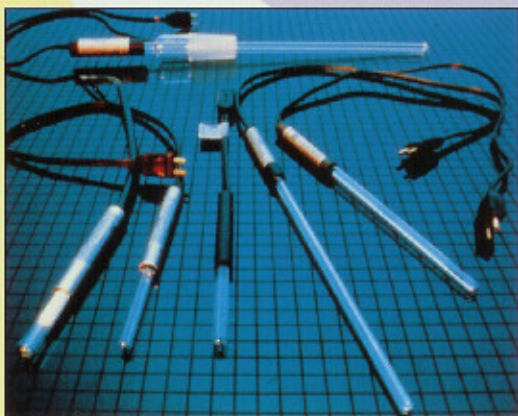


## Features

Quality crafted Pen-Ray lamps are manufactured to fit into the smallest apertures. The lamps provide a high degree of stable, isolated spectral line accuracy and long life (+5000 hours).

## Pen-Ray® Miniature UV Lamps



Pen-Ray lamps can be used as primary references or spectral sources. Lamp uses include photometric and fluorometric instruments, spectroscopic wavelength calibration, monochromatic sources for optical systems and reference studies plus chromatography, sterilization, interferometry, atomic absorption techniques, fluorescent inspections, ozone generation, photochemical reactions. Standard lamps with corresponding power supplies are shown below. For more information request a full catalog.

**Pen-Ray lamps** are individually created by master craftsmen to ensure quality and reliability. These low-pressure, mercury gaseous discharge lamps are constructed of ozone-producing, double-bore quartz (ozone-free also available). Electrodes are positioned at one end of the lamp along with a 16 in. zip cord and standard two-prong plug for connecting the lamp to the power supply. Power supplies (order separately) provide Pen-Ray lamps with the proper voltage and current for starting and operation. A variety of standard lighted lengths and UV wavelength configurations are available. Contact UVP for custom lamp shapes, sizes, fills or transmission.

Optional filter shields direct or modify emission output for **model 11SC-1**: Shield A provides a 0.014 in. ID hole for a point-like source. Shield B has 0.31 x 0.63 in. window. Shield C has a 0.19 x 1.5 in. window. G-275 filter absorbs visible light while transmitting UV at 254nm. G-278 filter converts shortwave to longwave at 365nm.

**Power Supply Dimensions** 6.3D x 3.7W x 2.3H in. (160 x 94 x 58.4mm); Except 99-0004-01, 99-0004-02 dimensions 4.6 x 5.75 x 3.75 in. (117 x 146 x 95mm)



Standard Models	Part No.	Lighted Length	Volts: Start/ Operate	Wave-length	Power Supply		Open Circ. Voltage	Max. Pri. Current	Lamp Current
					115V/60Hz	220V/50Hz			
11SC-1	90-0012-01	2.13 in.(5.38cm)	1000V/270V	254nm	99-0055-01	99-0055-02	2300 VAC	400 ma	18ma(avg)
11SC-1L	90-0019-01	2.25 in.(5.72cm)	1000V/270V	365nm	99-0055-01	99-0055-02	2300 VAC	400 ma	18ma(avg)
11SC-2	90-0020-01	0.75 in.(1.91cm)	1000V/270V	254nm	99-0055-01	99-0055-02	2300 VAC	400 ma	18 ma(avg)
22SC-3S	90-0025-01	1.0 in.(2.54cm)	1000V/350V	254nm	99-0056-01	99-0056-02	2000 VAC	400 ma	6 ma(avg)
22SC-3L	90-0024-01	1.13in.(2.86)	1000V/350V	365nm	99-0056-01	99-0056-02	2000 VAC	400 ma	6 ma(avg)
3SC-9	90-0004-01	9 in.(22.86cm)	640V/560V	254nm	99-0004-01	99-0004-02	2800 VAC	1000 ma	26 ma(avg)

**Certifications** 115V power supplies "US and C entela" certified except 99-0004-01; 230V models CE except 99-0004-02.

In addition to lamps with standard voltage power supplies, **portable Pen-Ray Field Packs** combine a Pen-Ray lamp with a dc power supply (9V battery). Power supply dimensions are 3.8L x 2.4W x 1H in. (96 x 61 x 25mm). Call UVP for specifications and part numbers.

**Stable Ozone Generators (SOG)** use the photochemical reaction of oxygen under shortwave (185nm) UV to produce a continuous flow of ozone. SOG models use a removable Pen-Ray lamp inserted into the generator box. A power supply (included) feeds reliable and stable power to the lamps for uniform ozone generation. SOG lamps are designed for calibration of field and labora-

tory ozone analyzers and as stable source for water purification and air pollution studies, instrument development and oxidant testing of materials.

**Pen-Ray Grid Lamps** provide stable, low noise operation. Grid lamp life is rated at 5000 hours. Standard or ozone-free grid lamps available in sizes 2x2 to 12x12 in.



Model	Part No.	Volts	Ozone Production	Lighted Length	Power Supply	Volts
SOG-1	97-0066-01	115V	0.8 ppm @	2.12"	99-0055-01	115V
SOG-1	97-0066-02	220V	0.5 L/min.	(5.38mm)	99-0055-02	220V
SOG-2	97-0067-01	115V	3.0 ppm @	9"	99-0004-01	115V
SOG-2	97-0067-02	220V	1.0 L/min.	(228.6mm)	99-0004-02	220V