Portable optical spectrum analyser

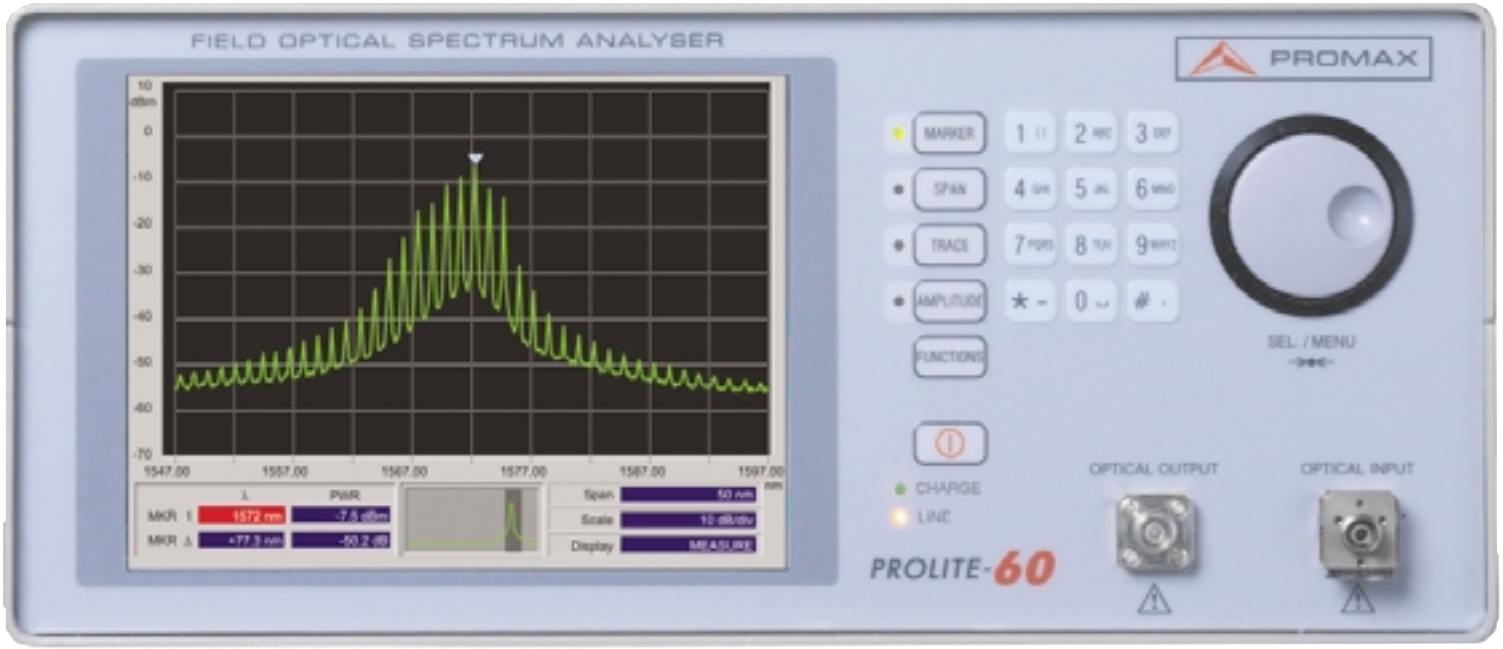
The **PROLITE-60** is the result of an intense research work associated to the development of the latest optical communication systems.

A priority for telecommunication operators all over the world is that of making more efficient their already existing optical networks. The first step is to increase their capacity, which can be achieved by using more wavelengths simultaneously to transport the information.

One of the biggest handicaps to implement this type of systems so far was the cost of the test equipment required to launch the projects. 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.
Say we are injecting into a fibre eight wavelengths out of eight laser sources. When we are to check at the other end of the fibre something as simple as whether all laser sources are working properly, an optical spectrum analyser is required. The

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

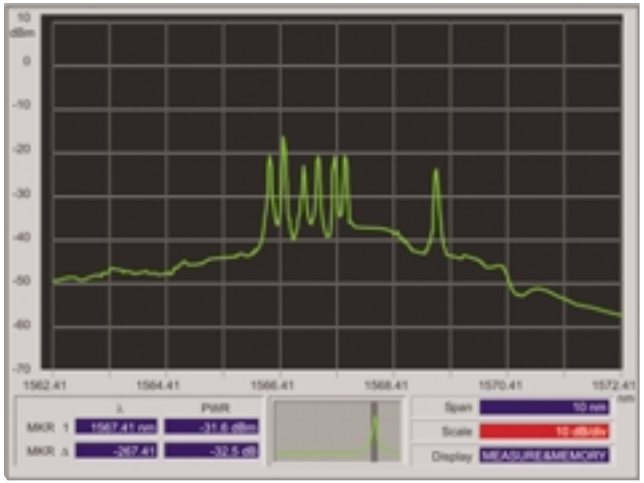
The **PROLITE-60** is also suitable for many other applications. Using the various available options it is suitable for reflectometry, analysis of materials, fibre sensors, testing of photonic devices such as filters, attenuators, couplers, isolators and other optical components.



A large number of applications

Wavelength multiplexation

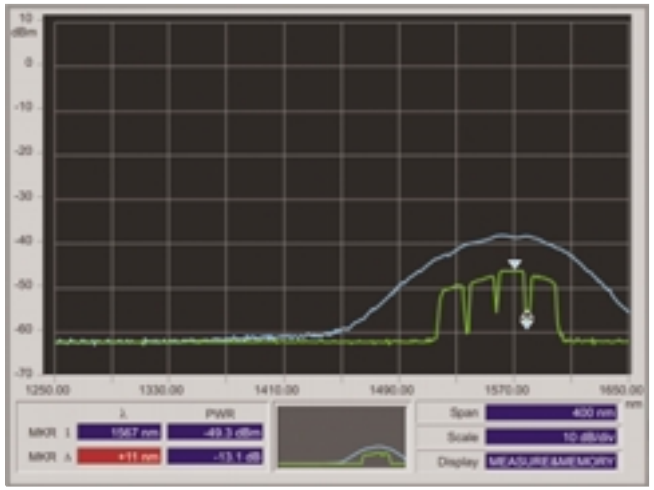
When different wavelength signals are transmitted within one fibre, the system is known as WDM (Wavelength division multiplex). The WDM systems can be classified as a Dense Wavelength division multiplex (DWDM) or as a Coarse Wavelength division multiplex (CWDM) depending on the wavelength separation. DWDM systems applies when separation is lower than 1nm whilst CWDM applies when wavelengths have a wider separation. The **PROLITE-60** has the specifications to allow installation, surveillance and maintenance of both DWDM and CWDM.

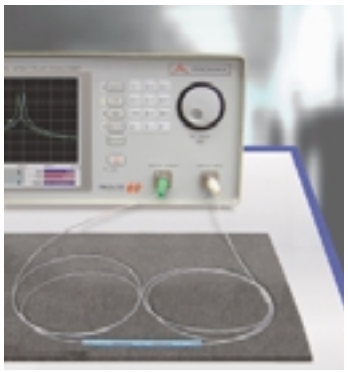


The utility of the optical spectrum analyser for the professionals working in this amazing world of the optic communications is out of any doubt. But, for many years, the level of price and complexity of the instruments available have been restricting their use. With the launch of the **PROLITE-60** it is now possible to consider the use of an optical spectrum analyser for any type of application in this field

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

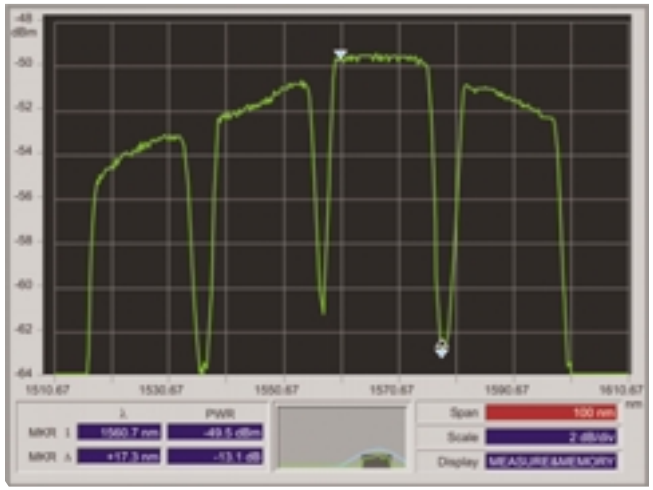




To study the optical spectral response of the devices used in a fibre optic communication system is essential for the success of a project. This applies not only during the design and production process but also during system implementation

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.

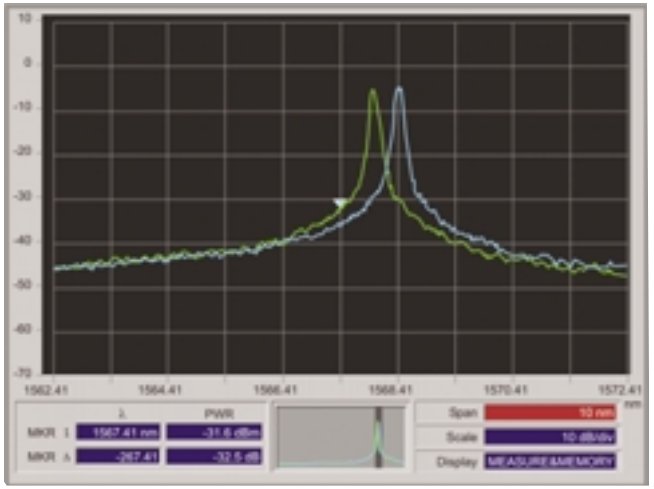


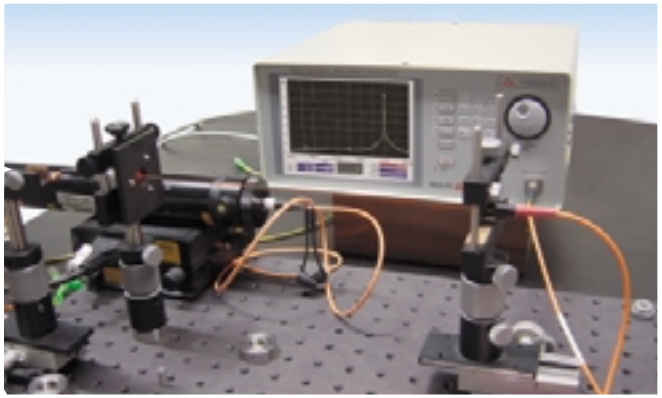


High features at a reasonable cost

Trace memory

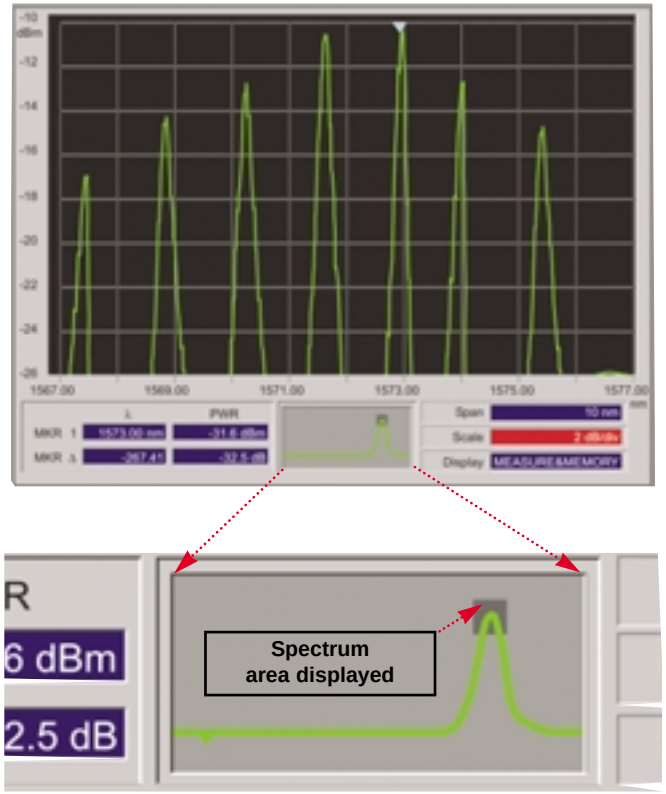
A measurement can be stored in memory for later display and comparison with the present measurement. This can be very useful for a number of applications, for instance, to observe the wavelength drift and the power drift of a light source.





Reference Display

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.



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.

	λ	PWR
MKR 1	1573.00 nm	-31.6 dBm
MKR Δ	-267.41	-32.5 dB



The first truly portable

Connectors

The instrument is available with most of the usual types of connectors. The required connector has to be selected with the order.



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 autonomy from fully charged status.

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

The communications port with PC is possible through 25 pins parallel, 9 pins RS-232 type and Ethernet connectors.



SPECIFICATIONS	PROLITE-60
Wavelength	
Range	1250 nm to 1650 nm
Span	400 nm to 10 nm
Resolution	0.150 nm
Accuracy	± 0.8 nm
Stability	± 0.2 nm
Power	
Dynamic range	-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
Power supply	
Mains supply	100-240 V AC
Autonomy	3 h approx.
Mechanical features	
Dimensions	294 (W) 126 (H). x 274 (D).mm.
Weight	5.7 k
Broadband source (optional)	1550 nm SLED light source (please ask for other wavelengths)
Universal optical connector (optional)	SC, FC, E-2000, ST, DIN