

# RAINIER<sup>5.0</sup>

Models LR5-355, LR5-555, LR5-855, LR5-1105, LR5-1405, LR5-1755



*RAINIER Systems meet the same stringent global performance standards as NSF/ANSI 55 Class A systems, without the associated high-cost that typically accompanies these systems.*

If microbiological protection is required for your commercial/industrial application, then LUMINOR has the solution in the RAINIER<sup>5.0</sup> series of ultraviolet disinfection systems.

Unsure about needing a UV sensor or if regulations require you to add a sensor, there is no need to replace the entire system... simply add a UV sensor module to the RAINIER<sup>5.0</sup> reactor as it comes with an integral sensor port built-in! Plug the optional UV sensor into the pre-wired controller and the UV intensity will be displayed on the LED output.

Constructed with highly polished 316L stainless steel reactors and industrial grade enclosures, RAINIER<sup>5.0</sup> uses proven low pressure amalgam (LP-AM) lamp technology offering stable output in both hot and cold water applications. Whether you are looking to control microbiological (bacteria & virus) issues in both hot or cold water with UVT levels as low as 50% or to reduce TOC in industrial grade waters, RAINIER has you covered.

Covering a wide variety of applications in both regulated and unregulated markets, RAINIER offers environmentally friendly disinfection at lower capital and operating costs than traditional disinfection solutions.

## Product Features

- Modular control panel with LED display for remaining lamp life, total running hours, audible & visual lamp failure, remote on and solenoid ready
- 316L stainless steel, polished reactors, with integral sensor port to allow for sensor upgradeability in the future (comes standard with visual glow plug)
- Designed & manufactured to ASME pressure vessel standards
- Reliable, industry proven low pressure amalgam (LP-AM) coated UV lamps with ceramic bases for durability, 12,000 hour lamp life
- Uniform lamp output in both hot or cold applications
- Flexible vertical or horizontal installation
- User friendly bayonet style lamp connector (quick ¼ turn removal with no extra tools needed)
- True gland seal retaining nut with positive stop
- Constant current electronic controller in a splash-proof (IP-54) case with audible and visual lamp failure indicators

## Flexible Applications:

### Disinfection

Choose your required dose for applications that include restaurants, nursing homes, campgrounds, agricultural, food services, schools, marine, etc.

### Hot Water

For use in hot water applications including recirculation loops, showers, cooling towers, etc., designed for the reduction of legionella

### Low UVT

For applications where water quality may approach 70% UVT or less, choose the low UVT systems to increase the operational performance and reduce nuisance alarms

### TOC

For the reduction of TOC (Total Organic Carbon) using UV lamps at 185 nm output

## Flow Rates

35 GPM (132 lpm) **LR5-355 Series**  
58 GPM (220 lpm) **LR5-555 Series**  
85 GPM (322 lpm) **LR5-855 Series**  
110 GPM (416 lpm) **LR5-1105 Series**  
140 GPM (530 lpm) **LR5-1405 Series**  
175 GPM (662 lpm) **LR5-1755 Series**

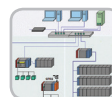


Experience troublesome lamp changes and broken sleeves no longer with LUMINOR's LUMI-LOC™ lamp connector. Lamp changes with an effortless ¼ turn of the connector... no fumbling with metal clips as in competitive systems.

RAINIER <sup>5.0</sup> , Light Commercial Amalgam UV systems, Non-Monitored						
Model	LR5-355 LR5-355-HW LR5-355-TOC	LR5-555 LR5-555-HW LR5-555-TOC	LR5-855 LR5-855-HW LR5-855-TOC	LR5-1105 LR5-1105-HW LR5-1105-TOC	LR5-1405 LR5-1405-HW LR5-1405-TOC	LR5-1755 LR5-1755-HW LR5-1755-TOC
Normal Flow Rate 30 mJ/cm <sup>2</sup> @ 95% UVT	35 GPM 132 lpm 8 m <sup>3</sup> /hr.	58 GPM 220 lpm 13.2 m <sup>3</sup> /hr.	85 GPM 322 lpm 19.3 m <sup>3</sup> /hr.	110 GPM 416 lpm 25 m <sup>3</sup> /hr.	140 GPM 530 lpm 31.8 m <sup>3</sup> /hr.	175 GPM 662 lpm 39.7 m <sup>3</sup> /hr.
Hot Water Flow Rate 30 mJ/cm <sup>2</sup> @ 75% UVT	22 GPM 83 lpm 5 m <sup>3</sup> /hr.	38 GPM 144 lpm 8.6 m <sup>3</sup> /hr.	60 GPM 227 lpm 13.6 m <sup>3</sup> /hr.	64 GPM 242 lpm 14.5 m <sup>3</sup> /hr.	81 GPM 306 lpm 18.4 m <sup>3</sup> /hr.	95 GPM 360 lpm 21.6 m <sup>3</sup> /hr.
LOW UVT Flow Rate 30 mJ/cm <sup>2</sup> @ 50% UVT	14 GPM 53 lpm 3.2 m <sup>3</sup> /hr.	23 GPM 87 lpm 5.2 m <sup>3</sup> /hr.	35 GPM 133 lpm 8 m <sup>3</sup> /hr.	36 GPM 136 lpm 8.2 m <sup>3</sup> /hr.	45 GPM 170 lpm 10.2 m <sup>3</sup> /hr.	51 GPM 193 lpm 11.6 m <sup>3</sup> /hr.
TOC Flow Rate 150 mJ/cm <sup>2</sup> @ 95% UVT	7 GPM 26 lpm 1.6 m <sup>3</sup> /hr.	12 GPM 45 lpm 2.7 m <sup>3</sup> /hr.	17 GPM 64 lpm 3.9 m <sup>3</sup> /hr.	22 GPM 83 lpm 5 m <sup>3</sup> /hr.	28 GPM 106 lpm 6.4 m <sup>3</sup> /hr.	35 GPM 132 lpm 8 m <sup>3</sup> /hr.
Alt. flow-US Public Health 16 mJ/cm <sup>2</sup> @ 95% UVT	66 GPM 250 lpm 15 m <sup>3</sup> /hr.	109 GPM 413 lpm 24.8 m <sup>3</sup> /hr.	167 GPM 632 lpm 37.9 m <sup>3</sup> /hr.	207 GPM 784 lpm 47 m <sup>3</sup> /hr.	263 GPM 996 lpm 59.7 m <sup>3</sup> /hr.	327 GPM 1240 lpm 74.3 m <sup>3</sup> /hr.
Alternate flow-NSF/EPA 40 mJ/cm <sup>2</sup> @ 95% UVT	27 GPM 102 lpm 6.1 m <sup>3</sup> /hr.	44 GPM 167 lpm 10 m <sup>3</sup> /hr.	67 GPM 252 lpm 15.1 m <sup>3</sup> /hr.	84 GPM 318 lpm 19.1 m <sup>3</sup> /hr.	106 GPM 401 lpm 24.1 m <sup>3</sup> /hr.	131 GPM 496 lpm 29.8 m <sup>3</sup> /hr.
Port Size	1 ½"	2"	2"	2 ½"	3"	4"
Electrical	230V/50-60Hz. (IEC power cords required)					
Plug Type	European CEE 7/7, 3-wire for all 230V. - "Z" suffix British Standard, BS1363, 3-wire for all 230V. - "3" suffix Australian AS/NZ 3112, 3-wire for all 230V. - "4" suffix North American NEMA 6-15, 3 prong - "5" suffix					
Lamp Watts	104	152	207	304	344	414
Power (Watts)	120	170	220	320	360	430
Replacement Lamp (disinfection @ 254 nm)	RL-500A (1 required)	RL-720A (1 required)	RL-1000A (1 required)	RL-720A (2 required)	RL-843A (2 required)	RL-1000A (2 required)
Replacement Lamp (Hot Water @ 254 nm)	RL-500A-HW (1 required)	RL-720A-HW (1 required)	RL-1000A-HW (1 required)	RL-720A-HW (2 required)	RL-843A-HW (2 required)	RL-1000A-HW (2 required)
Replacement Lamp (TOC @ 185 nm)	RL-500A-TOC (1 required)	RL-720A-TOC (1 required)	RL-1000A-TOC (1 required)	RL-720A-TOC (2 required)	RL-843A-TOC (2 required)	RL-1000A-TOC (2 required)
Replacement Sleeve	RQ-500 (1 required)	RQ-720 (1 required)	RQ-1000 (1 required)	RQ-720 (2 required)	RQ-843 (2 required)	RQ-1000 (2 required)
Chamber Material	316L Stainless Steel, A249 Pressure Rated Tubing, Polished & Passivated					
Reactor Dimensions	4 x 27.2 x 5.6" (10 x 69 x 14 cm)	4 x 35.8 x 5.6" (10 x 91 x 14 cm)	4 x 46.8 x 5.6" (10 x 119 x 14 cm)	6 x 35.8 x 7.9" (15 x 91 x 20 cm)	6 x 40.6 x 7.9" (15 x 103 x 20 cm)	6 x 46.8 x 7.9" (15 x 119 x 20 cm)
Controller Dimensions	11.8 x 7.9 x 6.3" (30 x 20 x 16 cm)			15.8 x 11.8 x 6.3" (40 x 30 x 16 cm)		
Maximum Operating Pressure	10.3 bar (150 psi)					
Operating Temperature Range	2-40° C (36-104° F)					
UV Monitoring Port (Upgradeability)	Yes					
Remote - On	Yes					
Dry Contacts (Solenoid Ready)	Yes					
4-20 mA Output	Yes					
Lamp Age Counter	Yes					
Visual Lamp-Out Indicator	Yes					
Audible Lamp-Out Alarm	Yes					
Shipping Weight	Call Factory	Call Factory	Call Factory	Call Factory	Call Factory	Call Factory

## System Features

### Remote Monitoring (Dry Contacts) Output (Capability Only) - Included



Allows for the dry contact signal (on/off) provided by the RAINIER<sup>5.0</sup> controller to be sent to a remote location. Can be used for remote on, solenoid connection, PLC connection, remote alarm, remote visual, or many other options. (**Note:** Requires optional 210010 cable/connector as shown below)

### Remote Monitoring Cable - Optional



Connector and 10 m (33') of cable to remotely control the RAINIER<sup>5.0</sup> dry contact signal, Order part number 210010

### UV Sensor Port - Included



All RAINIER<sup>5.0</sup> reactors include an integral UV sensor port for future upgradeability. Simply remove the plug and affix the optional UV Sensor!

### UV Sensor Module - Optional



Allows for the 254nm UV wavelength to be measured and displayed via the RAINIER controller. Sensor plugs directly into the controller and is mounted in the sensor port located on all RAINIER<sup>5.0</sup> and RAINIER<sup>6.0</sup> reactors. Order part number RS-RUV

## Manufacturer's Warranty

LUMINOR UV systems are covered by the following warranty:

REACTORS - Ten (10) year Limited Warranty  
ELECTRONICS - Three (3) year Limited Warranty  
UV LAMPS - One (1) year Limited Warranty  
QUARTZ SLEEVES - One (1) year Limited Warranty

Please refer to LUMINOR's complete warranty document for specific details, including conditions and exclusions. This document may be found on the web or by contacting LUMINOR directly.

## Replacement Parts

System	Lamps	TOC Lamps	Hot Water Lamps	Sleeves	Ballast
LR5-355	RL-500A (1 required)	RL-500A-TOC (1 required)	RL-500A-HW (1 required)	RQ-500 (1 required)	RB-R1.2
LR5-555	RL-720A (1 required)	RL-720A-TOC (1 required)	RL-720A-HW (1 required)	RQ-720 (1 required)	RB-R1.2
LR5-855	RL-1000A (1 required)	RL-1000A-TOC (1 required)	RL-1000A-HW (1 required)	RQ-1000 (1 required)	RB-R1.2
LR5-1105	RL-720A (2 required)	RL-720A-TOC (2 required)	RL-720A-HW (2 required)	RQ-720 (2 required)	RB-R2.2
LR5-1405	RL-843A (2 required)	RL-843A-TOC (2 required)	RL-843A-HW (2 required)	RQ-843 (2 required)	RB-R2.2
LR5-1755	RL-1000A (2 required)	RL-1000A-TOC (2 required)	RL-1000A-HW (2 required)	RQ-1000 (2 required)	RB-R2.2



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