

The Fujikura accredited test & measurement course provides additional training for those who wish to increase their understanding or specialise in the field of Fibre Optic testing. Both 2 and 5 day courses cover s testing techniques and the use of standard Fibre Optic test equipment (VLS/VFL, Light Source & Power Meter, and OTDR). In addition, the 5 day course includes time spent on chromatic and polarisation mode dispersion and FTTX testing.

Advanced Test & Measurement 3 day

The 3 day course covers these follow topics:

- Introduction to advanced testing & common terms used.
- Power & Loss budgets.
- Testing procedures:
 - i. Acceptance
 - ii. Installed cable
 - iii. Complete system
- Testing Equipment & Techniques:
 - i. VLS/VFL testing.
 - ii. ILM (Light source & Power Meter)
 - iii. OTDR Testing

Advanced Test & Mesurement 5 day

The 5 day course covers these following topics:

- Introduction to advanced testing & common terms used.
- Power & Loss budgets.
- Testing procedures:
 - i. Acceptance
 - ii. Installed cable
 - iii. Complete system
- Testing Equipment & Techniques:
 - i. VLS/VFL testing.
 - ii. ILM (Light source & Power Meter)
 - iii. OTDR Testing
- Additional advanced testing content:
 - i. Chromatic Dispersion (CD)
 - ii. Polarisation Mode Dispersion (PMD).
 - iii. FTTX testing.

- Description:** This course covers all areas to include fault finding and commission fibre optic systems. This course is aimed at those who have a good understanding of fibre optics and wish to expand their knowledge and experience.
- Venue:** **Main Fibreplus Ltd Training Centre: Westbury Wiltshire.**
Centres: Westbury - Dunfermline - Peterborough - Lancaster - Surrey
- Prerequisite:** This course requires a good knowledge of fibre optic, please refer to our City & Guilds 3667-02 Qualification or Fibreplus Ltd accredited 5 day course to achieve the knowledge required to get the most from this course.
- Duration:** 3 days.
- Dates:** Available most weeks throughout the year, refer to Calendar and call for booking availability.
- Price:** Please refer to current price list. **FIBREPLUS PRICE GUARANTEE.** Not to be beaten on a like for like basis.

Introduction to advanced testing

Common Terms

- Wavelength, Frequency, dB Loss, dBm Power
- Fibres i.e. OM1, OM2 OM3 & OS1 G652 to G657
- Bandwidth Limitations, Dispersion, Attenuation
- Absorption and scattering, Electromagnetic Spectrum
- Optical Bands O, E, S, C, L & U

For FTTx testing, Chromatic and Polarisation Mode Dispersion (CD/PMD) please refer to the 5day Test & Measurement course

System testing procedures

Stage 1

A) Acceptance Testing

- Testing Optical fibre on the drum
- Internal & External Checks
- Length
- Attenuation Co-efficiency

Stage 1

B) Testing Laid Cable

- Testing of the fibre section
- Termination options for testing
- Loss testing
- Attenuation Co-efficiency
- Bending issues, Micro & Macro

Stage 2

Final Testing of complete system

- Termination options for testing
- Loss testing
- Bending issues, Micro & Macro
- Over sheath resistance testing
- Earthing & Bonding
- Checking Labels Identification i.e. Laser / Cable /Fibre
- Documentation & Schematics

Post Testing

- Schematics & Test Documentation
- Maintenance & Trouble shooting

Equipment

Standard Equipment

- Launch & Tail Leads
- Reference Leads Issues
- Single mode Multi-mode 50 & 62.5 fibre issues

BFA & Mechanical Splices

- Use of Bare Fibre Adapters for testing
- Correct uses of Mechanical Splices

Fibre Identifiers, Mandrels & Microscopes

- Correct uses & importance

Understanding Connectors & Adapters

- Type i.e. SC, FC/PC, MPx, LC & ST etc.
- Polish i.e. Flat, Angled, Super & Super Angled
- Faults. Assessing performance of Connector and Adapters

Visible Light Source (VFL) & Loss Test Set (ILM)

- Limitations & Uses
- Understanding the various ILM Kits
- Cutback methods
- Various Referencing methods
- Understanding correct uses
- Active Equipment Testing
- Results and Documentation

OTDR (Optical Time Domain Reflectometer)

- Understanding correct use
- Reflective & Non-Reflective Events
- Interpreting Results
- Fault Locating
- Launch & Tail Leads
- Results and Documentation
- OTDR Dynamic Range



Exam and Assessment Method

- 2 hour practical assessment

Main Training Centre

Fibreplus Ltd. Unit 1 - 4 Brook Lane,
Westbury, Wiltshire. BA13 4ES
Tel:- 01225 636041 email:-enq@fibreplus.co.uk

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- Documentation & Schematics

PMD & CD Testing

- Testing for Length & Bandwidth Limitations

Post Testing

- Schematics & Test Documentation
- Maintenance & Trouble shooting

Equipment

Standard Equipment

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- Reference Leads Issues
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