



# Operating Manual



EV6000 Part Numbers:  
625784, 628000, 628785






EV6500 Part Numbers:  
626803, 629677

**ENGLISH**  
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## PRECAUTIONS

Inspect lamp before each use. If damage to the cord or housing is present, it is strongly recommended the lamp be sent to a Magnaflux Authorized Service Center for repair.

	<b>CAUTION</b> Ultraviolet Radiation Source. UV-A Risk Group 2 (IEC/EN 62471).
	<b>CAUTION</b> Wear UV absorbing glasses at all times. Do not use at less than minimum working distance.
	<b>WARNING</b> Do not immerse lamp in any liquid. Connect only to grounded electrical outlets.
	<b>CAUTION</b> Do not abuse cords. Never carry lamp by cord or yank to disconnect from receptacle. Never retrieve lamp by pulling on cord. Do not suspend the lamp by the cord.
	<b>CAUTION</b> Only use outdoor rated extension cords SW-A, SOW-A, STW-A, STOW-A, SJW-A, SJOW-A, SJTW-A, or SJTOW-A. Cord Rating 0-6 A. 0-25 ft / 0-7.6 m: 18 AWG / 1.0 mm <sup>2</sup> 26-100 ft / 7.6-30.4 m: 16 AWG / 1.5 mm <sup>2</sup> 101-150 ft / 30.4-45.7 m: 14 AWG / 2.5 mm <sup>2</sup>



## OPERATION

1. Connect the lamp to the power supply.
2. Connect the power supply to line power.
3. Press the power button on the rear of the lamp housing to turn on the UV LEDs.
4. The lamp will immediately be at full intensity and will stabilize within 5 minutes.
5. On EV6500 models only switch from UV mode to visible light mode, press and hold the power button for 3 seconds.
6. To turn off, press the power button on the rear of the lamp housing.

NOTE: The EV6000 and EV6500 are designed for continuous use; operating the lamp only when required will increase the lifespan of the UV LEDs.




## MAINTENANCE

- Check UV-A intensity at regular intervals using a calibrated UV-A Meter (320-400 nm range)
- UV-A intensity readings should be taken with the lamp positioned 15 in / 38 cm from the lamp filter to the face of the sensor
- Use mild soap and a damp cloth to clean the lamp housing as needed
- Do not spray lamp or power supply or immerse any part in liquid

## SPECIFICATIONS

	EV6000	EV6500
Maximum Irradiance (at 15 in / 38 cm)	5,000 $\mu\text{W}/\text{cm}^2$	7,000 $\mu\text{W}/\text{cm}^2$
Peak Wavelength	365 $\pm$ 5 nm	
UV-A Beam Profile (at 15 in / 38 cm)	Circular spot, 9 in / 23 cm diameter, >1,000 $\mu\text{W}/\text{cm}^2$	Circular spot, 10 in / 25 cm diameter > 1,000 $\mu\text{W}/\text{cm}^2$
Emission Spectrum		
Full Width at Half Max (FWHM)	$\leq$ 15 nm	
Longest Wavelength at Half Max (LWHM)	$\leq$ 377 nm	
+/- Width at Half Max	$\leq$ $\pm$ 10 nm	
Full Width at 10% Max (FW10%)	$\leq$ 30 nm	
+/- Width at 10% Max	$\leq$ $\pm$ 15 nm	
Excitation Irradiance (347-383 nm)	$\geq$ 2,000 $\mu\text{W}/\text{cm}^2$	
Wavelength Drift (elevated temperatures)	$\leq$ 5 nm	
Working Distance (RRES 90061)	Min 15 in / 38 cm, Max 36 in / 91 cm	N/A
Minimum Working Distance (ASTM E3022)	$\leq$ 5 in / 13 cm	< 5 in / 13 cm
Typical Visible Emission in UV Mode (400-760 nm)	< 1 FC / 10 lux at 15 in / 38 cm	< 2 FC / 20 lux at 15 in / 38 cm
UV-Pass Filter Transmission	Per ASTM E3022	N/A
Current Ripple	$<$ 5%	
Visible Light Intensity (at 15 in / 38 cm)	N/A	150 ft-candles / 1,500 lux
Visible Light Beam Profile (at 15 in / 38 cm)		Circular spot, 16 in / 41 cm diameter > 100 ft-candles / 1,000 lux
Operating Environment	40-120°F / 5-49°C, max 90% relative humidity	
Stabilization Time	5 minutes	
Maximum Housing Temperature	$<$ 120°F / 49°C	
Ingress Protection (EN 60529)	IP65	
Lamp Cord Length	16 ft / 5 m	
Power Supply Cord Length	10 ft / 3 m	
Weight	2.8 lb / 1.3 kg	
Power In	100-240 VAC, 50-60 Hz, $<$ 1 A	
Lamp Operating Voltage	24 VDC	

## SERVICE

	<p><b>CAUTION</b></p> <p>To assure product safety and reliability, repairs should be performed by Magnaflux Authorized Service Center using original parts.</p>
	<p><b>WARNING</b></p> <p>The LED assembly is static sensitive and can be permanently damaged with improper handling. All replacements of the LED assembly must be performed by a Magnaflux Authorized Service Center. Unauthorized repairs will void the warranty.</p>
	<p><b>WARNING!</b></p> <p>To maintain cTUVus certification, service of model 628785 must be performed by the factory. Contact Magnaflux Customer Service for more information.</p>

## UV FILTER/GLASS REPLACEMENT

1. Disconnect the lamp from the power supply.
2. Remove the protective shade from the front of the lamp.
3. Using a 3-mm hex key, remove the four screws from the front bezel.
4. Remove the front bezel, then remove the UV filter/glass and gasket.
5. Inspect the gasket for tears or damage. If damage is found, replace the gasket.
6. Install the new filter/glass, placing the gasket below the filter/glass in the plastic inset tray.
7. Replace the front bezel and secure with the four hex screws. NOTE: Tighten hex screws until they stop (little to no force required), then tighten an additional 1/8 turn.
8. Replace the protective shade.

## CORD ASSEMBLY REPLACEMENT

1. Disconnect the lamp from the power supply.
2. Using a 3-mm hex key, remove the four bolts from the rear cover.
3. Remove the rear cover (13) and gasket (10). Disconnect the blue leads (11) from the switch assembly (12).
4. Remove the 4-pin latch connector (8) from the LED assembly (7). Note the wire configuration used on the connector for installation of the new cord.
5. Using wire cutters, cut the brown and gray wires to remove the 4-pin latch connector from the cord.
6. Remove the ground wire (green/yellow) from the inner top of the housing.
7. Using a 16-mm wrench, loosen the nut on the cord grip (16) at the bottom of the handle.
8. Use the wrench to remove the entire cord grip from the handle. Slowly pull the old cord out of the handle.
9. Remove the nut from the new cord grip included in the replacement kit. Use the wrench to install the new cord grip in the handle.
10. Slip the new cord grip nut onto the new cord. Insert the new cord through the cord grip in the handle and carefully work the cord through to the lamp housing.
11. Attach the ground wire (green/yellow) to the top of the housing and tighten in place.
12. Using the wire configuration noted in Step 4, insert the gray and brown wires into the new 4-pin latch connector included in the replacement kit.
13. Attach the 4-pin latch connector to the LED assembly.
14. Using the wrench, tighten the cord grip nut at the bottom of the handle to secure the new cord in place.
15. Reconnect the blue leads to the switch assembly on the rear cover.
16. Replace the rear cover and secure with the four bolts. Note: tighten bolts until they stop (little to no force required), then tighten an additional 1/8 turn. Do not over-torque.

## DISPOSAL

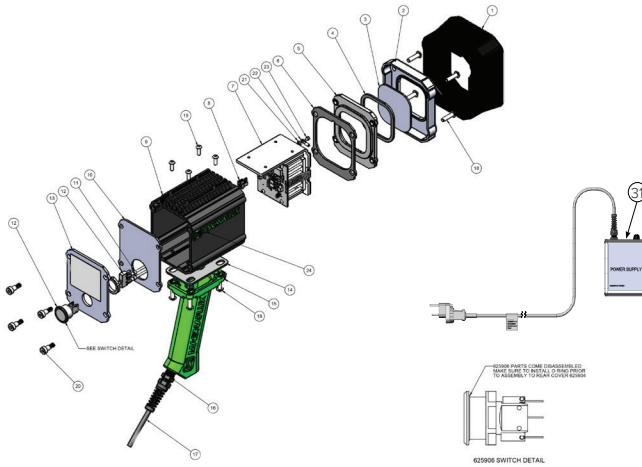
The EV6000 / EV6500 contains no hazardous materials and complies with EU RoHS regulations.

Please contact your local waste disposal authority for instructions on disposal of electrical waste.

## TROUBLESHOOTING

Problem	Possible Cause	Possible Solution
<b>Lamp does not power up</b>	No power	Verify the lamp is connected to the power supply  Verify the power supply is connected to line power
	Damaged or defective cable from power supply to lamp	Contact Magnaflux Authorized Service Center
	Damaged or defective power supply	Replace power supply  Contact Magnaflux Authorized Service Center
	Power switch defective	Contact Magnaflux Authorized Service Center
<b>EV6000 UV lamp shuts off after 5 seconds; EV6500 UV lamp automatically switches to white light after 5 seconds</b>	Power switch defective	Contact Magnaflux Authorized Service Center
<b>Lamp flashes several times then turns off</b>	Damaged or defective cable from power supply to lamp	Contact Magnaflux Authorized Service Center
	Damaged or defective power supply	Replace power supply  Contact Magnaflux Authorized Service Center
<b>Fewer than 5 LEDs active</b>	LED array failure	Contact Magnaflux Authorized Service Center
<b>Significant drop in UV-A intensity</b>	Filter or glass is dirty	Clean filter or glass
	LED array failure	Contact Magnaflux Authorized Service Center
<b>Visible light readings above 2 ft-candles or 20 lux</b>	Incorrect light meter measurement range	Use a visible light meter calibrated to meet ASTM E2297 defined range for visible light (400-760 nm)
	Damaged UV filter or glass	Replace filter or glass
	LED array failure	Contact Magnaflux Authorized Service Center

## DRAWINGS &amp; SERVICE PARTS



Item	Part No.	Qty	Description
1	625799	1	SHADE, EV6000 BLACK LIGHT
2	625896	1	COVER, FRONT, EV6000
3	625898	1	FILTER, UV-A, EV6000
	625889	1	GLASS, EV6500, NO FILTER
4	625900	1	GASKET, FILTER, EV6000
5	625901	1	COVER, FRONT, BASE, EV6000
6	625902	1	GASKET, FRONT COVER, EV6000
7	628155-01	1	LED ASSY, EV6000, 20 DEG LENS, CERTIFIED
	628155	1	LED ASSY, EV6500, 20 DEG LENS
8	628154	1	CONNECTOR, RECEPTACLE, 4-POS
9	625903	1	HOUSING, EV6000
10	625905	1	GASKET, REAR COVER, EV6000
11	628124	2	LEAD ASSY, EV6000
12	625906	1	SWITCH, MOMENTARY PB, EV6000
13	625904	1	COVER, REAR, EV6000
14	625910	1	GASKET, HANDLE, EV6000
15	625908	1	HANDLE, EV6000
16	628341	1	CORD GRIP, EV6000
17	628321	1	POWER CABLE, EV6000
18	625897	8	SCREW, M5 x .8 x 16mm
19	625907	4	SCREW, M4 x .7 x 12mmL
20	626291	4	SCREW, SHLDR, M5 x 8
-	628170	1	POWER CORD REPLACEMENT KIT (Includes items 8, 11, 16, and 17 above)
31	625877	1	POWER SUPPLY, 24VDC, NORTH AMERICA VERSION
	628326	1	POWER SUPPLY, 24VDC, EU VERSION
	628787	1	POWER SUPPLY, 24VDC, CSA VERSION

## EU DECLARATION OF CONFORMITY

In accordance with EN ISO 17050-1:2010

Object of the declaration:

Product: LED UV Lamp  
 Model/type: EV6000 / EV6500  
 Manufacturer: Magnaflux  
 Address: 155 Harlem Avenue, Glenview, IL 60025, USA

This declaration is issued under the sole responsibility of the manufacturer.

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

2014/35/EU The Low Voltage Directive  
 2014/30/EU The Electromagnetic Compatibility Directive  
 2011/65/EU The Restriction of Hazardous Substances Directive

Conformity is shown by compliance with the applicable requirements of the following documents:

Reference & Date	Title
EN61010-1:2010 +A1:2019	Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements
IEC 61326-1:2020	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements
EN ISO 3059:2012	Non-destructive testing - Penetrant testing and magnetic particle testing - Viewing conditions
EN ISO 3452:1998	Non-destructive testing - Penetrant testing
EN ISO 9934:2015	Non-destructive testing - Magnetic particle testing

Signed for and on behalf of: Magnaflux  
 Place of issue: DeWitt, Iowa, United States of America  
 Date of issue: June 2016  
 Name: Mike Fryauf  
 Position: Engineering Manager

Signature: 



## UKCA DECLARATION OF CONFORMITY

In accordance with EN ISO 17050-1:2010

Object of the declaration:

Product: LED UV Lamp  
 Model/type: EV6000 / EV6500  
 Manufacturer: Magnaflux  
 Address: 155 Harlem Avenue, Glenview, IL 60025, USA


This declaration is issued under the sole responsibility of the manufacturer.

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

Electrical Equipment (Safety) Regulations 2016  
 Electromagnetic Compatibility Regulations 2016  
 The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

Conformity is shown by compliance with the applicable requirements of the following documents:

Reference & Date	Title
EN61010-1:2010 +A1:2019	Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements
IEC 61326-1:2020	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements
EN ISO 3059:2012	Non-destructive testing - Penetrant testing and magnetic particle testing - Viewing conditions
EN ISO 3452:1998	Non-destructive testing - Penetrant testing
EN ISO 9934:2015	Non-destructive testing - Magnetic particle testing

Signed for and on behalf of: Magnaflux  
 Place of issue: DeWitt, Iowa, United States of America  
 Date of issue: April 2021  
 Name: Mike Fryauf  
 Position: Engineering Manager  
 Signature: 

## WARRANTY

Refer to the Magnaflux Warranty Statement at [www.magnaflux.com](http://www.magnaflux.com).

## SUPPORT

If you have a question please contact Magnaflux at:

1-847-657-5300  
[support@magnaflux.com](mailto:support@magnaflux.com)  
[www.magnaflux.com](http://www.magnaflux.com)

You can also contact your local Distributor or Magnaflux Authorized Service Center directly; contact information is available at [www.magnaflux.com](http://www.magnaflux.com).