

Smoke Density Photometric System

(DIN 50055)

firetesting technology



The **FTT** 'Smoke Density Photometric System' (DIN 50055) is designed to be used in conjunction with equipment that measures smoke from burning materials. The unit can be fitted to several instruments such as the Room / Corner test, (ISO 9705), Single Burning Item (SBI) (EN 13823), Heat Release and Smoke Production Apparatus for IEC 60332 Part 3 (EN 50339), Steiner Tunnel (ASTM E84) or Flooring Radiant Panel (EN 9239-1) etc.

The apparatus consists of:

- Light Source
- Light Measuring System
- Control Unit

The Light Source is a gas filled tungsten filament lamp. Power for the lamp is provided by a regulated power supply housed in the Control Unit.

The Light-Measuring Device consists of:

- Achromatic system of lenses
- Silicon photo-electric cell
- High gain low noise amplifier

These components are housed in an assembly with a collimating lens.

The signal from the Light-Measuring Device is taken to the Control Unit, which is capable of continuously measuring relative light intensity against time as percentage transmission over the ranges to be studied.

The system has a linear response with respect to transmittance and an accuracy of better than $\pm 1.5\%$ of the maximum reading. The Control Unit also regulates the damping of the amplifier so that the response times required to achieve 95% accuracy (t_{95}) correspond to the specifications given in the standard.

An analogue output on the control unit of 0-1V = 100% transmission is available to be taken to a data acquisition unit. A Windows based software package is also available to enable simple data acquisition, analysis and storage via a data logger. All parameters are displayed. The versatile data logger may be used in other applications and is supplied with software that allows the data stored in the logger to be downloaded to a PC for further analysis.



Smoke Density Photometric System



SBI Smoke Measuring System

Unrivalled Experience in Design and Manufacturing

FTT's site in East Grinstead, is home to the largest group of fire scientists and instrumentation design engineers working on fire testing instrumentation, and is at the heart of our design and manufacturing. For almost 30 years FTT has provided the highest quality instruments and service for fire testing and research professionals worldwide, directly and through its extensive global sales and support network.



Quality

- World-class manufacturing in accordance with multiple international and national standards, including: EN, ISO & ASTM
- ISO 14001, ISO 9001 certified

Integrity

- A dedicated team passionate about fire testing instrumentation and continuous product improvement
- Delivering reliable, robust and easy-to-use instruments for the past 30 years

Excellence

- A world-class team made up of qualified fire scientists, mechanical, electrical and electronic fire instrument design engineers and production, installation and maintenance engineers

Global

- World-wide distribution network for global sales, installations, training, maintenance and technical support
- Leading global supplier of the Cone Calorimeter, Large Scale Calorimeter, NBS Smoke Chamber and Oxygen Index