±5%rh [Option:BST (Black Standard Temperature) 60 to 115℃ (depending on irradiance)]
Number of specimens	Maximum 108pieces (65×55×1mm)
External dimension of the instrument	Approx.:width100cm, depth125cm, height180cm, weight400kg
Electrical requirements	3phase 200V approx. 43A 50/60Hz
Related standards	ISO 4892-2, ISO 16474-2, ISO 105-B02, ASTM G155, AATTC TM16, AATCC TM169 etc. (depending on test cycles)

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