



Leading Spectroscopy Company

RIUS-G Universal Spectrometer

Our Universal Spectrometer RIUS-G Series developed by the Research India Innovation group **“RI Instruments & Innovation India”** which applies in the field of **Medical Sciences, Material Science, Food Safety, Environmental Sciences and more.**

Spectrometer with 3648 pixels CCD linear array detector has high resolution up to 0.03 nm (FWHM). The system includes incident slit, collimating mirror, dispersion element (grating), focusing optical system and detector. Light is collected through the optical fiber into the spectrometer slit then the spectral information can be read out by the software



Software & Hardware Features

Instrument Control & Data Collection parameters are user-definable, such as Exposure time, dark correction, signal averaging, spectral smoothing, Automatic Saved Spectra. Graphics saved in .txt format and be opened in any Third-Party Software E.g. Origin, Excel and other data processing software.

In one modular setup one can perform Absorbance, Transmittance, Reflection, Irradiance, CRI, Fluorescence, Etc.

Suitable LED’s and selection of Laser could be done any time & these are optional.

Light Source

- H: Halogen Light Source 360 -1100 nm
- D: Deuterium– Halogen Continuous Light Source 200-1100 nm

Model No.	Wavelength Range	Unit Price
RIUS-G	200 -1100 nm Focal Length : 110 mm	₹ 2500000.00
Optional Attachments		
-V	Variable Slit 0- 200 /600 um continuous	
-T40	Cooled Detector – 40C	
-W	Connection through Wi-Fi	



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Spectrometer Specifications

Design	:	Czerny Turner
Detector	:	CCD linear array
Lens	:	Detector Collecting lens (Quartz)
Detector range	:	200 – 1100 nm
Pixels	:	3648
Sensitivity	:	460,000 counts/ μW per ms integration time
Focal Length	:	110 mm
TEC Cooled	:	- 40 °C (Optional)
Filter	:	Order Sorting Filter
Fiber optic connector	:	0.22 NA, 600 μm Core SMA Connectors Multimode
Wavelength range	:	200- 1100 nm (Grating Dependent)
Slit	:	Variable 0- 200/600microns or Fixed
Optical Resolution	:	0.03 – 8.4 nm
Signal-to-noise ratio	:	14000: 1 (averaging)
A/D Resolution	:	16 Bit
Onboard Memory	:	64 Spectra
Dynamic range:	:	1900 :1
Integration Time	:	10 us – 60 secs
Stray light:	:	<0.05% at 600 nm; <0.10% at 435 nm
Power Consumption	:	100mA @ 5V from USB interface
Trigger Modes	:	3 modes – Optional
Operating System	:	Windows 10 /8 / 7 (32 & 64 Bit)
Software	:	RI Spectra, With Database Search Option & Manual Shift Calibration
Computer Interfaces:	:	USB 2.0, HID 2.0
Temperature:	:	-30 °C to +70 °C Storage & -10 °C to +50 °C Operation
Humidity	:	0%-90% non-condensing

Contact Us:

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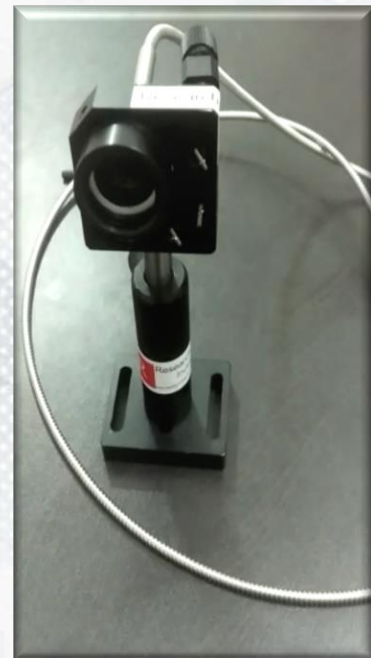
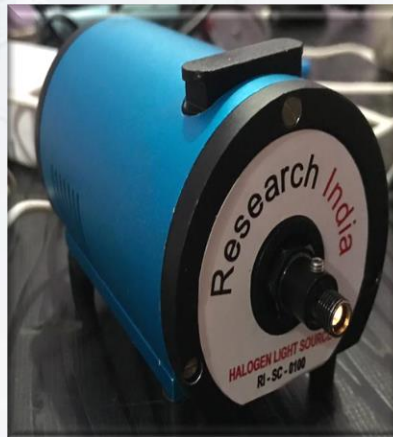
BALANCED DEUTERIUM HALOGEN (RIDH2000)

UV to near infrared high-quality long-life research wide band light source.

Our Balanced Deuterium Halogen (RIDH2000) composite light source for laboratory applications integrates the continuous broadband deuterium and tungsten halogen lamp spectrum in one channel. The integrated spectrum provides continuous output from 190 nm to 2500 nm.

The deuterium lamp emits a continuous spectrum of light ranging from 190-400 nm in the UV range to 400-800 nm in visible light, making the deuterium lamp a highly accurate source of analytical instrumentation, such as for liquid chromatography.

Tungsten halogen light bulbs are the principle of light-emitting principle is the use of objects and thermal radiation theory to achieve tungsten halogen lamp is to conduct sufficient current filament, the filament heat incandescent state, it will shine. The tungsten halogen lamp bulb usually has a wavelength in the range of 360 nm to 2000 nm. The life of a tungsten halogen bulb is related to its operating temperature. The higher the color temperature, the shorter the life



Contact Us:

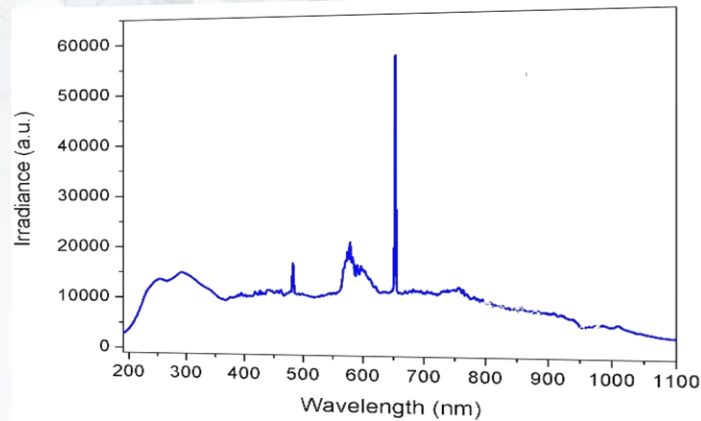
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RIDH2000 Light Source Features

- Experimental high stability, high quality deuterium lamp and tungsten halogen lamp.
- Efficient cooling system.
- Provide 190-2500 nm continuous spectral radiation continuous output.
- High power output.
- SMA905 standard interface output.
- Deuterium and tungsten halogen lamps can be turned on separately.
- Long life, high stability.
- Suitable for UV spectrometry



Size:	150 mm x 119 mm x 200 mm
Weight:	3.5 kg
Bulb Power:	30 W (deuterium lamp); 20 W (halogen lamp); high power (tungsten halogen lamp)
Source Lifetime	2000 hours
Typical output power with 600µm UV fiber:	200 µW (deuterium bulb) 625 µW (tungsten bulb)
Wavelength range:	180/190-400 nm (deep UV deuterium lamp); 360-2500 nm (standard tungsten halogen bulb)
Warm up time:	20 minutes
Voltage Drift:	< 0.01 % per hour
Voltage Stability:	< 5x10 ⁻⁶ peak (0.1-10.0 Hz)
Color Temperature:	3000 K (Halogen)
Humidity range:	5 - 95%
Power consumption:	~ 78 VA
Power requirements:	85-264 V 50/60 Hz

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LED Light Source

Research India RIL Series LED light source has various specifications from ultraviolet to near infrared. Both are SMA905 interface outputs, and their coupling efficiency is high.

The optical power of the fiber-coupled output is about 1~2mw with core diameter $\geq 600\mu\text{m}$, numerical aperture 0.22NA.

LED light source wavelength conventional products are: 265 ~ 880 nm various specifications

Product Performance

- SMA905 interface
- High coupling efficiency
- LED light-emitting chip adopts imported lamp beads, its performance is stable, and it will not drift and float for a long time.
- Lifetime: 100,000 hours
- Emits a cold light source, which has a small heat dissipation, a small volume, and is easy to carry



Application Range

Widely used in high-resolution optics, phosphor reflection, medical applications, photolysis media reactions, UV adhesive curing, special lighting, etc.

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LED Specifications

Model No.	Centre Wavelength	Half Width	Optical Output Power	Connector
RIL270	270nm	5 nm	1.5mW	SMA/FC
RIL310	310nm	6nm	1.5mW	SMA/FC
RIL370	370nm	8nm	2-5mW	SMA/FC
RIL395	395nm	9nm	2-5mW	SMA/FC
RIL405	405nm	9nm	2-5mW	SMA/FC
RIL425	425nm	14nm	2-5mW	SMA/FC
RIL460	460nm	15nm	2-5mW	SMA/FC
RIL485	485nm	25nm	2-5mW	SMA/FC
RIL495	495nm	21nm	2-5mW	SMA/FC
RIL525	525nm	29nm	2-5mW	SMA/FC
RIL545	545nm	34nm	2-5mW	SMA/FC
RIL605	605nm	16nm	2-5mW	SMA/FC
RIL665	665nm	12nm	2-5mW	SMA/FC
RIL800	800nm	17nm	2-5mW	SMA/FC
RIL880	880nm	15nm	2-5mW	SMA/FC
RI White LED	--	--	2-5mW	SMA/FC.

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