FIBRE OPTICS EQUIPMENT

- Selective Optical Power Meters
- FTTx Analysers
- LASER light sources
- Visual Fault Locators
- Micro OTDRs
- Portable Optical Spectrum Analysers
- Kit for optical fibre splicing and fusion
- Kit for optical fibre mechanical splicing and connectorization
- Optical fibre acessories
- Optical to RF converters
- Field Strength Meters

PROMAX

THE COMPANY

RESEARCH & DEVELOPMENT

PROMAX was founded in 1963 by Jose Clotet in Barcelona. The company's first developments included instruments to generate television and radio signals and analysers to check the reception quality.

Today, **PROMAX** is a leading company in providing test and measurement solutions worldwide to support the information technology revolution. The company invests about 15% of its annual turnover in Research & Development.

PRODUCTS

Our product lines include measuring instruments for cable TV, satellite TV, broadcast, wireless and fibre optics networks, FTTH and GPON analysers. DVB-T modulators, IP streamers or IP converters (ASI, DVB-T) are among the company's latest developments.

MANUFACTURING

PROMAX manufactures more than 200 different products in our manufacturing facilities in Barcelona. High efficiency and the best production quality are achieved using the latest technological resources.

EXPANSION

The products are distributed worldwide through a mix of direct and indirect sales channels. PROMAX has already set up 25 Calibration Centers and several Service Centers worldwide. Our target is to continue this process and deliver technical support at same time we make the products available to our customers.

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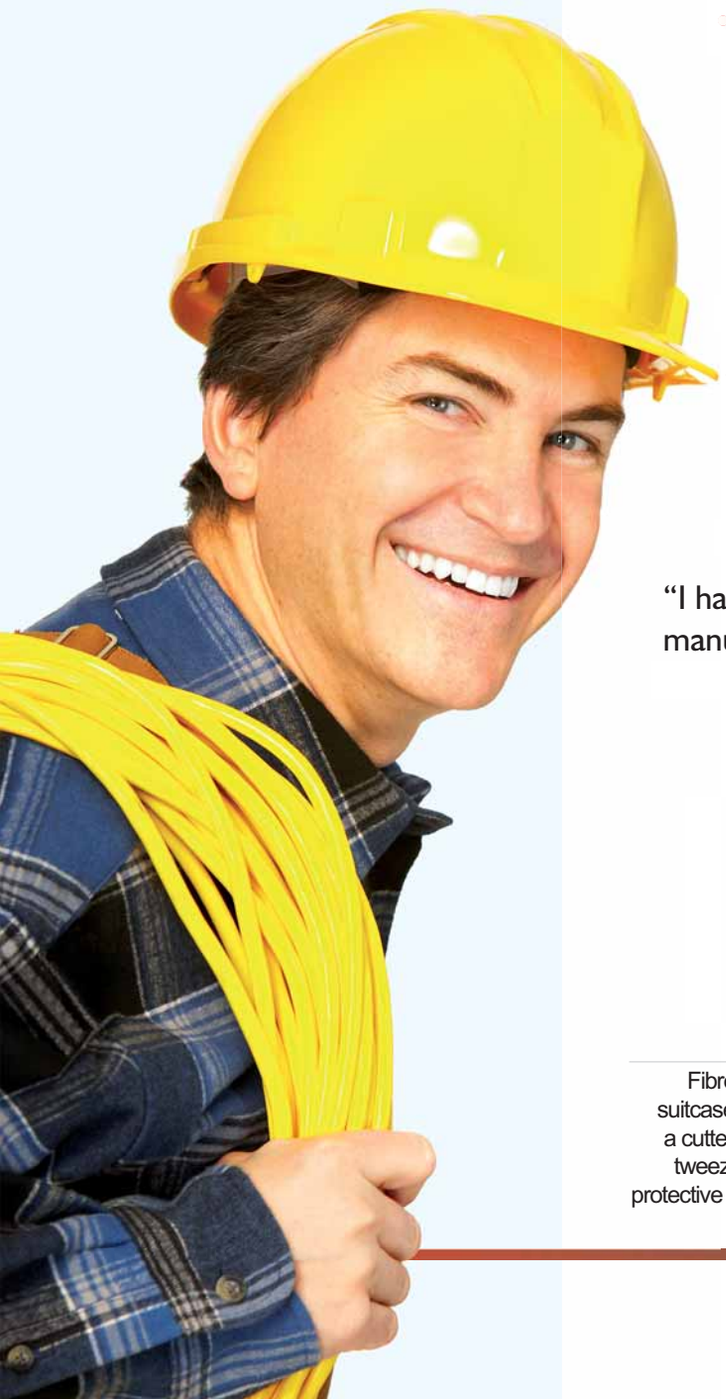
It is very easy to go over to fibre optics with PROMAX!



"I do not have any equipment to splice optical fibre"

"I already have the Fusion Kit PROLITE-40B or equivalent"

"I do not have a PROLITE-40B Kit, but a fusion splicer from another manufacturer"

"I have a **TV EXPLORER *HD*** or I am going to buy one. Can I adapt it in order to install optical fibre?"

"I have another **PROMAX** meter (or from another manufacturer). Can I use it to install optical fibre?"

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PROLITE-40B

Fibre Fusion Kit. It consists of a suitcase with a portable fusion splicer, a cutter, a stripper, spare electrodes, tweezers, alcohol dispenser botle, protective sleeves and a dust blowing pear.

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OP-040 Kit

PROLITE-40B extension kit. It includes tools to work with fibre optics, either in field or laboratory.

FUSION SPLICING

PROLITE-40B
Fusion Kit: Fusion Splicer + Cutter + Stripper + Accessories

OP-040
Fusion Kit Extension

Scissors for Kevlar, fibre disposal container, cleaning wipes, connector cleaner, connector kit, mechanical splicer, microscope, LED lamp and a hard suitcase for storage and transport.

PL-10
Fibre connector kit

In addition to the components of the OP-040 kit it includes a cutter and an optical fibre stripper. It includes all you need to assemble connectors.

Conversion modules from TV EXPLORER to fibre optics

It allows to integrate a selective optical power meter for FTTH and / or an optical converter to the field strength meter models: TV EXPLORER HD, HD+ or HD LE.

CV-100
Optical to RF converter

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PL-10 Kit

It includes the must-have tools for connector assembly. Additional to what's included in the OP-040 it comes with a cutter and a stripper.

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Optical to RF converter

It allows you to use your TV and Satellite analyser for measurements in optical networks. It includes LNB power supply bypass from the meter.

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TV EXPLORER *HD* Optical module

Available for new purchases or as a retrofit this optical measurement package includes FTTH selective optical power meter and/or RF to optical converter.

Optical power meter **PROLITE-63**

Optical power meter and FTTH tester

The **PROLITE-63** is an ergonomic, robust, easy-to-use and economical instrument with the basic functions needed in a fibre-optics installation. It has unique features such as **quick tests** on multi-mode and single-mode optical fibre systems.

It can be used, along with a stabilized laser source such as the **PROLITE-105**, to identify fibres, measure simultaneously optical attenuation for GPON networks, check continuity and evaluate the quality of a link. It has a logger function and a **USB plug to PC connection**.

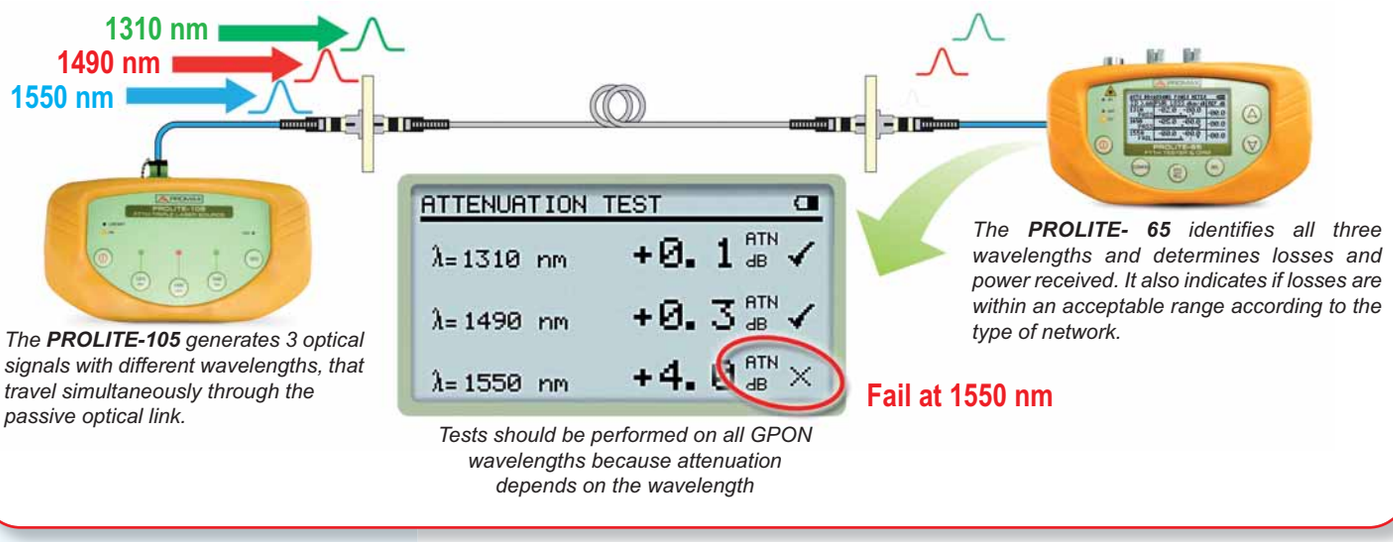
Optical power meter for FTTx-xPON **PROLITE-65**

Optical power meter and FTTH tester

The **PROLITE-65** is a test instrument to install, maintain and analyse general fibre optics systems and particularly **FTTx-GPON** systems. Measurements are possible without service interruption.

It has several functions such as attenuation test, optical loss, visual fault locator, datalogger, etc. It has an **USB interface for PC connection** to download reports, print measurements taken or update firmware.

Example: ***Certifying an installation***



*The **PROLITE-105** generates 3 optical signals with different wavelengths, that travel simultaneously through the passive optical link.*

Tests should be performed on all GPON wavelengths because attenuation depends on the wavelength

*The **PROLITE- 65** identifies all three wavelengths and determines losses and power received. It also indicates if losses are within an acceptable range according to the type of network.*

Fail at 1550 nm

Selective optical power meter for FTTx-xPON

PROLITE-67

Advanced meter for optical fibre test

The **PROLITE-67** is a handheld triple wavelength selective optical power meter (1310, 1490 and 1550) intended for applications in fibre optic networks, particularly those using FTTx/PON technology, that can be used in active FTTx systems or together with PROMAX laser sources for analysis, maintenance or certification purposes.

It has functions such as **Attenuation Test**, Loss test and Datalogger. It incorporates a visual fault locator with a visible laser light that can be configured continuous or intermittent. Connecting the laser output to the fibre you will be able to find cuts or cracks, identify fibres, etc.

visual fault locator included

Bandwidth	
OLT/OPM input	1310 ±50 nm / 1490 ±10 nm / 1550 ±15 nm
ONT input	1100 - 1700 nm
ONT/OPM-OLT insertion loss	<1.2 dB
Polarization dependent loss	<0.2 dB
Dynamic Range - ONT/OPM input	- 50 dBm to 20 dBm
Dynamic Range - OLT (Burst) input	- 32 dBm to 20 dBm
Visual fault locator FP laser	650 nm, optical power -2 dBm (monomode fibre / class 2)
Operating time	Approx. 10 h
Dimensions and weight	180 mm x 95 mm x 50 mm (W. x H. x D). 459 g (battery included).
Accessories	Mains adapter and cable, feeded cable car, protection cover, USB cable, wrist strap, CD-ROM, manual, transport suitcase (optional)

*Quick selection guide for **PROLITE** optical power meters*

PROLITE-63

Optical power meter
FTTH tester

PROLITE-65

Attenuation test
Visual fault locator

... plus all **PROLITE-63** functions

PROLITE-67

Selective measurements

... plus all **PROLITE-65** functions

PROLITE-77B

GPON optimized
Spectrum analyser

... plus all **PROLITE-67** functions

FTTx Analyser PROLITE-77B

The **PROLITE-77B** is a multipurpose test instrument designed for analysis, installation and maintenance of FTTX fibre optic systems, FTTH-GPON systems in particular.

optional spectrum analyser

Professional measurements

- FTTH Portable Analyser able to measure and display simultaneously three wavelengths (1310 and 1610 for Upstream and 1310, 1490 and 1550 nm for Downstream).
- Pass-through connection between the transmission centre (OLT) and the client (ONT).
- Troubleshooting by laser in the Visual Fault Locator mode.
- BURST measurement function for Upstream signal (1310 nm).
- C band spectrum analyser option.
- HIGH / GOOD / BAD user configurable power level indicators.
- Data transfer to a computer via USB.
- Ideal for fieldwork: lightweight, backlighted display, resistant to adverse weather conditions.
- Simple and very intuitive Graphical Interface, ambidextrous arrows keys, softkeys and alphanumeric keypad.
- Connectors protected by sliding lids built in the instrument.
- Rechargeable Li-On Batteries.

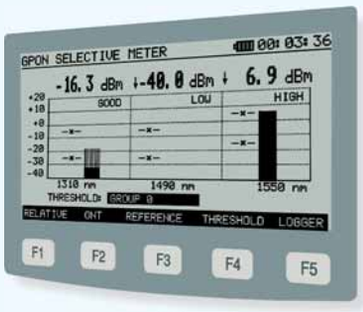
Attenuation test	1310, 1490, 1550. Measurement range from -50 dBm to 20 dBm
GPON/RFoG Measures	
Double band ONT input (Up.)	1310 ±40 nm (GPON), 1625 ±50 nm (RFoG)
OLT Input (Downstream)	1490 ±10 nm and 1550 ±10 nm
Insertion Loss (ONT-OLT)	< 1.2 dB
Dynamic Range	-30 to 10 dBm (ONT input) / -50 to 20 dBm (OLT input)
Fault locator	Laser FP 650 nm, power -2 dBm (Mono mode) / Class 2
Dimensions and weight	160 mm x 230 mm x 50 mm (W. x H. x D). 1.4 kg. (battery included)
Accessories	Mains Adapter, Car lighter charger, Carrying bag, Mains Cord, Battery, Instruction Manual

POWER METERS

Simple and easy to use

The **PROLITE-77B** is simple and easy-to-use, accessing directly to the most important functions by a single keystroke.

It can be connected as a pass-through device and is able to extract a small percentage of the transmitted signal for measurement, so the fibre optic service is not interrupted.



GPON meter

Easy to use: Plug and play!

- Just connect the fibre and read the results.
- Measurement directionality: it avoids confusing between ONT input and OLT input.
- ONT and OLT *Pass-Through* connecting ports: It does not interrupt the service while taking measures.
- Ambidextrous keyboard.
- Shortcut keys to the most important functions.
- Charge indicator on screen.

Data managing

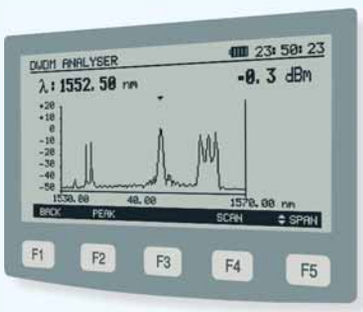
C band spectrum analyser (Option OP-077-S)

Specially designed for ITU G692 channels with by 100 GHz (0.8 nm) spacing in C band (1529-1564 nm).

✓ Visual Fault Locator:
Detect Quickly any problem!

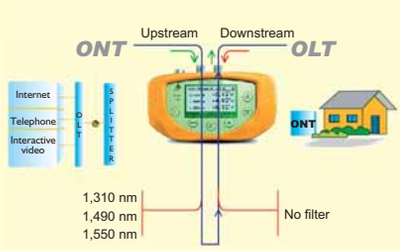
✓ Upstream signal analysis:
Know in detail your installation

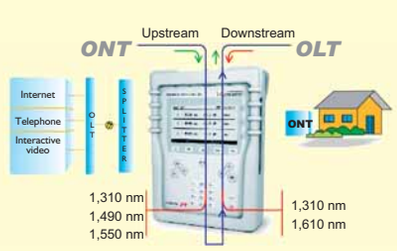
✓ Data management and transfer to PC via USB:
Save measurement records of each installation



C band spectrum analyser option

* ***Note**: Measurements may be taken even before service activation by connecting the **PROLITE-105** triple light source to **OLT** input.*





Attenuation test *	**PROLITE-67**	**PROLITE-77B**
Selective triple band input	1310, 1490, 1550 nm	1310, 1490, 1550 nm
Xpon/ RFoG measurements		
ONT input (upstream channel)	1100 -1700 nm (non-selective)	1310, 1625 nm (selective)
OLT input (downstream channel)	1490, 1550 nm (selective)	1490, 1550 (selective)
Fault locator	✓	✓

Triple wavelength LASER source PROLITE-105

1310, 1490 and 1550 nm wavelengths. Optional: 1310, 1550 and 1625 nm.

The **PROLITE-105** is a triple laser source that meets the requirements of FTTHx network test at 1310, 1490 and 1550 nm wavelengths. A low frequency modulation can be selected for each wavelength for identification purposes. It includes a sequential mode for automatic measurements when combined with non wavelength selective optical power meters such as **PROLITE-65**.

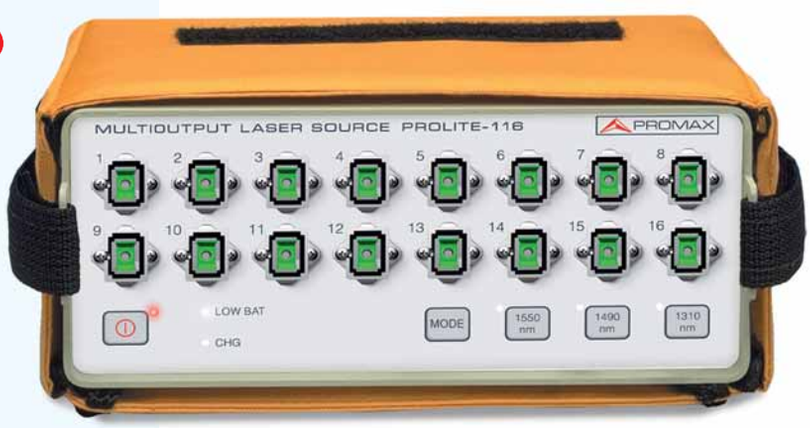
Versions for 1310, 1550 and 1625 nm are available optionally.

Generated wavelengths	1310 nm, 1490 nm and 1550 nm (optional: 1310, 1550 and 1625 nm)
Internal modulation for each wavelength (λ)	1310 nm: 270 Hz (Laser Fabry Perot) 1490 nm: 1 kHz (Laser Fabry Perot) 1550 nm: 2 kHz (Laser DFB).
Output connector	Type SC / APC
Output power	0 dBm on SM fibre
Battery operation time	25 h. approx. In sequential mode
Accessories	Car lighter adapter, mains adapter, power cable, carrying case, transport suitcase (optional).

Multi-output Triple LASER source PROLITE-116

battery life 50h

portable



Generated wavelengths	1310, 1490 and 1550 nm
Wavelenght modes	Independent / Simultaneous, Modulated, Sequential
Number of outputs	16. SC / APC connectors.
Output power	-15 dBm ± 1 dB over SM fibre
Battery	Li-Ion battery, battery life aprox. 5 hours in sequential mode
External supply	12 V DC, consumption 22 W. Mains adapter included
Dimensions	197 mm (W.) x 87 mm (H.) x 143 mm (D.)

Dual wavelength LASER source PROLITE-90

Dual light source 1310 / 1550 nm

The **PROLITE-90** dual laser source emits light at 1310 nm and / or 1550 nm wavelengths. The desired wavelength can be easily selected via direct access keys.

Both wavelengths can be modulated with 270 Hz in the case of 1310 nm and 2 kHz for 1550 nm, thus allowing any of these signals to be identified no matter how complex the network in which they are used may be.

Wavelengths generated	1310 nm and 1550 nm
Tolerance	± 30 nm
Output connector	FC, SC type...; ended APC, PC (according to order)
Output power	≥ 10 dBm for each wavelength SM 9/125 mm
Internal modulation	1310 nm: 270 Hz y 1550 nm: 2 kHz
Stability	< 0.3 dB in one hour.

Visual fault locator PROLITE-11

Pocket size visual fault locator

PROLITE-11 Visual Fault Locator is equipped with a 650-nm high power visible laser diode and it can be operated in CW (continuous) or MOD (1 Hz modulation) mode. There are two LED indicators RED and GREEN: The RED one shows the operating mode of the Laser Diode output signal, and the GREEN one indicates low battery level.

PROLITE-11 is housed in a pocket-size, rugged brass casing, and comes with a carrying pouch.

Light source	Class 3A laser diode
Central Wavelength	650 nm ±10 nm
Spectral Width (FWHM)	≤ 5 nm
Laser light pulse duration	CW mode pr 6'% duty cycle at 1 Hz
Connector	Universal
Power Supply	2 x 1,5 V AA Alkaline batteries
Dimensions	192 mm length (with ST dust cap). 22 mm diameter

Programmable optical attenuator PROLITE-360

Programmable calibrated optical attenuator for FTTH

The **PROLITE-360** is a programmable calibrated optical attenuator of up to 60 dB. It is designed to work in R+D labs, in manufacturing processes and it is specially useful for field work due to its portability and ease of use. It is adapted to FTTH measurement requirements and in general, to installations where you must attenuate an optical signal in a calibrated way. It includes PC software to update firmware as well as remote control and programming for complex attenuation sequences.

Variable optical attenuator PROLITE-330

Variable optical attenuator 0 to 30 dB for FTTH

The **PROLITE-330** is a variable 30 dB optical attenuator. It is a very low cost instrument designed for general use in R+D labs as well as field applications when a variable signal attenuation is required.

You can know exactly the attenuation value in combination with a power meter. Specially designed for FTTH networks and devices. Typical applications are the test of optical connections, system margins loss simulation, etc.

MicroOTDR PROLITE-50 / 51 / 52

OTDRs for single, double and triple window

Using optical time domain reflectometry they can be used to evaluate the performance of connectors, splices, combiners and splitters which is fundamental for maintenance of fibre optic networks.

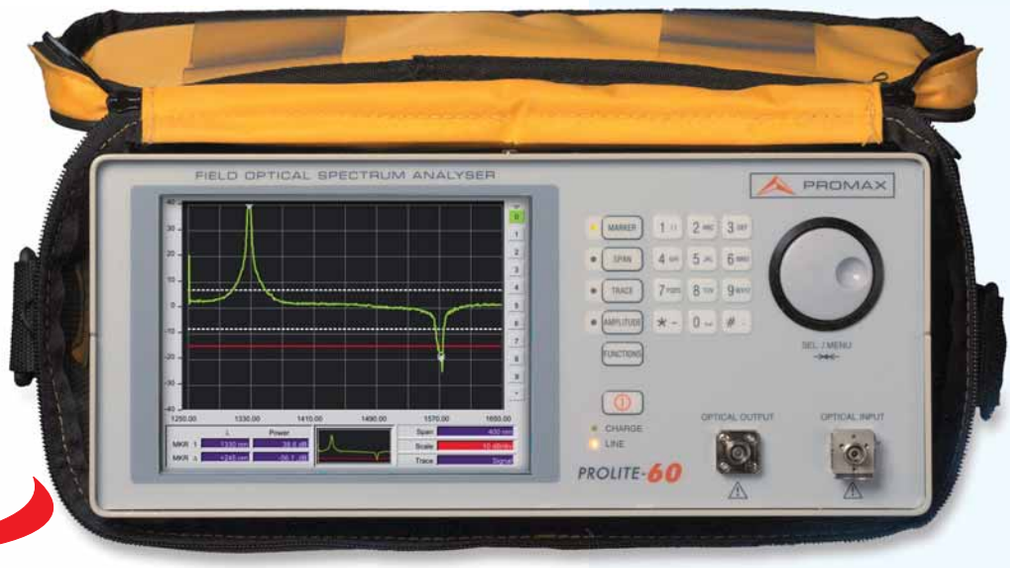
PROLITE-50/51/52 micro OTDRs are compact, lightweight and easy to use. They can store up to 1000 measurements to be downloaded to a PC through the USB interface for further analysis at a later stage.

Portable field optical spectrum analyser

PROLITE-60

3 hours battery life

optional SLED light source



The first optical spectrum analyser truly portable

When various wavelengths are sharing one single fibre, the optical power meters are not normally bringing out much information about the problems that can be affecting to each one of them as the measurements are not wavelength selective. In these cases, it is essential to have an optical spectrum analyser.

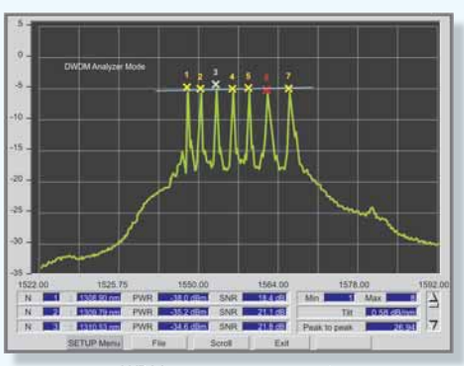
PROLITE-60 is the first optical spectrum analyser truly portable, robust and battery operated available at a really attractive cost.

The **PROLITE-60** is also suitable for many other applications. Using the various available options it is suitable for reflectometry, analysis of materials, fibre sensors, testing of photonic devices such as filters, attenuators, couplers, isolators and other optical components.

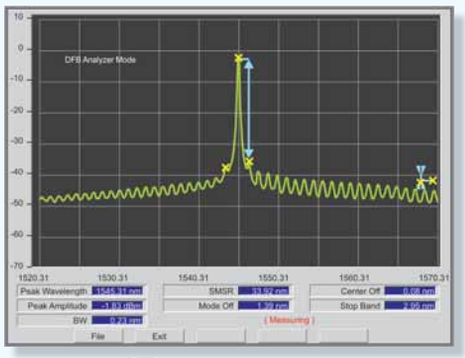
DWDM and CWDM applications

The **PROLITE-60** has the specifications to allow installation, surveillance and maintenance of both DWDM and CWDM. The utility of the optical spectrum analyser for the professionals working in this amazing world of the optic communications is out of any doubt. But, for many years, the level of price and complexity of the instruments available have been restricting their use.

With the launch of the **PROLITE-60** it is now possible to consider the use of an optical spectrum analyser for any type of application in this field



WDM source measurements

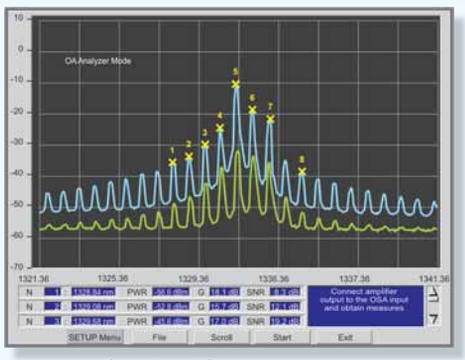


DFB source measurements

Optional SLED light source

Optionally, the **PROLITE-60** can be delivered with a SLED (Superluminiscent Light Emitting Diode) light source. These sources are providing a light of a wide spectral content, covering a wavelength range of around 100nm.

To study the optical spectral response of the devices used in a fibre optic communication system is essential for the success of a project. This applies not only during the design and production process but also during system implementation.

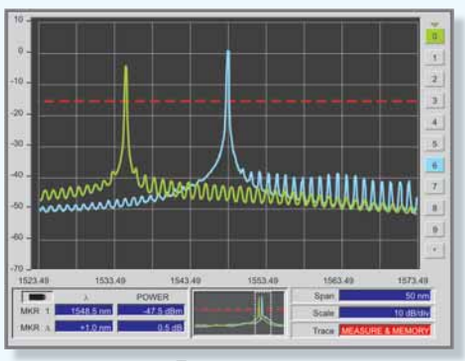


Optical amplifiers measurements

Response of optical filters and amplifiers

Optical filters, amplifiers and other network devices can be conveniently analysed using the SLED output and the different on screen presentation options that the instrument includes. Direct access to the SPAN and AMPLITUDE controls allow a very fast characterisation of the device under test.

This is not only useful in the laboratory but also in field use applications to for instance, identify devices that could be involved in the wrong operation of an optical fibre link.

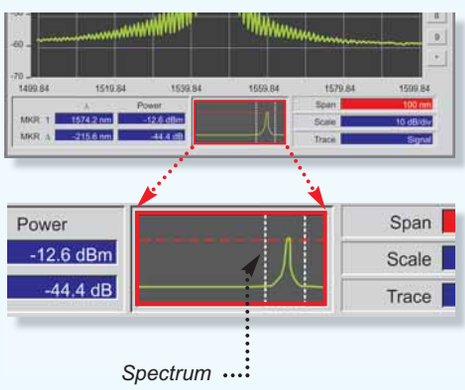


Trace memory

Trace memory

A measurement can be stored in memory for later display and comparison with the present measurement. This can be very useful for a number of applications, for instance, to observe the wavelength drift and the power drift of a light source.

In the picture you can see an actual signal (green) next to the trace of a signal stored in the memory of the equipment. The **PROLITE-60** allows to recover the data relative to the memorised measurement traces, for each type of measurement: WDM, DFB, LED, FP or OA,



Spectrum area displayed

Graphic guide on the area of the represented spectrum

The analyser allows a great flexibility to present the signal on screen in the most convenient way for the specific application. This includes selection of different portions of the signal both in the vertical and horizontal axis.

For convenience, so that the user is aware at any time of the portion of the whole spectrum being displayed, the **PROLITE-60** shows in a smaller window in the bottom of the screen a Reference Display with indication of the whole spectrum and the part being magnified.

SPECTRUM ANALYSER

Double Marker

The wavelength and the optic power measured at the point indicated by the marker number one are displayed in the first position. The wavelength and power difference between the marker one and marker two are displayed in the second position.

Universal connector on demand

The instrument is available with most of the usual types of connectors. The required connector has to be selected upon ordering. Optionally a universal input connector can be selected and with the use of conversion adapters different types of connectors can be used.

Internal battery

The instrument is delivered with a NiMh internal battery with built-in charger. It can be mains operated through universal 100-240 Vac input. The battery allows 3 hours of minimum operating time from fully charged.

The **PROLITE-60** is an ideal instrument for many type of applications in the optic field. Thanks to its low weight, reduced dimensions, rough use proof design and built in battery operation it also becomes ideal for any type of field type operation.

Connection to PC

PC communication is possible through 25 pins parallel, 9 pins RS-232 type and Ethernet connectors.

Wavelength	
Range	From 1250 nm to 1650 nm
Span	From 400 nm to 10 nm
Resolution	0.150 nm
Accuracy	± 0.8 nm
Stability	± 0.2 nm
Power	
Dynamic range	From -60 dBm to 10 dBm
Accuracy	± 1 dB
Flatness	± 0.5 dB
Stability	± 0.2 nm
OSNR (Selectivity at 1550 nm)	
@ 25 GHz (± 0.2 nm)	18 dB
@ 50 GHz (± 0.4 nm)	25 dB
@ 100 GHz (± 0.8 nm)	30 dB
Polarisation dependency	<1dB
Cycle time	5 s
Optical connector	FC/PC
Display	6.4” TFT color
Battery operation time	3 h approx.
Broadband source (optional)	1550 nm SLED light source (please ask for other wavelengths)
Universal optical connector (optional)	SC, FC, E-2000, ST, DIN

Fibre Fusion Kit: Fusion Splicer + Cutter + Stripper + Accessories

PROLITE-40B

Portable fibre optics fusion splicer

The **PROLITE-40B** is a portable fibre optic fusion splicer designed for field work with a 5" LCD monitor and inner light to work in environments where lighting is poor or nonexistent. Menus on the LCD show all the possible options and a simultaneous view of X and Y axes with a sharp image of the cores of the two sections of fibre to be spliced.

The **PROLITE-40B** selects the most suitable fusion splicing programme for each type of fiber automatically. Fibre optics are aligned by means of **core alignment method**. The splicing process takes about 8 seconds (plus 30 seconds of furnace time).

The **PROLITE-40B** includes a hard case for storage and transportation, fusion protection sleeves, stripper, cutter, tweezers, spare electrodes, alcohol dispenser bottle and dust blowing pear.

PROLITE-40B kit accessories

- ✓ Optical fibre cutter
- ✓ Optical fibre stripper
- ✓ Spare electrodes
- ✓ Fusion protection sleeves
- ✓ Alcohol dispenser bottle
- ✓ Tweezers
- ✓ Dust blowing pear
- ✓ Transport suitcase

Applicable fibres	SM (ITU-T G.652), MM (ITU-T G.651), DS (ITU-T G.653), (ITU-T G.657), NZDS (ITU-T G.655)
Fibre alignment method	Core alignment
Fibre cleaved length	10 ~ 16mm
Fibre diameter	Cladding diameter: 80 ~150 µm. Coating diameter: 100~ 1000 µm
Storage of splice result	5000 results, 10 parameter per result

Extension for the PROLITE-40B fibre fusion kit

Kit OP-040

Complementary for the PROLITE-40B Kit

It consists of the same elements as the **Kit PL-10** (see next page) except for the cutter and stripper, already included in the **PROLITE-40B** Kit.

Kit for mechanical splicing or connectorization

Kit PL-10

- ✓ Designed for owners of a fibre optic fusion splicer, from any manufacturer, without the accessories that are included with the PROLITE-40B.
- ✓ All these items included in the kits are available also separately as consumables.

a Connector Cleaner - ***AF-009***

More than 525 cleanings. 2.5 mm connectors including SC, ST, FC, E2000.

b Kevlar® scissors - ***AF-008***

Special ones to cut resistant material used in coatings.

c Mechanical Splicer - ***AF-011***

It allows fast splicing of fibres with buffers of 250 or 900 µm. Insertion losses <0.2 dB, low reflectivity. Supports tensions greater than 3.5 kgs.

d LED headlamp

e 200x fibre microscope - ***AF-012***

For ST, SC FC and LC fibres. Oblique and coaxial LED illumination.

f Fibre Optic Disposal Unit - ***AF-007***

Lid with snap closure which prevents fibre stubs going accidentally out from the container.

g SC / APC pre-polished connectors (10 u.) - ***AF-010***

It includes, for each connector, a fibre holder and a cutting template.

h Alcohol cleaning wipes (50 u.) - ***AF-004***

With no water, no leaks, lint free and with low vapour release.

i Transport and storage suitcase

It provides extra protection for the items included in the kits.

j Optical fibre cleaver - ***AF-001***

Compact, lightweight and robust, ideal for fieldwork. ∅ 125 µm fibre. Blade life 12,000 cuts.

k Fibre optic stripper - ***AF-003***

Precise and clean cut. Ergonomic, rubber coated. It removes the 3 mm fibre cover and the 250 microns and 900 microns coatings.

Fibre optics basic measurement kit **PL-675**

FTTH optical power meter + Triple LASER source

Designed for the test and certification of fibre optics distribution networks in buildings even before they are active. A single installer can do the tests on his own: the **LASER source** (**PROLITE-105**) is connected to the main fibre input connector of the building and generates the three wavelengths simultaneously while the installer checks the proper reception in each one of the outlets by using the **selective power meter** (**PROLITE-67**).

Fibre optics advanced measurements kit **PL-775**

Selective FTTH meter with attenuation test + Triple FTTH source

Variant of PL-675 kit with a **PROLITE-77** as an advanced FTTH meter which has all the features of the **PROLITE-67**, plus: loss measurement, ONT measurement, power measurement and optional C band spectrum analyser.

*Example: Certification and installation using **PL-675 or PL-775 kits***

*In the main fibre input connector of the building, the **PROLITE-105** is connected to generate three optical signals, with different wavelengths, that travel simultaneously through the passive optical distribution system.*

*The three wavelengths are sent simultaneously or sequentially to the network depending on the type of FTTH power meter you are using, selective such as **PROLITE-77** or **PROLITE-67**, or non-selective like PROLITE-65.*

Then a FTTH power meter can be used throughout the building connection sockets to measure optical power and loss and determine if they are within the acceptable range for a given type of network.

Optical to RF signal adapter CV-100

Valid for any field strength meter with LNB power supply

The **CV-100** is an optical to RF converter that can be used together with a TV and Satellite analyser to perform measurements in optical systems and satellite optical LNBs in particular. It covers the terrestrial RF, CATV and Satellite FI bands (vertical low polarization). It includes LNB power supply bypass from the meter and a selectable 20 dB RF attenuator.

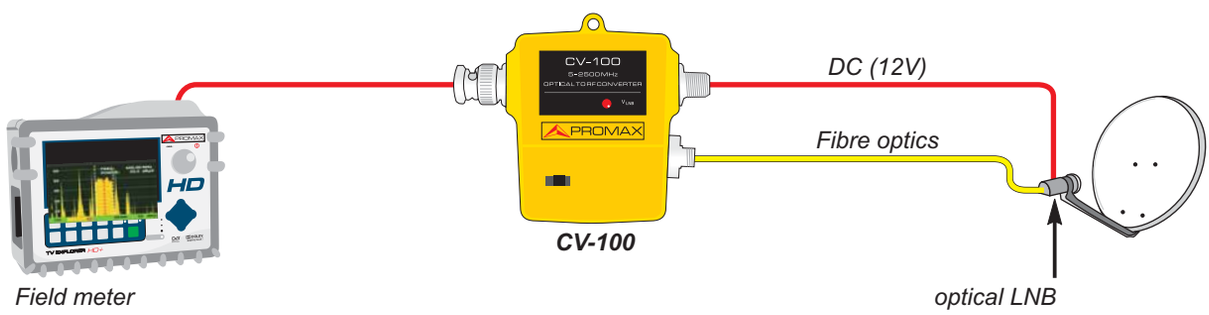
It is an ideal complement for those installers that own a field strength meter like any of the TV EXPLORER's because they will be able to work on fibre optics systems not needing any additional equipment.

SAT, terrestrial, CATV output

LNB supply bypass

Optical Input	Wavelength range: from 1100 to 1600 nm Input power range: from +7 dBm to –30 dBm Optical Return Loss: >40 dB Optical connector: FC-PC (standard, others on demand) Fibre Core / Cladding: 9 / 125 µm
RF output	Bandwidth: from 5 to 2500 MHz Max. output signal: 120 dBµV RF connector: BNC CTB, CSO: ≤ 65 dBc Selectable 20 dB attenuator (High/Low)
DC output	By passed from RF output connector (12V / 500mA) Max Voltage 14 V (over-voltage) DC connnector: F connector for optical LNB supply

CV-100 Connection Diagram to a field strength meter



High definition TV analyser

TV EXPLORER HD+

dynamic echoes analyser included

High resolution Spectrum Analyser with direct access keys

Constellation Diagram for all DVB systems (DVB-T2 and DVB-S2 included)

MER by carrier DVB-T2 and DVB-T

- Video decoding: MPEG-2 and MPEG-4 H.264 for 1080i, 720p and 576i
- Audio decoding: Dolby Digital Plus, AAC, MPEG-2 and MPEG-1
- Video formats: SD (standard definition) and HD (high definition)
- Screen formats: 16:9 and 4:3
- HDMI interface
- DVB-T2, DVB-T/H, DVB-C and DVB-S/S2
- Dynamic echoes analyser
- CAM module (Conditional Access) for encrypted channels
- TS-ASI input and output

FIELD METERS

	TV EXPLORER HD+	TV EXPLORER HD	TV EXPLORER HD LE	TV EXPLORER II+	TV EXPLORER II	TV EXPLORER	TV EXPLORER HD ATSC	TV EXPLORER HD ISDB-T	TV EXPLORER HD DTMB	US TV EXPLORER II
LCD screen size	6.5"	6.5"	6.5"	6.5"	6.5"	5.5"	6.5"	6.5"	6.5"	6.5"
LCD aspect ratio	16:9	16:9	16:9	16:9	16:9	4:3	16:9	16:9	16:9	16:9
Transflective LCD screen	●	●	●	●	●		●	●	●	●
Optical module (selective OPM & optical-to-RF converter)	○	○	○							
DVB-T Terrestrial	●	●	●	●	●	●				
DVB-T2 HD Terrestrial	●	○	○							
ATSC Terrestrial							●			●
ISDB-T Terrestrial								●		
DTMB Terrestrial									●	
DVB-C Cable	●	●	●	●	●	●	●	●	●	●
DVB-C2 HD Cable	○									
Cable QAM annex A&B							●	●	●	●
DVB-S Satellite	●	●	●	●	●	●	●	●	●	●
DVB-S2 HD Satellite	●	●	●	●	●		●	●	●	●
DSS Satellite							●	●		●
Analogue TV	●	●	●	●	●	●	●	●	●	●
Analogue FM	●	●	●	●	●		●	●	●	●
Diagrama de Constelación	●	●	●	●	●		●	●	●	●
Channel MER by carrier and Merogram	●	●	●	●						
Spectrogram	●	●	●	●			●	●	●	
AUTO ID (auto identifying) and EXPLORER (band scanning)	●	●	●	●	●	●	●	●	●	●
Spectrum analyser	●	●	●	●	●	●	●	●	●	●
Automatic reference level for Spectrum Analyser mode	●	●	●	●	●		●	●	●	●
Reports & Internet updates	●	●	●	●	●	●	●	●	●	●
Echoes detection	●	●	●	●	●				●	
Echoes dynamic analysis	●	○	○						●	
IF Satellite test	●	●	●	●	●	●	●	●	●	●
Cable TV: return path (5 MHz)	●	●	●	●	●		●	●	●	●
Cable TV: 1 GHz	●	●	●	●			●	●	●	●
Encrypted channels (*common interface*)	●	●	●	●			●	●	●	
Video stream recorder and player	●	●	●	●			●	●	●	●
Spectrum / Constellation / Measurements screen captures	●	●	●	●			●	●	●	●
Dolby Digital Plus decoder	●	○	○				●	●	●	
MPEG-4 H.264 decoder	●	●	●				●	●	●	
Input/Output ASI-TS connection	●	●					●	●	●	
Output HDMI connector	●	●					●	●	●	
Real time clock	●						●	●	●	
USB *on-the-go* connection	●	●	●				●	●	●	
Programa NetUpdate 3	free	free	free	free	free	free	free	free	free	free
Hard transport case (soft carrying bag always included)	●	●	●	●	●	○	●	●	●	●

● Included ○ Optional

TV EXPLORER *II+*

TV EXPLORER *HD LE*

TV EXPLORER *HD*

TV EXPLORER *HD+*

Optical modules for TV EXPLORER HD / HD LE / HD+

For new equipment or as upgrade

Conversion modules for **TV EXPLORER** to fibre optics allow integrating a selective power meter for FTTH and/or an optical converter into the field meter. Therefore, the **TV EXPLORER** field meter becomes a **true *"all in one"*** for the telecommunications installer.

Conversion modules are available for **TV EXPLORER *HD***, ***HD+*** and ***HD LE*** models (for new equipment or to upgrade in user-owned equipment).

Converted RF Band:	
Optical TDT and cable links	From 50 MHz to 1000 MHz
Optical IF-Satellite installations	From 950 MHz to 5450 MHz (for universal optical LNB)
Optical input	From 1200 nm to 1600 nm
RF output	From 50 MHz to 2150 MHz
Optical power measurement	Yes

Application 1: Optical LNBs

Connecting the meter directly to an optical LNB you can perform the alignment of the satellite dish, use spectrum analyser, digital measurements such as MER or constellation diagram, signal decoding, etc.

In other words you can work with optical LNBs like with conventional ones.

Application 2: Selective optical power measurements

It includes a selective optical power meter for FTTH networks certification in combination with our triple laser source **PROLITE-105**.

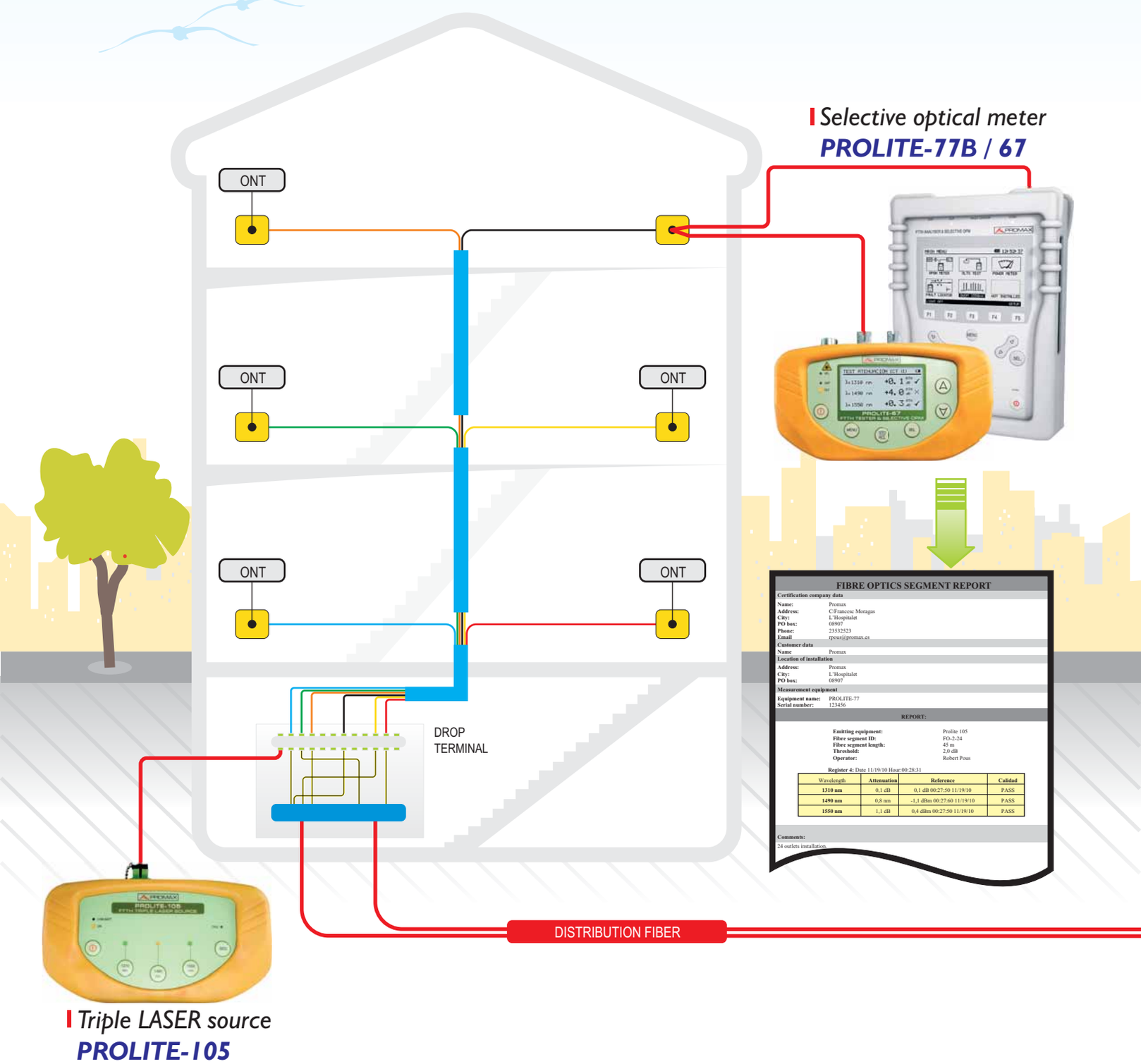
Typical wavelengths use for these applications are 1310, 1490 and 1550 nm.

Application 3: Optical to RF conversion for optical CATV or DTT links

Thanks to the use of state-of-the-art technology in the design of this new optional modules, it is possible to enjoy all functions of **TV EXPLORER *HD*** meters in CATV and DTT optical links with bandwidths up to 1 GHz.

GENERAL FIBRE OPTICS WIRING DIAGRAM IN FTTH NETWORKS

CERTIFYING THE FIBER OPTICS SEGMENT BETWEEN MAIN REGISTER AND ACCESS POINT

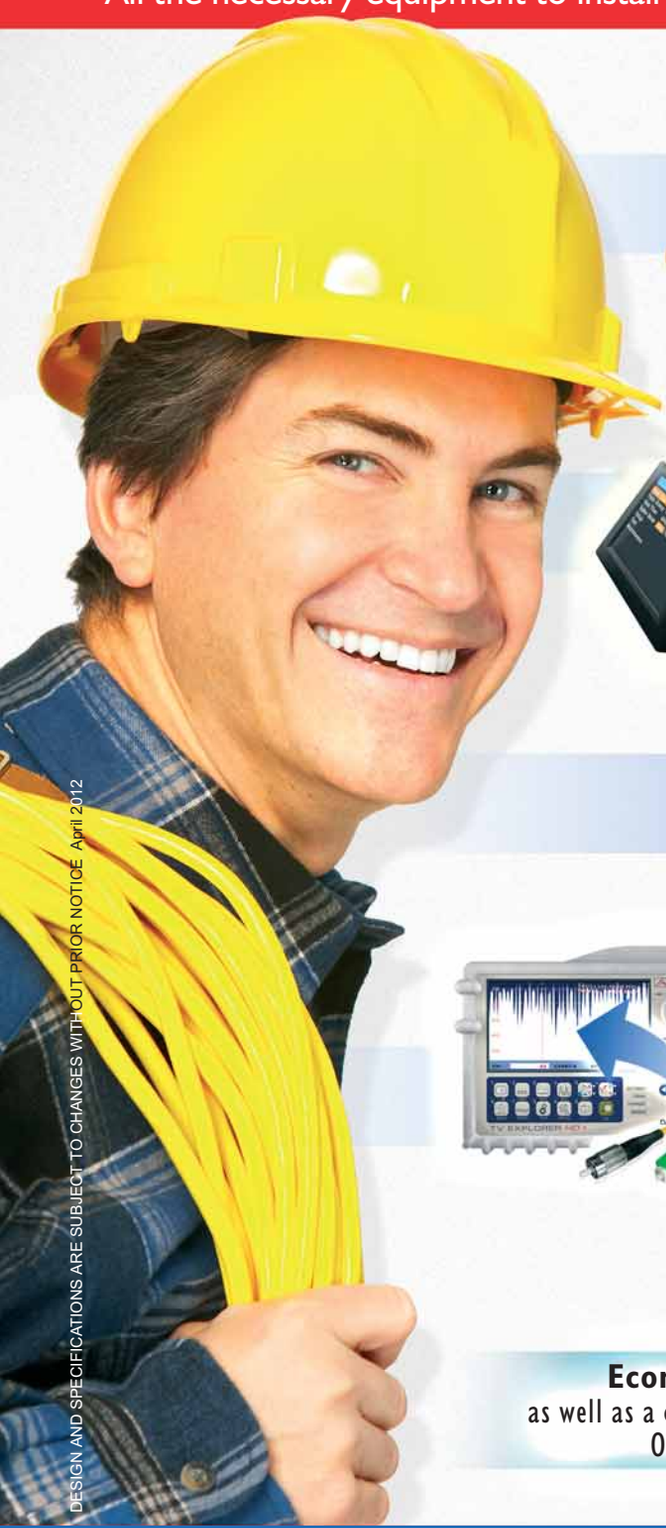


PROMAX

It's easy to go over to fibre optics with PROMAX equipment

All the necessary equipment to install and maintain fibre optics networks and FTTH

FTTH EQUIPMENT



PROLITE range

Selective optical power meters with built-in visual fault locator
Calibrated triple LASER light sources
Optical attenuators

FUSION Kits

Fibre optics fusion splicer + cutter + stripper
Splicing and connectorization kits

Advanced FTTH analyzer

Portable selective FTTx analyser
Optimised for GPON
Optional Spectrum Analyser module

Optical modules for field meters

TV&SAT Analysers with optional selective optical power meter
Available for TV EXPLORER *HD* / *HD LE* / *HD+*
Available as an upgrade

Economic and **Advanced measurement kits** available,
as well as a **complete range of instruments** for fibre optics installers:
OTDRs, Optical spectrum analysers and many other more.

www.promaxelectronics.com

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