



LUMETRON GW-4 Glow Wire Apparatus



The **LUMETRON GW-4** is designed to perform tests specified in many standards to check Resistance to Fire in Insulating parts. The best method for testing electro-technical products with regard to fire hazard is to duplicate exactly conditions occurring in practice. In most cases this is not possible. Hence, for practical reasons, testing of electro-technical products for fire hazard is conducted by simulating as closely as possible actual effects occurring in practice. Parts of electro-technical equipment which may be exposed to thermal stress due to electric effects & deterioration of which may impair safety of equipment shall not be unduly affected by heat & fire generated within the equipment. The test described in IEC 60695-2-10 (2000-10) - Glow wire Apparatus and Common Test Procedure and IS:11000(Part 2/Sec 1)-1984, 'Fire Hazard Testing, Glow Wire Test & Guidance' is applicable to electro-technical equipment & its sub-assemblies & components. The GW-4 meets the requirements of the most recent IEC specification for Glow Wire Test as per IEC 60695-2-10, 2000-10

Features

- * Meets requirements of the latest IEC specifications as per IEC 60695-2-10 (2000-10).
- * Nickel/Chromium (Ni/Cr 80:20) Glow-Wire, 4 mm diameter, shaped as specified in the standard.
- * Precision fine wire Cr/Al, insulated junction thermocouple, 1.0 mm (or 0.5 mm - OPTION) dia, to measure Glow-Wire temperature, sheath resistant to 1000°C.
- * Digital processor based PID Temperature indicator, 4 digits with ambient compensation.
- * Adjustable current source to heat and maintain Glow-Wire to preset temperature.
- * Motorised specimen carriage preloaded with force of 0.8 to 1.2 N when in contact with Glow-Wire.
- * Mechanical stopper limits movement of tip of Glow-Wire in to the specimen to 7 mm.
- * Digital -processor timer to control Glow-Wire application time, test duration & to record flame timing.
- * Draught proof test chamber with ambient light limited to less than 20 lux..
- * Universal, adjustable stainless steel perforated tray mounting bracket to fix test specimens.
- * Precision scale for measuring flame height.
- * Visual illuminated indicators/switches for various functions and audio indicator for TEST ON indication.

Specifications

Heating Element	: Nickel/Chromium Glow-Wire (80:20), 4 mm dia, shaped as specified in standard
Temp. Sensor	: Sheathed Cr/Al thermocouple, 1.0mm (OPTION=0.5 mm) dia, located in tight fitting pocket hole in glow-wire
Temp. Control	: Processor based digital PID indicator, 4 digit, 1°C resolution.
Temp. Range	: Adjustable from Ambient to 960°C
Timer Control	: Processor based digital timer, 4 digit, 0.1 sec resolution, 4 independent channels as follows : t01 = ta = Glow wire application time, range = 0.1~ 999.9 sec (Factory set to 30 sec.) t02 = ta+30 = Test duration time, range = 0.1 ~ 999.9 sec (Factory set to 60 sec.) t03 = ti = Time when specimen STARTS burning t04 = te = Time when specimen STOPS burning
Test Sequence	: Automated with following controls : START : Starts glow wire heating ADJUST : Manually adjust Glow Wire tip temperature with control potentiometer. TEST : Starts Test sequence (TEST indicator turns ON after glow wire achieves preset temperature and stabilizes for one minute) IGNITE : Memorizes when specimen starts burning EXTINGUISH : Memorizes when specimen stops burning HEIGHT : Precision scale to measure max. flame height, manually operated
Carriage	: Automatic, motorized forward & reverse motion of Test Specimen, (with manual jog switches operative in standby mode to allow precise sample positioning)
Penetration depth	: Mechanically limited to 7 mm
Sample Loading	: Test sample contact force against glow wire preloaded to 0.8 ~ 1.2 N.
Sample Size	: 180 mm x 180 mm max., 15 mm x 15 mm min., Thickness - 100 mm max., 10 mm min.
Safety	: Emergency Switch, MCB & fuses.
Dimensions	: 550 W x 250 D x 600 H, mm, overall, approximate
Supply	: 220~240 V AC, 50~60 Hz, 1 Ph, 4 A

