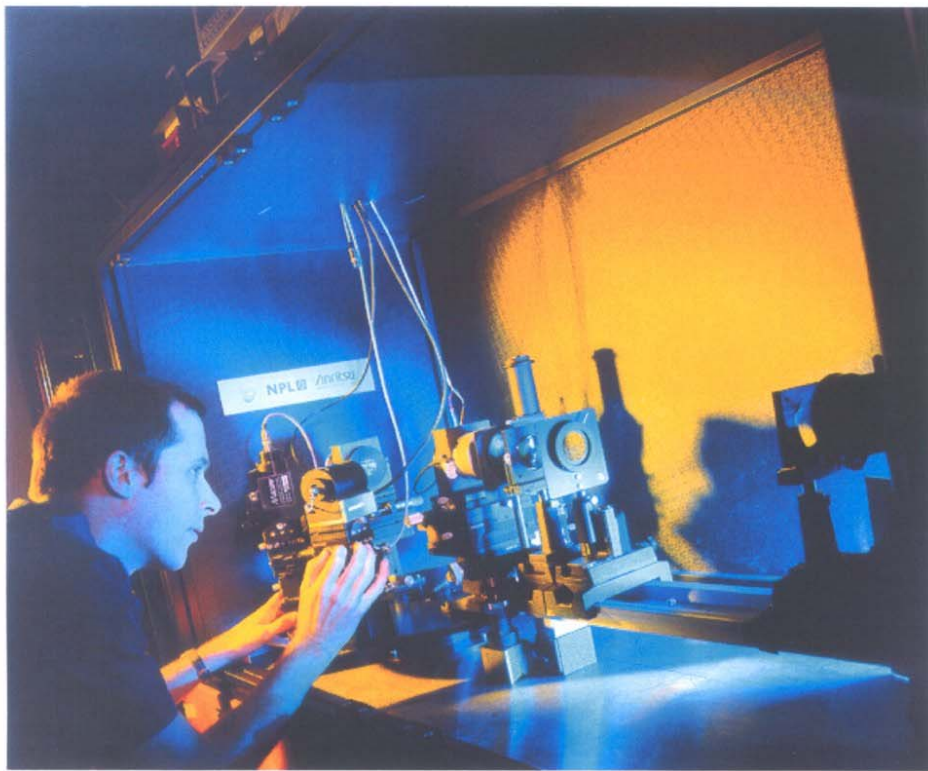


## Calibration Services for Fibre Optic Power Meters



The fibre optic power meter is one of the most commonly used pieces of test equipment. It provides the system engineer with accurate information on the optical power passing through a fibre link and can be used, for example, to measure fibre attenuation, component splitting ratios and insertion loss, and for the verification of calculated system power budgets. In order that accurate and consistent measurements are made at all locations it is essential that all commercial power meters are regularly calibrated against national standard laboratory responsivity scales.

NPL pioneered the cryogenic radiometer as the most accurate instrument in the world for measuring optical power and has developed a calibration chain for fibre optic power meters that links to this world leading primary standard.



NPL can provide UKAS accredited calibrations for your power meters

Parameter	Typical Uncertainty ( $2\sigma$ ) at 95% confidence level
Absolute responsivity $-10$ to $-23$ dBm:	
FC/PC connectors	$\pm 0.7\%$
SC/PC connectors	$\pm 1.0\%$
FC/APC or SC/APC connectors	$\pm 1.6\%$
Linearity of response – all connector types:	
Superposition technique ( $+15$ to $-90$ dBm)	$\pm 0.05\%$
Comparison technique ( $+20$ dBm to $+10$ dBm)	$\pm 0.7\%$
( $+10$ dBm to $-90$ dBm)	$\pm 0.3\%$

Wavelength ranges available:  $850 \pm 30$  nm,  $980 \pm 10$  nm  
Any wavelength in the range 1270 to 1650 nm

### High Power

NPL can also calibrate fibre optic power meters at 1550 nm up to a world-leading  $+30$  dBm for absolute response and up to  $+47$  dBm for linearity. Please contact NPL for more details.

### Associated Services

NPL can provide the solutions to your optical power calibration needs. Services include; supplying a set of NPL designed InGaAs and Silicon transfer standards, directly traceable to the NPL cryogenic radiometer, which cover the complete spectral range; and can provide advice, equipment and training for setting up your own power meter calibration facilities.

### For further information please contact:

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