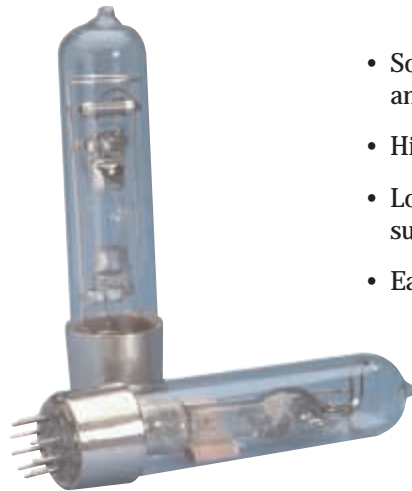


Oriel High Power Spectral Calibration Lamps



65130 and 65010 High Power Spectral Line Lamps

- Sources of intense, discrete UV, VIS and NIR spectral lines
- Highly stable long-term output
- Low cost rod mounted housing supports lamps
- Easily interchangeable lamps

Choose these sources if you require very intense, discrete spectral lines. These lamps are approximately 2X more intense than comparable pencil calibration lamps, although the spectral intensity distribution is very different. See Fig. 1 for the irradiance from the 65130 High Power Mercury Lamp. The lamps are housed in the 65160 Lamp Housing, and powered by the 65150 Regulated AC Power Supply.

Lamp Housing with Integrated Filter Holder

The lamps are operated in the 65160 Housing. A socket adapter holds the lamp so the direction of maximum radiance is through the lamp-housing aperture. The same socket holds any of these high-powered spectral line lamps so you can interchange between the lamps without switching lamp mount.

A filter holder at the aperture holds 1-inch (25.4 mm) diameter interference filters for wavelength isolation. The 65160 can be rod mounted using standard 1/4-20 threaded optical rods. A rod is not included. A 6 ft. (1.8 m) long cable is included to connect to the 65150 Power Supply. To ensure the greatest flexibility we offer a Z Bracket accessory.

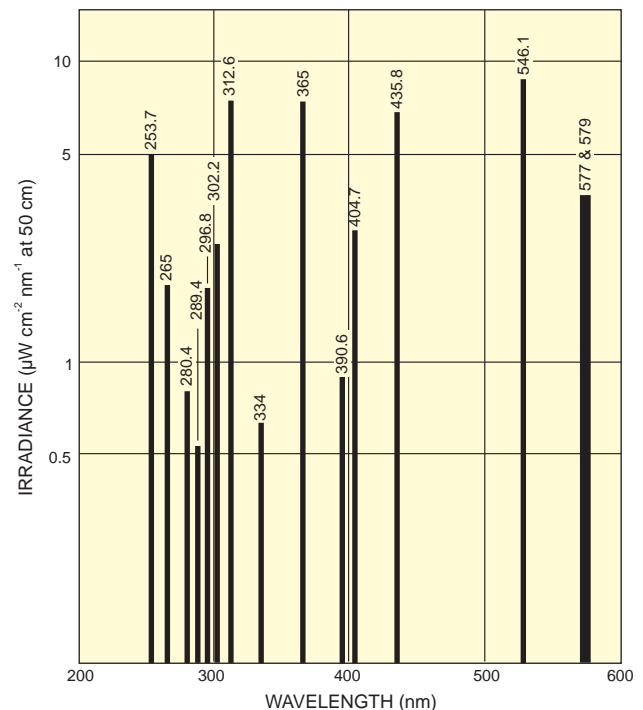


Fig. 1 Irradiance, at 50 cm, from the 65130 Mercury High Power Spectral Line Lamp

Regulated Power Supply

These lamps operate in AC mode. The output stabilizes after a few minutes of warm-up. Because the power supply operates in regulated AC mode, there are rapid variations in output on an ms time scale; see Fig. 2. However, the average output over many seconds is very stable. In fact, input voltage variations of as much as 10% are removed by the regulation circuit so you only see changes of less than 1% in light output.

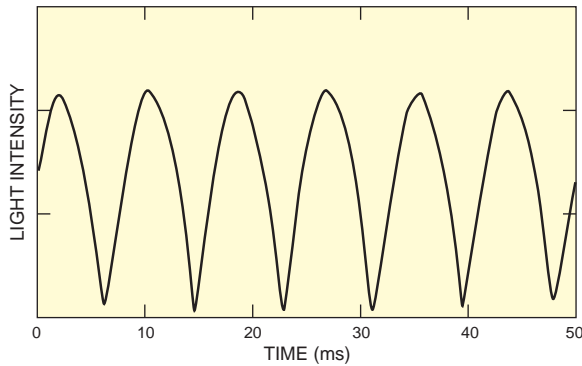


Fig. 2 Short term temporal behavior of the light output of 65010 Cesium Lamp, over time, when powered by the 65150 Power Supply.

High Power Spectral Calibration Lamps

The radiating material is enclosed in a compact burner. Starter gases are used with the metallic elements. The burner is surrounded by a glass tube for thermal insulation and mechanical protection. Several of the lamps have a quartz tube for transmission of the UV.



65160 Lamp Housing on 66275 Z Bracket.

The 66275 Z Bracket lets you rod mount the 65160 Lamp Mount at a low optical axis height to match our monochromator inputs. The lowest centerline height with this mount is 2.8 inches (71 mm). Click here for more details on the 66275.

Spectral Lines

The following are commonly used spectral lines from these lamps.

Lamp	Wavelength (nm)
Mercury	253.7
Zinc	280.0
Zinc	307.1
Mercury	312.6
Cadmium	326.1
Mercury	334.1
Mercury	365.0
Mercury	404.7
Mercury	435.8
Cesium	455.5
Cadmium	508.5
Thallium	535.0
Mercury	546.1
Mercury	577.0
Sodium	590.0
Zinc	636.2
Cesium	852.1
Mercury	1014.0

Safety Considerations

Although these are low wattage sources, they still emit hazardous UV radiation. Be sure to wear protective eyewear and gloves.

Specifications

Power Supply

Starting Voltage	600 V peak to peak for ca. 350 ms
Operating Voltage	10 - 60 V, lamp dependent
Operating Current	0.6 - 1 A, selon la lampe
Input	115 V / 2.4 A or 230 V / 1.2 A
Weight	18.2

System

Line Regulation (<1 Hz)	<±1% for ±10% change in line voltage
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Ordering Information

Spectral Line Lamps

Model	Lamp Type	Lamp Wattage	Lamp Current (A)	Approx. Luminous Intensity (cd)	Radiating Area (mm)		Price
					Height	Width	
65010	Cesium (Cs)	10	1	0.3	15	6	
65020	Helium (He)	55	1	2	15	8	
65060*	Mercury-Cadmium (Hg-Cd)	25	1	10	20	8	
65080	Sodium (Na)	15	1	40	15	6.5	
65090	Neon (Ne)	30	1	3.5	15	8	
65110*	Thallium (Tl)	15	1	1.5	8	3	
65120*	Zinc (Zn)	15	1	0.5	15	6	
65130*	Mercury (Hg)	22 - 44	0.6 - 1	20	20	3	

*These lamps have a quartz envelope for UV transmittance.

Accessories

Model	Description	Price
65150	Regulated Spectral Line Power Supply	
65160	Lamp Mount	
66275	Z Bracket	

TECHNICAL REFERENCE

CALIBRATION SOURCES

DEUTERIUM SOURCES

ARC SOURCES

INCANDESCENT SOURCES

MONOCHROMATOR AND FIBER ILLUMINATORS

SOLAR SIMULATOR

PHOTOLITHOGRAPHY INSTRUMENTS

ACCESSORIES FOR ORTEL LIGHT SOURCES