

# EV6000

## Hand-held LED UV Lamp



The EV6000 represents the latest in LED UV technology from Magnaflux. Within the EV6000, UV-A radiation is generated by special high-performance LEDs and focused through custom-designed optics to provide a beam width of 23 cm diameter at 38 cm height.

Each lamp is shipped with a manufacturer's certificate of conformance which confirms that the EV6000 meets or exceeds all current specifications for use with fluorescent liquid penetrant and magnetic particle testing.

### Features and Benefits

#### Wide, uniform beam with no hot-spots

The wide beam of the EV6000 allows the inspection of large structures and areas more quickly. Custom designed optics provide an intense and even coverage of UV-A and the integrated filter ensures minimal visible light emission.

#### Rugged and durable design

The EV6000 is designed to stand up to the harsh environments that NDT professionals work in. Manufactured using chemical-resistant materials, this lamp has a reinforced construction and a sealed enclosure. There are no fan cooling systems to clog or fail, and our custom-designed optics resist clouding.

#### Improved operator and environmental safety

The compact, ergonomic and well-balanced design of the EV6000 weighs 30% less than mercury-vapor UV lamps, reducing stress and fatigue for the operator. Cool-running LEDs and passive heat dissipation prevent any risk of burns, eliminating the need for a cooling fan.

Making the switch to LED is better for the environment and your operating costs. LED bulbs provide exceptional bulb life and low power consumption compared with traditional UV lights, plus they eliminate the need for fragile mercury-vapor lamps and the hazardous waste associated with them.

#### Certified to latest specifications

Each EV6000 lamp is individually certified to the latest ASTM standards for LED UV lamps. With its controlled emissions and integral UV filter, the EV6000 meets or exceeds all Aerospace Prime and OEM specifications for emission spectrum and beam profile, including Rolls Royce RRES 90061.



### Accessories

#### 017B012: UVe-Lux White Light and Dual Function Meter

A compact, lightweight and robust meter, specifically designed for the NDT environment. It uses a single sensor to measure UV and white light at the same time.

#### 017G001: UV Absorbing Spectacles

Specifically designed to eliminate long wave UV(A) and protect the eyes during long periods under ultra-violet lighting. They also reduce fatigue and provide an optimum contrast in viewing.

#### 023A008: Mounting fixture

Our mounting hardware allows you to mount the EV6000 UV lamp for stable, hands-free inspection. Once mounted, the lamp is fully adjustable, enabling you to position the UV(A) light at the most convenient angle for inspecting all areas of your test part.

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## Specification and Operating Data

Typical level of irradiance	4750 - 5000 $\mu\text{W}/\text{cm}^2$
Peak wavelength	365 nm $\pm$ 5nm
Typical irradiated area (beam profile at 38 cm (15 in))	Circular spot 23 cm (9 in) diameter, > 1,000 $\mu\text{W}/\text{cm}^2$ UV-A intensity
<b>Emission spectrum</b>	
Full width at half maximum (FWHM)	$\leq$ 15 nm
Longest Wavelength at Half Max (LWHM)	$\leq$ 377 nm
+/- Width at Half Maximum	$\leq \pm$ 10 nm
Full Width at 10% Maximum (FW10%)	$\leq$ 30 nm
+/- Width at 10% Maximum	$\leq \pm$ 15 nm
Excitation irradiance (347-382 nm)	$\geq$ 2000 $\mu\text{W}/\text{cm}^2$
Wavelength drift (at elevated temperature)	$\leq$ 5 nm
Operating environment	5-49°C (40-120°F) max. 90% relative humidity
Warm-up time (ambient conditions)	Instantaneous
Maximum housing temperature	< 49°C (120°F)
Lamp cord length	5.18 m (17 ft)
Power supply cord length	2.75 m (9 ft)
Weight	0.9 kg (2 lb)
Power in	100-240 VAC / 50-60 Hz / < 1 A
Part numbers	626953: EV6000 lamp with power supply 626971: EV6000 lamp only 626952: Power supply only

The EV6000 complies with the following standards and specifications:

Property	Standard	Specification
Irradiation level	ASTM E3022	minimum 1000 uW, maximum 10,000 uW
	RRES 90061	minimum 1200 $\mu\text{W}/\text{cm}^2$ , maximum 5000 $\mu\text{W}/\text{cm}^2$
Working distances (WD)	ASTM E3022	minimum WD $\leq$ 13 cm (6 in)
	RRES 90061	minimum WD = 38 cm (15 in), maximum WD = 92 cm (36 in)
Typical visible emission	ASTM E3022	Range 400-760 nm: $\leq$ 2 ft-candles at 38 cm (15 in)
	RRES 90061	Range 390-800 nm: $\leq$ 20 lux at 38 cm (15 in) (minimum WD) $\leq$ 5 lux at 92 cm (36 in) (maximum WD)