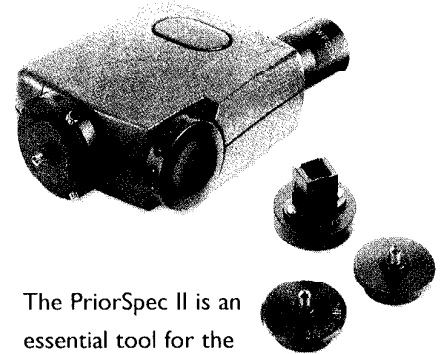


# PriorSpec™ II

**PRIOR**  
Scientific

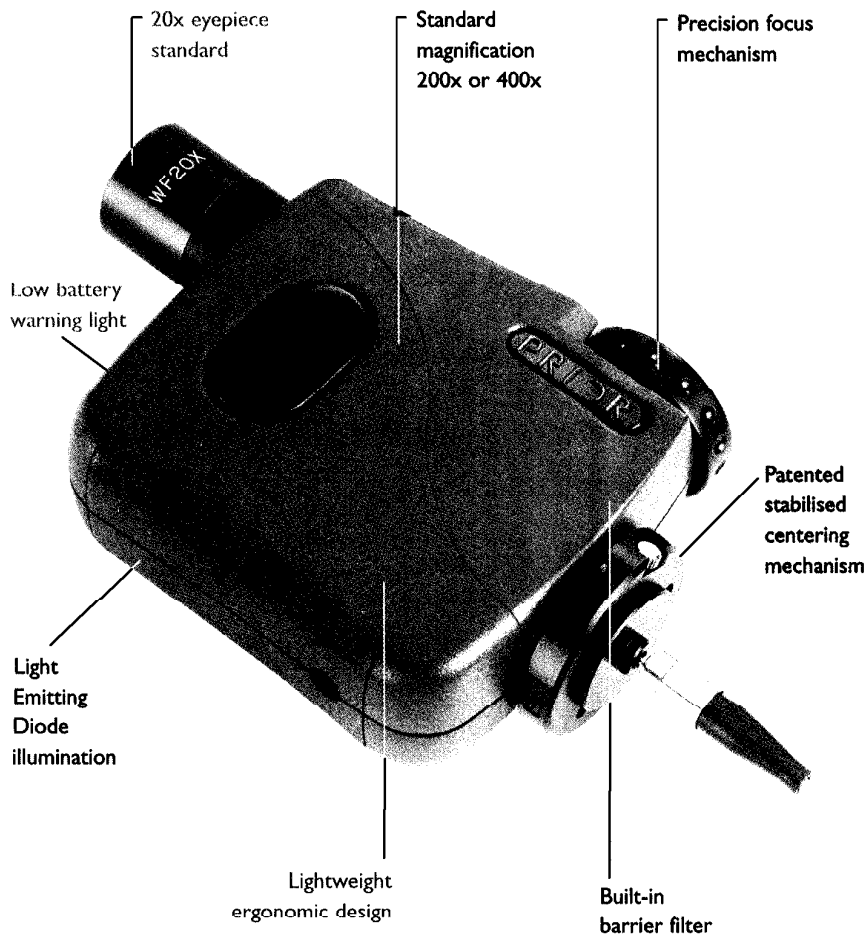
## Microscope for Fiber Optic Terminations

### Features



The PriorSpec II is an essential tool for the visual inspection of fibre optic connectors. Scratches, dirt and other problems associated with poor transmission performance can be clearly seen.

Building on the strength of the market leading PriorSpec, the PriorSpec II provides several new features. A novel folded beam design provides an ergonomic, pocket-sized microscope and a new illumination system offers greatly increased bulb and battery life.



- Robust design and construction.
- Compact 'folded beam' design.
- Outstanding optical quality.
- Long life LED illumination system.
- Simple to use and maintain.
- Choice of magnifications including a zoom option.
- Widefield eyepiece.
- Full & extensive range of pre-centred adapters.
- Optical filter for added safety.
- Low battery warning light.

## Specifications

### Quality Optics

This quality inspection microscope provides a total magnification of 200x or 400x and incorporates a precision focus mechanism. The 'folded beam' optical system consists of all glass optics including an achromatic objective and widefield eyepiece for a high quality optical image. Magnification is easily changed at anytime by simply replacing the eyepiece. A zooming eyepiece is also available to provide a 200x to 400x magnification range.

### Optical Safety

A laser barrier filter is incorporated into the PriorSpec II for added safety.

Activated fibres should never be viewed with the PriorSpec II. The new filter specification is as follows:

Wavelength (nm)	Optical Density (OD)	Attenuation (dB)
850	3.0	30
1300	5.2	52
1550	4.8	48

### Superior Illumination

The PriorSpec II utilises a new and innovative illumination system. An LED offers improved light quality, very low heat output and extremely long life, estimated to be

10,000 hours of usage, (the equivalent of 10 years typical work load).

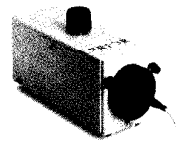
The combination of the LED with microprocessor

control means that the battery life is dramatically improved by a factor of 20 times. The longer battery life with a low energy warning display will mean far fewer battery changes. The illumination will not fade at the end of the battery life, ensuring that the image quality is not compromised.



### Also available from Prior Scientific.

A Pocket Microscope has been developed as a compact unit for low cost applications. A zoom range of 100x to 150x is standard and a range of adapters is available.



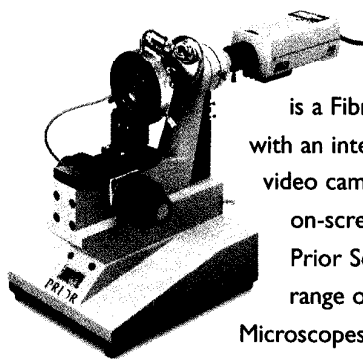
The Video Fibre Viewer designed for manufacturing areas,

is a Fibre Optic inspection unit with an integrated high-resolution video camera (monochrome) for on-screen inspection.

Prior Scientific can also offer a range of Bench Fibre

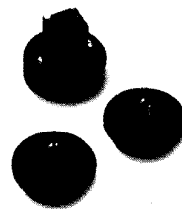
Microscopes for the critical

inspection of fibre optic terminations in the manufacturing, QA and research environments.



### Patented Connector Adapters

Prior Scientific offers the widest range of adapters available to suit different connectors. They snap into the pre-centred adapter ring on the microscope nosepiece. As new connectors are developed and are released on to the market, Prior develops the appropriate adapter.



### Ordering Guide

- G00200 PriorSpec II, magnification 200x
- G00400 PriorSpec II, magnification 400x
- G425 Widefield eyepiece 10x
- W387A Widefield eyepiece 20x
- W436F Zoom eyepiece, magnification 10x – 20x
- W2650 Carrying case

**PRIOR**  
S c i e n t i f i c

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Specifications subject to change without notice. UK Patent No. 2156097 US Patent No. 4640578

# PriorSpec™ II

## *General Overview*

Prior Scientific has been involved in the design and manufacture of microscopes since 1919. This experience was utilised in the development of the PriorSpec, a joint undertaking with BT which began in 1986 and resulted in what is now recognised as the industry leading solution for portable inspection of fibre terminations. This was also Prior's first involvement with the telecommunications industry, which led to the development of several products all with one thing in common; high quality optical inspection of connector end-faces.

The introduction of the new PriorSpec II now builds on our strengths in this market and also signals our commitment to developing additional products for fibre optic test and inspection.

PriorSpec II offers a unique blend of evolutionary and revolutionary advances. The optical performance users have come to expect of our products has of course been maintained. The new system is clearly a Prior product and bears all the hallmarks of a robust design, ease of use and unmatched image quality which are unmistakably 'Prior'.

## *Ergonomics*

During the development of the new PriorSpec II design, Prior Scientific contracted an Industrial Designer that has been heavily involved with designs at Lotus Cars. This combination of aesthetic design and Prior's optical design capabilities has resulted in a product which is more compact and lighter than earlier designs while maintaining a style and 'look' which is as unique as its predecessor.

PriorSpec II fits comfortably in the hand and is easily used by left-handed and right-handed operators. Controls are readily accessible and the new focusing mechanism does not require end stops – it is impossible for the user to damage optics by overdriving the focus mechanism.

## *Optics*

High quality glass optics are used throughout to provide the highest quality image. It is this optical quality that allows scratches, dirt and other problems associated with high insertion loss to be seen clearly. The optics are configured within a new folded beam design rather than a straight tube. This means a more compact design is achieved which fits easily into a pocket and which sits comfortably in the hand. A laser barrier filter is included in the system. Live fibres should never be viewed with the PriorSpec II but in this event some protection is provided by the filter in the range of 900 – 1550nm.

PriorSpec II is available in either 200x or 400x versions. Magnification is easily changed (in the field if necessary) by changing the eyepiece. Only widefield eyepieces are used which provide a wide aperture to make the PriorSpec II easier to use. If the flexibility of a zooming magnification range is preferred, a zoom eyepiece can be used to provide an overall magnification of 200x – 400x.

## *Illumination*

A new Light Emitting Diode (LED) illumination system has been designed and implemented in the PriorSpec II. LED's offer a considerable advantage in lifetime compared with traditional bulbs and the system used will provide approx. 10,000 hours of usage. This equates to approx. 60 weeks of continuous use 24 hours a day, 7 days a week while the saving on replacement bulbs is more than enough to buy a new PriorSpec II.

One disadvantage of LED's is that the light level decreases as the batteries are used. Not so with PriorSpec II. The new illumination system includes a clever piece of microprocessing circuitry which 'manages' and maintains light levels until close to the end of the battery life at which point the 'low battery' indicator light will illuminate to advise the user that new batteries will soon be required. Other advantages of this feature are longer battery life and that rechargeable batteries can be used.

## *Adaptors*

PriorSpec II adaptors are not compatible with the original Priorspec and vice versa. The most popular adaptors are currently available and as in the past, new adaptors will be designed and manufactured as the need arises. The current list of available adaptors can be seen in the price list.

Existing users of the Priorspec will continue to purchase the earlier adapter design.

## PriorSpec II.

<i>Feature</i>	<i>Benefit</i>
Robust design and construction	Hard wearing and low maintenance
Compact & light weight	Priorspec II requires minimal space
Ergonomic design	Comfortable to use for long periods
Simple to use and maintain	Minimal training and maintenance required
Outstanding optical quality	Ensures best image possible
“Folded beam” optical system	Images viewed are high in quality Compact & Ergonomic unit
Wide-field eyepiece	High quality optical image and easier to use
Locked in eyepieces	Eyepieces will not be lost in transit or on site
Choice of magnifications	Flexibility and choice for single and multi mode applications
Continuous focus without stops	Precise, long lasting focus mechanism which cannot be damaged
Improved built in barrier filter	For added safety for user at 155nm
LED illumination system	Long life illumination, 10,000 hours
Unique power conservation system	Battery does not require frequent replacing
Low battery warning light	Notifies user in advance of battery failure
Rechargeable Batteries option	Reduces running costs
Battery removal ribbon	Easier battery removal
Battery cover with retained screw	No lost screws, reduced running costs
One “stop shop” for microscope and adapters	Ease of purchase for user

## PriorSpec II.

### *Feature*

### *Benefit*

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Complete with Carry Case

Single package

Full range of adapters

Most manufacturers connectors can be viewed

Patented Centring mechanism

Fibre core will always be in centre of field of view

Back-light facility

For checking damage to fibre core.

Customised component  
price list

Customer buys what they require

OEM versions available

Product in specific colour and branded as their own