



**Title:** Knight Mini HR Spectrometer

**Material / Specification:** 200-340nm

**Part number(s):** OSP0701, OSP0702, OSP0703, OSP0704, OSP0705

**Knight Optical's range of High Resolution mini spectrometers are designed for applications where even the high accuracy of our other ranges is not enough.**

Bought as an upgrade for our Blueshift UV/VIS/NIR range, the Knight Mini HR spectrometers double the resolution of the chosen model to achieving resolutions of better than 0.1nm depending on the selected model range and slit size, but also reducing the operating wavelength by the same factor.

The result is that the Knight Mini HR system can very accurately measure tunable laser and LED characterization and laser induced breakdown spectroscopy as well as other complex applications.

All our mini spectrometers are built with durability in mind. Our systems contain no moving parts and are encased in a rugged metal enclosure to provide maximum protection for field based studies as well as laboratory based measuring.

Designed to be fully "Plug and Play," the Knight Mini HR spectrometer is ready to use straight out the box. Install the supplied SpectraWiz software, plug the system in and start taking measurements without any fuss.



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[www.knightoptical.com](http://www.knightoptical.com) | [info@knightoptical.com](mailto:info@knightoptical.com)



**Directors:** Mr C. G. Overton, Mrs A. E. Overton. Knight Optical (UK) Ltd is Registered in England and Wales, **Registration No.** 3755966 Registered office: 34 Bower Mount Road, Maidstone, Kent, ME16 8AU **V.A.T. Registration No.** GB 703 1430 90

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## Specifications:

Model:	UV I
Dynamic range:	2000:1 with 8 decades
Optical resolution:	0,4
Detector type:	CCD, 2k/3k pixels
Detector range:	200-340nm
Grating:	1800
Spectrograph:	f/4, SymX-Czerny-Turner
Order Sorting Filters:	Integrated and High Pass
Signal to Noise:	1000:1
Digitizer:	16-bit
Dimensions:	25x75x125mm
Signal to noise:	4000:1 with TEC
Weight:	0.4 kg
Power consumption:	< 100 mA via USB port
Interface:	USB or USB Hub
Detector Integration:	1ms to 65s
Slit size options:	25, 50,100, or 200µm
Stray Light:	<0.1% at 435nm;<0.05% at 600nm
Fiber Optic Input:	SMA905 0.22na single fiber
Operating Systems:	Windows XP/Vista/7/8
Software included:	SpectraWiz program & apps
Also free programs for:	LabView, Excel + VBA, Delphi

## Knight Mini HR Configurations:

Model	Wavelength Range (nm)	Grating g/mm	Grating Range (nm)	Nm/pixel dispersion	Slit-25 nm res.	Slit-14 nm res.	Slit-7nm res.
UV I	200-340	1800	140	0.068	0.30	0.20	0.10
UV II	200-300	2400	100	0.048	0.21	0.14	0.07
NIR I	900-1075	1200	175	0.085	0.26	0.17	0.09
NIR II	750-850	1800	100	0.049	0.15	0.10	0.05
NIR III	500-580	2400	80	0.039	0.12	0.08	0.04

## Variations:

The configurations table above shows our standard range of Knight Mini HR upgrades for use in the UVN spectrum. These are suitable to a wide range of applications and can be purchased through our website or by calling our experienced sales team. If these configurations do not fit your requirements we are able to upgrade any of our Blueshift range to have HR capabilities. Please contact us with your specifications and find out how our range of HR upgrades can work for you.

All our mini spectrometers are supplied with intuitive Windows XP, Vista, 7 and 8 compatible SpectraWiz software for quick and easy measuring wherever you are. SpectraWiz software is versatile, allowing for accurately measuring and displaying wavelength

emissions, reflectance, transmission, absorption, concentrations and absolute intensities.

The images below, taken from the SpectraWiz software supplied, show some of the many applications for the Knight Mini HR system:

In addition to our Knight Mini HR spectrometers, Knight Optical also supply a range of mini spectrometer models and accessories for alternative applications, please click on the "see also" tab below, alternatively speak to our experienced, technical sales team to discover how Knight Optical's range of high quality mini-spectrometers can improve your spectral analysis capabilities and experience.