

UL Ultraviolet Equipment

Lamps

Ultraviolet Lamp

Ultraviolet light (UV) is the part of the electromagnetic spectrum that is adjacent to and greater in energy than visible light. The ultraviolet spectrum extends from 180 to 400 nanometers (nm) and is divided into three categories: shortwave, mediumwave, and longwave.

Shortwave UV light extends from 180 to 280 nm with a peak in energy at about 254 nm. Ultraviolet equipment that produces light in the shortwave region is ideal for mutation studies, toxicology, fluorochemistry, and germicidal applications.

Mediumwave UV light extends from 280 to 320 nm with a peak in energy at about 312 nm. Mediumwave UV lamps are generally used in electrophoresis documentation procedures and to identify minerals by their fluorescent response.

Longwave UV light, or black light, extends from 320 to 380 nm with a peak in energy at about 365 nm. Use longwave UV lamps as leak detectors in conjunction with fluorescent dyes. They are also useful for mineral studies.



Photo above shows a scorpion fluorescing under longwave (365 nm) UV light. The fluorescence is due to a substance in the cuticle of the scorpion.

Handheld Mini Ultraviolet Lamps

Compact—fit in your pocket

Small, lightweight lamps are ideal for use anywhere. Choose from single- or dual-wavelength models. The dual-wavelength model 97602-22 has a wavelength selector for choosing 254 or 365 nm light.

What's included: one 4-watt tube and a nylon strap. Order batteries separately below.

Specifications & Ordering Information

Catalog number	Description	Wattage	Wavelength (nm)	Intensity (μW/cm²)	Dimensions (W x H x D)	Power	Price	Replacement tubes	
								Cat. no.	Price
KH-97602-02	No flashlight	4 watts	254	170 at 3"	6½" x 1¼" x 1¼"	4 AA batteries (not included)		KH-09815-12	
KH-97602-12			365	230 at 3"				KH-97602-52	
KH-97602-22			254/365	113/68 at 3"				KH-97602-54	
KH-97602-30	Flashlight included	4 watts	365	230 at 3"	6½" x 1¼" x 1¼"			KH-97602-52	

KH-09376-01 Batteries, AA. Pack of 4

New



97602-02

97602-22

97602-12



UV lamp 97602-30 features a flashlight.

Pen-Ray® Ultraviolet Lamps

Ideal for UV testing through small apertures

- Economically calibrate your photometric and fluorometric instruments
- Use as primary references or spectral sources

These long-lasting Pen-Ray lamps are rated for 5000 hours of use. Lamps feature a double bore quartz tube, an excellent transmitter of UV radiation. Choose from standard, deluxe, or extra-long models.

What's included: a 16" cable to plug in to a power supply. Order power supplies separately in the table below. Order optional lamp shield for deluxe model below.



Deluxe Pen-Ray lamp 97606-00 shown with power supply 97606-80 and optional lamp shield 97606-52

Specifications & Ordering Information

Catalog number	Description	Wavelength (nm)	Intensity (μW/cm²)*	Dimensions (L x W x D)	Price	Power supplies					
						Cat. no.	VAC, Hz	Price	Cat. no.	VAC, Hz	Price
KH-97606-02	Standard	365	145	4¾" x ¾" x ¾"		KH-97606-80†	115, 60		KH-97606-85†	230, 50	
KH-97606-00	Deluxe	254	4400	4¾" x 1¼" x ¾"		KH-97606-80†			KH-97606-85†		
KH-97606-08	Extra-long	254	5400	11½" x ¾" x 1½"		KH-97606-90			KH-97606-95**		

*Measured at 0.75" †ETL/ETLc certified ‡CE certified **Avg lamp current is 26 mA

Lamp Shields for deluxe model 97606-00. Use to direct UV light through a point-like aperture or small window opening. Shields also protect tube from breakage.

KH-97606-50 Lamp shield, 0.04" opening

KH-97606-52 Lamp shield, 5/16" x 5/8" opening



97606-80 97606-85

Ultraviolet Equipment

UL

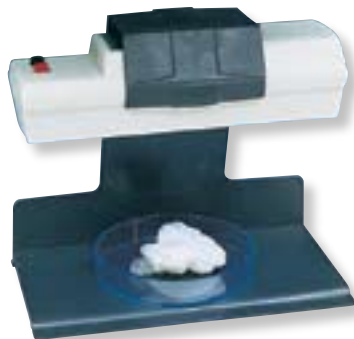
Lamps

Handheld and Portable Ultraviolet Lamps

A Shortwave Ultraviolet Lamp

Compact 254 nm, 4-watt lamp.

What's included: a tube, a 2" x 3" filter and an 8-ft, two-wire cord (115 VAC model has a plug). Order optional lamp stand below right to free your hands.

**A**

Lamp 09815-10 shown with optional stand 09817-00

B 4-Watt Short/Longwave Ultraviolet Lamp

Compact, short/longwave lamp comes with two 4-watt tubes (254 and 365 nm). Each tube produces a distinct wavelength; no mixing of primary UV ranges occurs.

What's included: a 2" x 3" filter and a 7-ft, two-wire cord with on/off switch (115 VAC model has a plug). Order optional lamp stand 09817-00 at right.

**B**

09817-20

C 6-Watt, Short/Longwave Ultraviolet Lamp

Get short or longwave ultraviolet light at the touch of a button. Two separate tubes (254 and 365 nm) operate independently—no wavelength mixing occurs.

Snap-on filter frame simplifies filter replacement. Filter measures 6" x 1 3/4". Wavelength rocker switch is conveniently located for index-finger operation. Housing is constructed of lightweight Cyclocac® plastic.

What's included: a 7-ft, two-wire cord (115 VAC model has a plug.) Order optional lamp stand 09818-50 at right.

**C**

Lamp 09818-00 shown with optional stand 09818-50

D Longwave Ultraviolet Wand

Long, narrow design is ideal for quick reliable leak detection in tight spots or hard to reach areas.

What's included: a 365 nm, 15-watt tube, and a 27 1/2-ft, two-wire cord with plug.

**D**

Lamp 97601-00 is ideal for tight or hard to reach spots.

E High-Intensity, Shortwave Ultraviolet Lamp

This high-intensity, ultraviolet lamp has a 2" x 6" filter area and a high-intensity grid.

What's included: the 115 VAC model comes with a plug; the 230 VAC model has stripped ends. A 3-ft cord connects lamp to base; an 8-ft, three-wire cord connects base to outlet.

**E**

09813-00

Lamp Stands for **A-C**

KH-09817-00 Lamp stand for UV lamps 09815-02, -10 and 09817-20, -22. Holds UV light at an angle for maximum light spread. Measures 4 7/8"H

KH-09818-50 Lamp stand for UV lamps 09818-00 and -02. Cast aluminum base. Measures 6 1/8"H

Genesis® Safety Glasses

- Absorb 99.9% of harmful UVA and UVB radiation

Wraparound lens design provides uncompromised peripheral vision. Coating helps to keep your lenses scratch free.

Compliance: ANSI Z87.1, CSA Z94.3, and MIL-STD 662



Catalog number	Frame color	Lens color	Price per pair	
			1 pr	10 pr
EK-86325-70	Black	Clear		
EK-86325-82	Translucent blue	Indoor/outdoor		

Specifications and Ordering Information

Key	Description	Wattage	Wavelength (nm)	Intensity (μW/cm²)	Dimensions (L x W x H)	Lamps; 115 VAC, 60 Hz		Lamps; 230 VAC, 50 Hz		Replacement tubes¹		Replacement filters	
						Cat. no.	Price	Cat. no.	Price	Cat. no.	Price	Cat. no.	Price
A	Shortwave	4 watts	254	1120 at 3"	7 7/8" x 2 5/8" x 2"	KH-09815-10 ²		KH-09815-02 ²*		KH-09815-12		KH-09815-11	
B	Short/longwave	4 watts	254/365	760/720 at 3"	7 7/8" x 2 5/8" x 2"	KH-09817-20 ²		KH-09817-22 ²*		KH-09815-12 KH-09816-12		KH-09815-11	
C	Short/longwave	6 watts	254/365	1350/1200 at 3"	15" x 3 1/8" x 2 1/2"	KH-09818-00 ²		KH-09818-02 ²*		KH-09814-27 KH-09814-26		KH-09818-10	
D	Longwave wand	15 watts	365	350 at 6"	20" x 1 1/2"	KH-97601-00		—	—	KH-09819-10		—	—
E	High-intensity shortwave, grid	20 watts	254	2400 at 5"	15" x 3 1/8" x 2 1/2"	KH-09813-00		KH-09813-02		KH-09813-12		—	—

*CE certified

¹For shortwave/longlamps order one replacement tube for each wavelength.

*ETL and ETLc certified

UL Ultraviolet Equipment

Lamps

Cole-Parmer Ultraviolet Lamps

All-aluminum housing increases durability

- Lamp holders add versatility

Choose the wattage and wavelength you need. In the table below, you will find UV lamps with wattages as high as 100 watts; other models feature switch-selectable dual wavelengths.

Lamps include long-life filters (unlimited life for 312 and 365 nm, 3000 hours for 254 nm) for consistent intensity levels. The 50- and 100-watt high-intensity lamps also include a separate power supply.

UV lamp stands, handle, and bracket give you versatility. The lamp stand frees your hands; lamp handle and bracket let you conveniently mount your lamp below a horizontal surface, such as inside a fume hood. Order lamp holders separately at the bottom of the page.



GO to page(s) 1486–1491

See our “Safety—Eye Protection” section for a full selection of safety eyewear on pages 1486–1491.

4-watt lamp 09815-34
shown with handle
09815-93



15-watt lamp
09815-00

Specifications & Ordering Information



Wattage	Wavelength (nm)	Intensity* (μW/cm²)	Dimensions (W x H x D)	Lamps; 115 VAC, 50 Hz		Lamps; 230 VAC, 60 Hz		Replacement tubes		Replacement filters	
				Cat. no.	Price	Cat. no.	Price	Cat. no.	Price	Cat. no.	Price
4 watts	254	340	10 ⁷ / ₈ " x 3 ³ / ₁₆ " x 2 ⁵ / ₁₆ "	KH-09815-34		KH-09815-35		KH-09815-36		KH-09815-37	
	365	400		KH-09815-30		KH-09815-31		KH-09815-32		KH-09815-33	
	254	265		KH-09815-38†		KH-09815-39†		KH-09815-36		KH-09815-37	
	365	350						KH-09815-32			
6 watts	254	710	10 ⁷ / ₈ " x 3 ³ / ₁₆ " x 2 ⁵ / ₁₆ "	KH-09815-44		KH-09815-45		KH-09815-46		KH-09815-47	
	312	505		KH-09815-48		KH-09815-49		KH-09815-50		KH-09815-47	
	365	610		KH-09815-40		KH-09815-41		KH-09815-42		KH-09815-43	
	254	400		KH-09815-19†		KH-09815-21†		KH-09815-46		KH-09815-47	
	312	505						KH-09815-50			
	254	400		KH-09815-51†		KH-09815-52†		KH-09815-46		KH-09815-47	
	365	610						KH-09815-42			
	312	505		KH-09815-17†		KH-09815-18†		KH-09815-50		KH-09815-47	
15 watts	254	730	19 ⁵ / ₈ " x 5 ⁵ / ₁₆ " x 3 ³ / ₄ "	KH-09815-03		KH-09815-04		KH-09815-59		KH-09815-27	
	312	1000		KH-09815-05		KH-09815-06		KH-09815-63		KH-09815-27	
	365	1100		KH-09815-00		KH-09815-01		KH-09815-55		KH-09815-26	
	254	1780		KH-09815-13		KH-09815-14		KH-09815-59		KH-09815-29	
30 watts†	312	3000	19 ³ / ₄ " x 5 ⁵ / ₁₆ " x 4"	KH-09815-22		KH-09815-23		KH-09815-63		KH-09815-29	
	365	2300		KH-09815-07		KH-09815-08		KH-09815-55		KH-09815-28	
	254	930		KH-09815-24†		KH-09815-25†		KH-09815-59		KH-09815-29	
	365	1350						KH-09815-55			
100 watts	254	3400	15 ⁷ / ₈ " x 3 ³ / ₁₆ " x 2"	KH-09815-83		KH-09815-84		KH-09815-85		KH-09815-86	

*Intensity is measured at a distance of 6" (15 cm).

†For dual-wavelength lamps, order one replacement tube for each wavelength.

‡These 30-watt lamps use two 15-watt tubes.

Lamp Holders

Catalog number	Type	Price
For 4-, 6-, 50-, and 100-watt lamps		
KH-09815-90	Stand** Handle Bracket	
KH-09815-93		
KH-09815-94		
For 15- and 30-watt lamps		
KH-09815-95	Stand	

**Stand is not for use with 100-watt models.

Accessories

[KH-09815-99](#) Replacement starter for UV tubes (tubes for 50- and 100-watt high-intensity lamps do not need starters)



6-watt lamp
09815-51 shown
on stand 09815-90



Bracket 09815-94
for 4-, 6-, 50-, or
100-watt lamps

Ultraviolet Equipment

UL

Lamps

Handheld Ultraviolet Lamps

Change light sources or wavelengths at the touch of a switch

- Triple-wavelength model available

These handheld, 8-watt UV lamps have a rocker switch on the back to easily change from UV to white light, or between wavelengths. Lamps feature durable metal housing with scratch-resistant powder paint.

Great when working in dimly lit areas—single wavelength models 97607-00 through -25 come with 254, 302, or 365 nm and a white tube.

Triple wavelength models 97607-30 and -35 include 254, 302, and 365 nm tubes for excellent versatility.

What's included: a 7-ft, three-wire cord; the 115 VAC models have a plug.



Specifications & Ordering Information

Wattage	Wavelength (nm)	Intensity* (μW/cm²)	Dimensions (W x H x D)	115 VAC, 60 Hz		230 VAC, 50 Hz	
				Catalog number	Price	Catalog number	Price
8 watts	254	630	14 ¹³ / ₁₆ " x 3 ¹³ / ₁₆ " x 2 ¹ / ₂ "	KH-97607-00		KH-97607-05	
	302	640		KH-97607-10		KH-97607-15	
	365	500		KH-97607-20		KH-97607-25	
	254/302/365	630/640/500		KH-97607-30		KH-97607-35	

*Intensity is measured at 3"

Replacement Tubes

Cat. no.	Wavelength	Price
KH-97607-50	254 nm	
KH-97607-51	302 nm	
KH-97607-52	365 nm	
KH-97607-54	White	

Accessories

[KH-97607-70](#) Lamp stand, fits all models



Handheld lamp 97607-30



Order optional lamp stand 97607-70 for hands-free operation.

Ultraviolet Germicidal Lamps

A low-cost choice for destroying bacteria, molds, yeasts, and viruses

Help prevent contamination in your research laboratories, food factories, and white rooms with these germicidal lamps. They emit 254 nm UV light for efficient destruction of bacteria, molds, yeast, and viruses. Replace starter and tubes at the same time.

What's included: a 6-ft cord and a plug; the 220 VAC models have a European plug.



Specifications & Ordering Information

Tube life: 2000 hours

Intensity† (μW/cm²)	Dimensions (L x W x H)	Lamps; 115 VAC, 60 Hz		Lamps; 230 VAC, 50 Hz		Replacement tubes		Replacement filters	
		Cat. no.	Price	Cat. no.	Price	Cat. no.	Price	Cat. no.	Price
31	20" x 5 ¹ / ₂ " x 4.6"	KH-97505-00**		KH-97505-05**		KH-09815-59		KH-09815-99	
76		KH-97505-10**		KH-97505-15**		KH-09815-59[‡]			
60	38" x 5 ¹ / ₂ " x 4 ¹ / ₄ "	KH-97505-20		KH-97505-25		KH-97505-80		KH-97505-90	
152		KH-97505-30		KH-97505-35		KH-97505-80[‡]			

†Intensity is measured at 6¹/₂ feet.

[‡]Order two replacement tubes.

**Lamps include fixation bracket.



97505-00 Durable lamps have a shock-resistant anodized aluminum housing.

Three-Wave Ultraviolet Lamps

Longwave, shortwave, and midrange UV light in one lamp

These patented lamps are lightweight and designed for hand or stationary use. Select the desired wavelength with a simple turn of the dial. Reflector surfaces mounted behind each tube provide maximum UV light for fluorescence applications—ideal for use in microbiology or in mineral and substance identification.

What's included: three tubes, 8-ft cord, and U.S. standard three-prong plug.



Specifications & Ordering Information

Wattage	Wavelength (nm)	Intensity†† (μW/cm²)	Dimensions (W x H x D)	115 VAC, 60 Hz		230 VAC, 50 Hz	
				Cat. no.	Price	Cat. no.	Price
4 watts	254, 302,	1070	3" x 9 ¹ / ₂ " x 4 ¹ / ₂ "	KH-97609-00		KH-97609-05	
6 watts	365 nm	1858	3" x 12 ¹ / ₂ " x 4 ¹ / ₂ "	KH-97609-10		KH-97609-15	
8 watts		1670	3" x 15 ¹ / ₂ " x 4 ¹ / ₂ "	KH-97609-20		KH-97609-25	

††Intensity readings were taken at 3" from approximate center.



97609-00

UL Ultraviolet Equipment

Lamps



A
Battery-operated
ultraviolet lamp
09817-80

B
Rechargeable
ultraviolet lamp
97603-25

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Portable High-Intensity Ultraviolet Lamps

Portable lightweight design is ideal for use in the field

Choose from single- or dual-wavelength lamps; all include 6-watt tube(s). Single-wavelength lamps let you use both tubes simultaneously to achieve intensities twice as high as similar units. Dual-wavelength lamps let you choose from either 254 or 365 nm light.

A Battery-Operated Lamps are made of lightweight Cicolac® for easy fatigue-free use. All models have a built-in flashlight. Powered by two 6-volt lantern batteries (included); average battery life is 20 hours.

B Rechargeable Lamps are powered by a built-in rechargeable battery or included AC/charger adapter (60 Hz for 115 VAC, 50 Hz for 230 VAC). The optional cigarette lighter adapter (sold separately below) lets you operate UV lamps on a 12 VDC power source. The dual-wavelength models require one replacement tube for each wavelength.



Specifications & Ordering Information

Catalog number	Wavelength (nm)	Intensity (μW/cm²)	Dimensions (W x H x D)	Power (VAC)	Price	Replacement tubes		Replacement filters	
						Cat. no.	Price	Cat. no.	Price
A Battery-operated ultraviolet lamps									
KH-09817-60	254	1350	2 7/8" x 9 1/2" x 9 3/4"	—		KH-09814-27		KH-09817-97	
KH-09817-70	254/365	930/710		—		KH-09817-93		KH-09817-99	
KH-09817-80	365	1650		—		KH-09817-91		—	—
B Rechargeable ultraviolet lamps									
KH-97603-10	254	1250	3" x 9 3/4" x 5 1/2"	115		KH-09814-27		KH-09817-97	
KH-97603-15				230	—	—	KH-09814-27		
KH-97603-20				115	—	KH-09814-27		KH-09817-99	
KH-97603-25	254/365	780/520	3" x 9 3/4" x 5 1/2"	230		KH-09814-26			
KH-97603-00	365	1600	3" x 9 3/4" x 5 1/2"	115		KH-09814-26		—	
KH-97603-05				230					—

KH-09376-05 Replacement battery, 6 V. For battery-operated UV lamps. Two required

KH-09817-95 Replacement white bulb for flashlight

KH-97603-50 Cigarette lighter adapter, 12 VDC. For use with rechargeable UV lamps



Lamp
97600-00



Exposure box
09819-29



Lamp visor
09819-28



Lamp funnel
09819-27

High-Intensity Longwave Ultraviolet Lamps

Detach lamp head from transformer base for portability

These high-intensity lamps produce 365 nm UV light. Lamp head rotates 360° in its transformer base. A filter minimizes white light interference allowing you to easily detect weak fluorescence.

What's included: a 100-watt spot bulb that provides a 7° beam width. Models 97600-00 and -05 are ETL/ETLc approved and have an 8-ft cord from the lamp to the transformer and an 8-ft power-line cord. Models 97600-10 and -15 have a 20-ft cord from the lamp to the transformer and a 20-ft power-line cord. The 115 VAC models have a three-prong plug; the 230 VAC models have stripped ends.



Specifications & Ordering Information

Filter life: 5000 hours

Spot bulb life: 5000 hours

Flood bulb life: 2000 hours

Wattage	Wavelength (nm)	Intensity (μW/cm²)	Dimensions (W x H x D)	Cord	115 VAC, 60 Hz		230 VAC, 50 Hz	
					Cat. no.	Price	Cat. no.	Price
100 watts	365	21,000 at 2", 8,900 at 10"	5 1/8" x 15 1/2" x 13 13/16"	8 ft	KH-97600-00	—	KH-97600-05	—
				20 ft	KH-97600-10	—	KH-97600-15	—

Accessories

KH-09819-27 Lamp funnel directs light

KH-09819-28 Lamp visor shields your eyes

KH-09819-29 Exposure box exposes samples to direct UV source

KH-09819-23 Replacement filter

KH-09819-24 Replacement bulb, 7° beam width

Ultraviolet Equipment

UL

Lamps

Ultraviolet Bench Lamps

Reliable sterilization and inspection for applications in hospitals, laboratories, and pharmaceutical companies

- 365-nm models are ideal for fluorescence and inspection applications
- 254-nm models provide an effective tool for sterilization and sanitation control

The 365-nm models have self-filtering, low pressure "black light" tubes that stay cool for a longer period of time than conventional UV tubes, making them ideal for nondestructive testing. Highly polished inner aluminum deflector provides maximum UV reflectance.

The 15-watt models are designed for flooding an area of 15 ft² at 20"; the 40-watt models flood an area of 300 ft² at 12 ft.

What's included: two tubes; brackets for wall or ceiling mounting; and a 7-ft, three-wire cord (115 VAC model comes with three-prong plug).

Specifications & Ordering Information



Wattage	Wavelength (nm)	Dimensions (W x H x D)	Lamps; 115 VAC, 60 Hz		Lamps; 230 VAC, 50 Hz		Replacement tubes	
			Cat. no.	Price	Cat. no.	Price	Cat. no.	Price
15 watts	254	19 3/4" x 4 1/2" x 6"	KH-97605-00		KH-97605-05		KH-97605-50	
	365		KH-97605-10		KH-97605-15		KH-09819-10	
20 watts	254	24" x 4 1/4" x 6"	KH-97615-00		KH-97615-05		KH-97615-50	
	365		KH-97615-10		KH-97615-15		KH-97615-51	
20 watts	254	51 3/4" x 6 1/2" x 5"	KH-97605-30		KH-97605-35		KH-97605-54	
	365		KH-97605-40		KH-97605-45		KH-97605-52	

KH-97605-80 Exposure stand for 15-watt bench lamps. One adjustable shelf. Measures 20" W x 13" H x 6" D



Bench lamp 97605-10



Model 97605-00 shown with optional exposure stand 97605-80. Shelf is adjustable to vary distance from the UV source.

BioLite™ MultiSpectral Source

Use in animal studies, medical imaging, and other industrial inspection applications

- Choose from one or two flexible gooseneck light guides
- Interchangeable optional emission filters for excitation of samples
- Low noise/vibration without transmitting vibrations to the specimens

The BioLite multispectral source is a 150-watt quartz halogen, visible light source designed for use with fiber optic bundles. The six-position mechanical dimmer permits variable intensity range from 0 to 100%. The closed optical path tightly controls the output spectrum, allowing for consistent repeatable measurements for many applications. Filters can be easily exchanged for monochromatic light output.

BioLite kit 97600-30, -32 is used for in vivo studies. Kit includes articulated lights, bifurcated fiber optic cables mounted to platform tray, excitation filters 97600-62 and -64, and an emission filter.

Order excitation filters separately. Standard filters offer broad-band light for contrast enhancement of objects observed in the lab or inspection bench. Specialty filters feature excitation spectra for in vivo/in vitro fluorescence.

Specifications & Ordering Information



Overall dimensions: 9"L x 7"W x 8 1/2"H

Light guide(s): flexible chrome plated metal tubing, 18"L x 0.72" dia

Light source: 150-watt halogen type EKE

Catalog number	Description	No. of light guides	Power (VAC, Hz)	Price
KH-97600-20	BioLite multispectral source	2	115, 50/60	
KH-97600-22			230, 50/60	
KH-97600-24	BioLite multispectral source	1	115, 50/60	
KH-97600-26			230, 50/60	

Excitation filters

Catalog number	Filter type	Application	Price
Standard excitation filters			
KH-97600-40	Green	Increases for red/blue objects	
KH-97600-42	Blue	Enhances red/yellow objects	
KH-97600-44	Red	Darkens green/blue objects	
KH-97600-46	Yellow	As safelight with photoresist materials	
Specialty excitation filters			
KH-97600-62	370 to 430 nm	Excitation for BFP and CFP	
KH-97600-64	422 to 478 nm	Excitation for GFP and CY2	

New



97600-20

Accessories

KH-97600-70 Replacement visible light source, 150-watt quartz halogen

KH-97600-72 Replacement chrome gooseneck fiber bundle, single

KH-97600-74 Replacement chrome gooseneck fiber bundle, bifurcated

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UL Ultraviolet Equipment

Viewing Cabinets

Economical Ultraviolet Viewing Cabinets

Special contrast control filter eliminates "blue haze" and protects your eyes

- Models available for use in the lab or field

Use these economical viewing cabinets for chromatography examination (paper or TLC), fluorescent analysis, and industrial inspection. Special contrast filter absorbs UV energy to protect your eyes and eliminates blue haze associated with UV viewing.

Removable bottom panel allows you to position cabinet over large and bulky samples or over a transilluminator. Cabinets include a lightweight curtain to block ambient light. Soft rubber viewing port makes viewing comfortable. **Note:** Lamps are not included with viewing cabinets, order separately on page 1905.

Specifications & Ordering Information

Catalog number	Description	Wattage	Wavelength (nm)	Dimensions (W x H x D)	Price
KH-97604-00	Lab cabinet	4 watts	254	10½" x 12" x 9"	
KH-97604-02	Field cabinet	6 watts	365		



97604-00

Cole-Parmer Ultraviolet Viewing Cabinet

Customize a viewing cabinet with the wavelengths you require

Design your own cabinet for fluorescent analysis—just install any of the 6-watt UV lamps sold on page 1904. Cabinet accommodates two 6-watt lamps of the same or different wavelengths.

What's included: a black curtain and a UV absorbing shield beneath the viewing port to protect your eyes from UV radiation. Housing is ABS plastic. Cabinet measures 12¼"W x 11½"H x 9¾"D.

Specifications & Ordering Information

Catalog number	Wattage	Wavelength (nm)	Dimensions (W x H x D)	Price
KH-09818-60	2 x 6 watts	Dependent on tubes	12¼" x 11½" x 9¾"	

[KH-09818-61](#) Replacement UV absorber shield



Cabinet 09818-60 with two 6-watt lamps 09815-51 sold on page 1904.

Cole-Parmer Deluxe Ultraviolet Viewing Cabinets

All models include white-light bulb for normal observation

- Select from 365 and 254/365-nm wavelengths

Excellent for reading thin layer chromatography plates and fluorescent analysis in chemistry, biology, geology, and mineralogy. Select from 365-nm and 254/365-nm dual wavelength model (each wavelength can be switched on and off independently). The 365-nm models are especially suited for industrial and electronic quality control.

Removable bottom panel is ideal for use with 200 x 200 mm or larger fluorescent table (see page 2246). Viewing port has an absorber shield to protect your eyes from UV light. Cabinets also include a white-light bulb for normal observation. All models feature a lightweight ABS plastic housing.

What's included: four 15-watt UV tubes, white-light bulb, absorber shield, and starter.

Specifications & Ordering Information

Wattage	Wavelength (nm)	Intensity (μW/cm²)	Dimensions (W x H x D)	Lamps; 115 VAC, 60 Hz		Lamps; 230 VAC, 50 Hz		Replacement tubes*		Replacement filters†	
				Cat. no.	Price	Cat. no.	Price	Cat. no.	Price	Cat. no.	Price
4 x 15 watts	365	2000	20½" x 17" x 11½"	KH-09818-62		KH-09818-63		KH-09815-55		KH-09818-64	
	254/365†	900/1050		KH-09818-70		KH-09818-71		KH-09815-59		KH-09818-67	

*One filter is required for each pair of tubes.

†Dual wavelength models can switch each wavelength independently.



09818-70



Accessories

[KH-09818-72](#) Replacement white-light bulb

[KH-09818-73](#) Replacement absorber shield

[KH-09815-99](#) Replacement starter

GO to ColeParmer.com

For ChromaDoc-It®
TLC Imaging Systems



Ultraviolet Equipment

UL

Transilluminators

Cole-Parmer Dual-Intensity Ultraviolet Transilluminators

High-performance UV transilluminators for high intensity performance

- Dual-wavelength and dual-intensity models extend your capabilities
- Ultraviolet safety cover provides extra protection
- Improved design with electronic ballast and no flickering effect

All models feature long-life filters, a special reflector for uniform illumination, a UV-treated polycarbonate safety cover, and a stainless steel frame surrounding the filter.

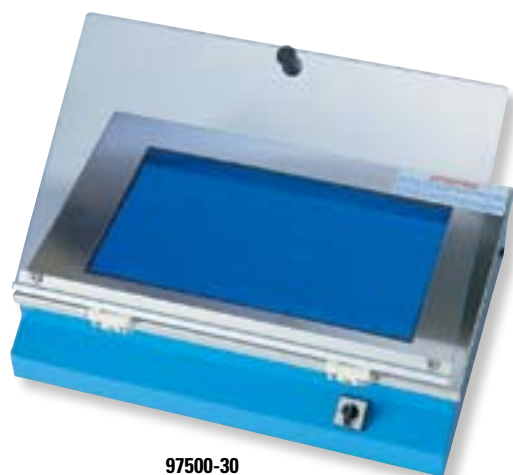
Improved design based on an electronic ballast technique provides supreme light stability and avoids the usual flickering effect, improve gel visualization and documentation.

Dual-intensity tables include a two-position dual-intensity selector (70% and 100%). Choose low intensity to reduce photo nicking or photo bleaching of gel samples during prep work, choose high intensity for your analytical documentation.

Use the larger size tables (20 x 20, 21 x 26, 20 x 35 cm filter) alone or with any of the deluxe viewing cabinets on page 1908.

GO to page(s) 401-413

Design your own photodocumentation system to permanently record your results. See our "Electrophoresis" section on pages 401-413.



97500-30



UV table 97500-00 is shown
with converter plate 09814-99
(order below)

Specifications & Ordering Information

Dimensions: 18½" W x 2¼" H x 13"D

Power: 100 to 240 VAC, 50/60 Hz

Filter area	Wattage	Wavelength (nm)	Intensity* (µW/cm²)	Lamps		Replacement tubes		Replacement filters	
				Cat. no.	Price	Cat. no.	Price	Cat. no.	Price
20 x 20 cm	6 x 8 watts	312	10000	KH-09814-01		KH-09814-04		KH-09814-02	
21 x 26 cm		312	10000	KH-09814-06		KH-09814-11		KH-09814-08	
20 x 20 cm	6 x 15 watts	254	7800	KH-97500-00		KH-09815-59		KH-09814-52	
		312	8000	KH-97500-10		KH-09815-63		KH-09814-52	
		365	7000	KH-97500-20		KH-09815-55		KH-09814-57	
		254/312	8500	KH-97500-21		KH-09815-59		KH-09814-52	
20 x 35 cm	6 x 15 watts	254	7800	KH-97500-30		KH-09815-59		KH-09814-60	
		312	10000	KH-97500-40		KH-09815-63		KH-09814-60	
		365	7000	KH-97500-50		KH-09815-55		KH-09814-65	
		254/312	8000	KH-97500-31		KH-09815-63		KH-09814-60	
20 x 40 cm	6 x 15 watts	254	7800	KH-09814-66		KH-09815-46		KH-09814-84	
		312	10000	KH-09814-69		KH-09815-50		KH-09814-84	
21 x 26 cm	6 x 15 watts	312	10000	KH-09814-18		KH-09814-22		KH-09814-20	

*Intensity measured at the surface of the table.

UVP UV-to-White Converter Plates

Unique phosphored Plexiglas® assembly with a white diffuser converts UV to white light. Plates work with many transilluminators in the 302 to 312 nm range. View protein gels, Coomassie® blue-stained media, or silver-stained media.

Specifications & Ordering Information

Catalog number	Work area	Price
KH-09814-98	20 x 40 cm	
KH-09814-99	21 x 26 cm	

Accessories

KH-28100-00 Gel supporting plate transports electrophoresis gels to UV tables for viewing. Measures 18½"W x 9¼"D. **Note:** does not transmit shortwave 254-nm light

GO to page(s) 1910

Tables can be used with our deluxe viewing cabinets. See page 1910 to order.

UL Ultraviolet Equipment

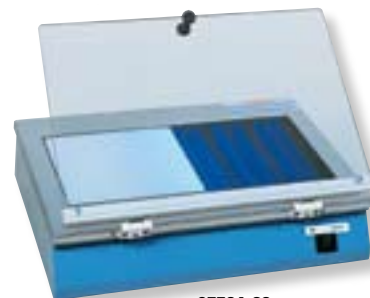
Transilluminators

Ultraviolet/White Light Transilluminators

Save space and money—get two tables in one

These dual-wavelength tables feature two 20 x 20 cm illumination areas. One side is a white light source—use it to view or photograph protein gels, autoradiograms, or microtiter plates. The other side is a 254, 312, or 365 nm UV-source ideal for RNA and DNA visualization.

What's included: a 200 x 200 mm UV filter and white light filter, six 8-watt UV tubes, two 8-watt white light tubes, and UV safety screen.



97504-20

Specifications & Ordering Information

Wavelength (nm)	Intensity* (μW/cm²)	Dimensions (W x H x D)	Lamps; 115 VAC, 60 Hz		Lamps; 230 VAC, 50 Hz		Replacement tubes		Replacement filters	
			Catalog number	Price	Catalog number	Price	Catalog number	Price	Catalog number	Price
254	6000	18½" x 6⅛" x 13¾"	KH-97504-00		KH-97504-05		KH-97504-60		KH-97504-50	
312	7000		KH-97600-10		KH-97504-15		KH-97504-62		KH-97504-50	
365	6000		KH-97504-20		KH-97504-25		KH-97504-64		KH-97504-52	

*Intensity measured at the surface of the table.

[KH-97504-66](#) Replacement white light tube, 8-watt

GO to page(s) 401-413

Design your own photodocumentation system to permanently record your results. See our "Electrophoresis" section on pages 401-413.

White Light Transilluminators

Uniform white light diffusion for viewing negative and film positives

- Cool white light is emitted through an evenly diffused glass surface which is permanently sealed into the unit for durability
- Scratch- and chemical-resistant Plexiglas® surface can be cleaned easily
- Excellent for viewing coomassie blue stained gels as well as autoradiographs, X-rays, and microtiter plates

Two sizes available—21 x 26 cm film sizes contains two 8-watt tubes, or 36 x 43 cm film sizes contains four 14-watt tubes.



09814-00

09814-10

Specifications & Ordering Information

Wattage	Filter area	Dimensions (W x H x D)	Lamps; 115 VAC, 60 Hz		Lamps; 230 VAC, 50 Hz		Replacement tubes	
			Catalog number	Price	Catalog number	Price	Catalog number	Price
2 x 8 watts	21 x 26 cm	13¼" x 4¼" x 9½"	KH-09814-00[†]		KH-09814-05[†]		KH-97607-54	
4 x 14 watts	36 x 43 cm	16" x 4¼" x 19½"	KH-09814-10[‡]		KH-09814-15[‡]		KH-97607-53	

[†]These transilluminators require two identical tubes.

[‡]These transilluminators require four identical tubes.

Economical Mini Light Box

Mini light box is ideal for viewing slides, mini-gels, and petri dishes. Operates on four C batteries (not included) or optional 110 VAC adapter. Includes a removable counting grid.

Specifications & Ordering Information

Catalog number	Dimensions (w x H x D)	Price
EK-14211-04	6½" x 1¼" x 5½"	



14211-04

Accessories

[EK-14211-62](#) Adapter, 110 VAC

[EK-09376-02](#) Batteries; 1.5 V, size C. Pack of 4

[EK-14211-60](#) Replacement grids. Pack of 5

UV-Protective Wraparound Face Shield

- Full-length, wrap-around shield sits away from face for easy breathing.

Optically clear window of 0.06" thick polycarbonate meets ANSI standard Z87.1—protects against UV radiation from 200 to 360 nm. Adjustable headband.

Compliance: ANSI Z87.1, 29 CFR Part 1910.1030

[EK-06767-00](#)
Wraparound face shield



Ultraviolet Equipment

UL

Crosslinkers

UV Crosslinkers

Microprocessor-controlled UV sensor feedback system ensures maximum energy efficiency

- Available with interchangeable shortwave, midrange, and longwave tubes
- Preset and manual controls for UV or time exposure settings
- Small footprint saves valuable benchtop space

UV crosslinking procedure optimizes the use of the UV energy while ensuring that crosslinking is consistent. Internal UV sensor is calibrated with traceability to NIST (or NPL in UK and Europe) standards. Change the wavelength for different applications by changing the UV tube (order separately) and corresponding UV wavelength calibration sensor. Other features include preset or user-selected UV exposure and time, internal safety system with automatic shutoff, large LED that displays remaining time or energy, and a UV-blocking clear viewing window. The 115 VAC model is ETL/ETLc certified, and the 230 VAC model is CE certified.

Use shortwave (254 nm) for sterilization, uniform radiation for crosslinking DNA or RNA to membranes after Northern or Southern blots, dot blotting, and colony or plaque lifts. Other applications include nicking ethidium bromide stained DNA in agarose gels and gene mapping for creating cleavage-inhibiting thymine dimers. Use midrange (302 nm) for phototherapy, UV crosslinking and curing, and gradient sampling. Use longwave (365 nm) for UV curing, photochemistry, and immunology research.

What's included: 8-ft power cord with plug (three-prong plug on 115 VAC models; standard European plug on 230 VAC models).

Specifications & Ordering Information



Dimensions

Chamber: 10"W x 5"H x 12"D Overall: 15½"W x 8¾"H x 13¾"D

Catalog number	Wavelength (nm)	Power (VAC, Hz)	Price	Replacement tubes	
				Catalog number	Price
EK-39462-00*	254	115, 60		EK-97607-50	
EK-39462-05*		230, 50			
EK-39462-10†	254	115, 60		EK-97607-50	
EK-39462-12†		230, 50			
EK-39462-18	302	115, 60		EK-97608-58	
EK-39462-20		230, 50			
EK-39462-14	365	115, 60		EK-97607-52	
EK-39462-16		230, 50			

*With swing-out door

†With pull-down drawer



39462-00

New



39462-10

UV Translinker

UV crosslinker and transilluminator in one self-contained space-saving unit

- Crosslinker uses 254 nm UV tube which provides uniform radiation for crosslinking DNA or RNA to membranes
- Transilluminator uses 302 nm UV tube in Hi/Lo intensity styles

The translinker has all of the features of the crosslinker and utilizes shortwave UV in the crosslinker chamber. On/Off controls for the transilluminator are included on the crosslinker panel. The 115 VAC model is ETL/ETLc certified, and the 230 VAC model is CE certified. Transilluminator portion carries a 2-year warranty while crosslinker portion carries a 1-year warranty.

What's included: shortwave UV crosslinker and transilluminator built into the crosslink cabinet, UV blocking cover (included with the transmitter), 8-ft power cord with plug, and membrane touch pad.



Specifications & Ordering Information

Catalog number	Filter area	Power	Price
KH-09814-43	20 x 20 cm	115 VAC, 60 Hz	
KH-09814-45		230 VAC, 50 Hz	

KH-97607-50 Replacement UV tube, 8 watt, 254 nm

KH-97607-51 Replacement UV tube, 8 watt, 302 nm



09814-43



99280-20

High-Capacity Ultraviolet Sterilizer

- Supplies disinfected water at a rate of 10 GPM

This sterilizer destroys 99.9% of bacteria without adding chemicals to the water. It features a monitoring system that alerts you when the UV lamp has burned out. UV lamp disinfecting life is approximately 9000 hours. Sterilizer has ¾" NPT(F) inlet and outlet connections.

What's included: 5 feet of polypropylene tubing, brackets, hardware for wall mounting, and 6-ft cord (120 VAC unit includes three-prong plug).

Specifications & Ordering Info

Dimensions: 5½"W x 25"H x 5½"D

Cat. no.	Power	Price
EK-99280-20	120 VAC, 60 Hz	
EK-99280-25	220 VAC, 50 Hz	

EK-99280-51 Replacement UV bulb for 99280-20 and -25

UL Ultraviolet Equipment

Radiometers

Ultraviolet Intensity Meters (Radiometers)

Ultraviolet (UV) intensity meters measure shortwave, medium-wave, and longwave UV light intensities. Use an intensity meter (radiometer) to monitor the efficiency of your UV light source and ensure that you are providing optimal UV light for your application. UV intensity meters are perfect for industrial safety, laboratory, UV curing, and air/water purification industries.

Common Applications

- Protection against potential UV hazards such as fluorescent lighting, monitor glare, or welding
- Maintaining biologically effective UV radiation from the sun and artificial sources



Ultraviolet Intensity Meters

Choose a longwave or shortwave model—each model has two switch-selectable ranges. Do not use these meters where visible-light intensity exceeds 40 footcandles.

What's included: a 4-ft cord connects the sensor to the meter for remote readings, a snap-on contrast filter, certificate of calibration traceable to NIST standards, and a carrying case.

Specifications & Ordering Information

Short-term repeatability:
±1% under isothermal conditions
Linearity tolerance: ±10%

Dimensions: 3"W x 3¼"H x 3"D
Power: solar cell

Catalog number	Sensor type	Wavelength (nm)	Intensity $\mu\text{W}/\text{cm}^2$	Price
KH-09819-71	Longwave	365	20 to 6000	
KH-09819-72	Shortwave	254	20 to 12,000	



09819-71

Cole-Parmer Digital Radiometers

Sensor filter admits narrow band of UV while screening out infrared and visible light

- Silicon photoelectric sensor gives rapid readings in mW/cm^2

The economical choice is our standard radiometer 09811-50. Autoranging models 09811-54, -56, and -58 feature a HOLD button to freeze readings and 0 to 800 mV recorder output. Maximum operating temperature for sensor is 50°C.

What's included: sensor with 2-ft cable, carrying case, and one 9 V battery.

Specifications & Ordering Information

Case dimensions: 6"L x 3⅞"W x 1⅜"H
Sensor dimensions: 2⅞"L x 1⅜"W x ¾"H

Power: 9 V battery (included)
Battery life: 120 hours

Catalog number	KH-09811-50	KH-09811-54	KH-09811-56	KH-09811-58
Description	Standard radiometer	Radiometer with HOLD button and recorder output		
Wavelength	365 nm	254 nm	312 nm	365 nm
Ranges	0 to 19.99 mW/cm^2	0.000 to 1.999, 2.00 to 19.99, and 20.0 to 80.0 mW/cm^2 , autoranging		
Sensor accuracy	±7%	±5%		
Half bandwidth	330 to 375 nm	241 to 270 nm	300 to 325 nm	347 to 377 nm
Calibration center	365 nm	254 nm	312 nm	365 nm
Display	3½-digit LCD	3½-digit LCD		
Display accuracy	±0.5% full-scale	±0.5% full-scale		
Recorder output	None	0 to 800 mV		
Price				

[KH-09376-04](#) Replacement batteries, 9 V. Pack of 4



09811-54

Cole-Parmer Microprocessor-Controlled Radiometer

Sensor filter screens out visible and infrared light for accuracy

- Interchangeable sensors eliminate need for manual calculations
- Measures energy and intensity

Radiometer measures values of 254, 312, or 365 nm ultraviolet radiation. Meter stores minimum and maximum intensity readings to allow comparison of values. Analog recorder output allows you to make a permanent record of your readings; HOLD function makes reading easier.

What's included: carrying case. Order sensors and batteries separately.

Ordering Information

Cat. no.	Description	Price
KH-97503-00	Microprocessor radiometer	

Specifications

Ranges

Intensity: 0 to 350.0 mW/cm^2
Energy: 0 to 99,999 J/cm^2

Resolution

Intensity:
0.001 from 0.000 to 3.500 mW/cm^2 ,
0.01 from 3.51 to 35.00 mW/cm^2 ,
0.1 from 35.1 to 350.0 mW/cm^2

Energy:
0.0001 from 0.0000 to 9.9999 J/cm^2 ,
0.001 from 10.000 to 99.999 J/cm^2 ,
0.01 from 100.00 to 999.99 J/cm^2 ,
0.1 from 1000 to 9999.9 J/cm^2 ,
1 from 10,000 to 99,999 J/cm^2

Accuracy

Sensor: ±5%
Display: ±0.2% full-scale, +1 digit

Display:

four-line, 16 character LCD

Time:

0 to 99 hours

Recorder output:

0 to 3.5 V full-scale

(each wavelength)

Operating ambient:

32 to 122°F

(0 to 50°C), 30 to 60% RH

Dimensions:

4"W x 7¾"H x 1½"D

Power:

four AA batteries

(not included)

[KH-97503-50](#) Sensor, 254 nm

[KH-97503-52](#) Sensor, 312 nm

[KH-97503-54](#) Sensor, 365 nm

[KH-09376-01](#) Batteries, 1.5 V AA. Pack of 4



Radiometer
97503-00
with 365 nm
sensor 97503-54

Ultraviolet Equipment

UL

Radiometers

Radiometers and NIST-Traceable Sensors

User-friendly integrating instrument simplifies data collection and fits in the palm of your hand

- Automatic unit conversion with a push of a button
- Save time with the quick integration of various sensors
- Radiometers even let you measure humidity and temperature

Log specifications easily—radiometers display minimum, average, and maximum values at the push of a single button. Both audible and visual alarms are activated when dose or value setpoint is reached. Easily download into computer, graph or chart results with included software. Radiometer does not include sensors; order separately at right.

Radiometers

Single-Input Radiometer can be used with any one of the sensors. Displays minimum, maximum, and mean readings. Plus a built-in radiometric capability.

Dual-Input Datalogging Radiometer accepts two inputs to measure two samples simultaneously. Stores up to 1024 readings.

What's included: UL-listed 6-ft, two-wire AC adapter/charger (90 to 265 VAC), RS-232 cable, batteries, and carrying case. Order interchangeable sensors separately below.

Interchangeable NIST-Traceable Sensors

All sensors have weatherproof detector housing available.

UV Sensors give accurate measurement of either UVA or UVB ultraviolet radiation from sunlight or artificial light sources. The UVC germicidal sensors provide an accurate reading of the ultraviolet radiation from a UVC germicidal lamp to insure that the lamp is killing all the bacteria. UV radiation safety sensor measures the amount of UV radiation that it is being exposed to and indicates the level at which is unsafe by the standards of the American Conference of Governmental Industrial Hygienists (ACGIH).

Visible Light Sensors measure light intensity below 0.01 lux and can also be used as a safety detector for hazardous intensities of light. The PAR sensor measures photosynthetic active radiation. Blue light hazard sensor measures the blue light (near UV) radiation hazard to eyes. It can be used by employers and safety officers to protect against the effects of excessive daily blue light exposure.

Humidity/Temperature/Dew Point Sensor measures relative humidity, ambient temperature and dew point.



Single-input radiometer 97650-02
shown with sensor 97650-54

Dual-input
radiometer
97650-00
shown with
sensor
97650-50



Specifications & Ordering Information

Cat. no.	Description	Inputs	Datalogging	Power	Price
KH-97650-02	Radiometers	1	No	4 AA batteries	
KH-97650-00		2	1 minute to 2 hours*	4 AA batteries, AC/DC charger†	

Sensors

Catalog number	Description	Spectral response	Range	Resolution	Price
UV sensors					
KH-97650-52	UVA	320 to 400 nm	200 mW/cm² 2000 W/m²	0.001 mW/cm² 0.01 W/m²	
KH-97650-50	UVB	280 to 340 nm	200 MED/hr 1160 µW/cm²	0.001 MED/hr 0.01 µW/cm²	
KH-97650-61	UVC/ germicidal	249 to 261 nm	2000 µW/cm² 20,000 mW/m²	0.01 µW/cm² 0.1 mW/cm²	
KH-97650-59	UV radiation**	200 to 400 nm	1000 µW/cm² 10,000 mW/m²	0.01 µW/cm² 0.1 mW/m²	

Visible sensors

KH-97650-54	Visible photopic	380 to 780 nm	150,000 lux 220 W/m²	1 lux 0.001 W/m²	
KH-97650-56	PAR	400 to 700 nm	20,000 µE/s/m²	0.1 µE/s/m²	
KH-97650-60	Blue light safety	400 to 520 nm	2000 µW/cm² 20,000 mW/m²	0.01 µW/cm² 0.1 mW/cm²	

Humidity temperature dew point sensor

KH-97650-58	Humidity/ temp dew point††	—	0 to 100% RH	0.1% RH	
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*User-set intervals between the range of 1 minute to 2 hours.

†9 to 12 V AC/DC charger.

‡These are minimal erythral doses.

**Measures duration of exposure prior to TLV proposed by the ACGIH.

††Not applicable to NIST traceability. Converts values to dew point.

UVX Digital Ultraviolet Intensity Meter

With interchangeable NIST-traceable sensors

This radiometer is used to monitor the useful life of any UV light source by measuring lamp irradiance. It operates with a 9 V battery for up to 120 hours. Select three intensity ranges: 0 to 20 mW/cm², 0 to 2000 µW/cm², and 0 to 200 µW/cm². Optional 10:1 attenuator extends the reading range up to 200 mW/cm².

Choose one of the three interchangeable sensors for measuring 254 nm, 302 nm, or 365 nm ultraviolet wavelengths. All sensors are calibrated with NIST traceability, and are ±5% accurate. The 3-ft cable length is ideal for measuring UV in remote locations. Sensors are not included; order separately below. We recommend that the sensors are recalibrated every six months; call our Application Specialists for detailed information.

Specifications & Ordering Information

Ranges: 0 to 20 mW/cm², 0 to 2000 µW/cm², 0 to 200 µW/cm²

Accuracy: ±2%

Display: 3½-digit LCD

Sensor accuracy: ±5%

Power: 9 V battery (not included)

Dimensions: 6½" L x 3¾" W x 2" H



Catalog number	Description	Price
KH-97651-10	Digital UV intensity meter	

Sensors

Catalog number	Wavelength	Price
KH-97651-20	254 nm	
KH-97651-22	365 nm	
KH-97651-24	302 nm	



Accessories

[KH-97651-26](#) Attenuator, 10:1

[KH-09376-04](#) Replacement batteries, 9 V.
Pack of 4