

# LUMINOR™ BLACKCOMB

NSF STANDARD 55, Class A



## VALIDATED PERFORMANCE

Independently Certified for Primary  
Disinfection

If you are looking for an independently validated UV system for PRIMARY disinfection of a bacteriologically contaminated water source, LUMINOR's "NSF 55 CLASS A" validated systems is your solution.

The BLACKCOMB systems come with a true 254nm Teflon® based UV sensor to continuously monitor the UV output (performance) of the system and delivers a graphical colour representation of the UV intensity provided by the system.

Based on a modular, plug and play platform, the BLACKCOMB system has the most advanced residential controller on the market with a colour user interface with a multitude of screens displaying diagnostics, status, warnings and even QR codes for a link back to LUMINOR's website.

Couple this with the capability to fully customize the colour screens with your own dealer information, or different language, and you can easily see how this UV system shines above all others (the optional Custom Dealer Programmer is required...contact factory for further information)!

### Conditions For Use

Your system will provide years of use provided the system is maintained on a regular basis as per the specifications outlined in the Owner's Manual. For the following system to perform as tested, the following water quality parameters must be met.

Parameter	Level
Hardness	< 120 mg/L (7 gpg)
Iron (Fe)	< 0.3 mg/L (ppm)
Manganese (Mn)	< 0.05 mg/L (ppm)
Tannins	< 0.1 mg/L (ppm)
Turbidity	< 1 NTU
Transmittance	> 75% UVT

For levels outside those specified in the table above, please contact the factory for further technical assistance.



System Tested and Certified by NSF International against CSA B483.1 and NSF/ANSI 55 for Disinfection Performance, Class A

### Product Features

- True 254nm Teflon® based UV sensor continuously measures and displays UV output (as a %)
- Colour screen controller with Lightlock™ for protected lamp replacement, includes QR codes, full diagnostics & warnings
- "Future-proof" expandability port for future upgrades and options
- Axial flow, stainless steel polished reactors, designed & manufactured to ASME pressure vessel standards (304 on LB6 units and 316L on LBH6 units)
- User friendly bayonet style lamp connector (quick ¼ turn removal with no extra tools needed)
- Reliable, industry proven, proprietary low pressure coated UV lamps with ceramic bases for durability and long life (9,000 hours on LB6 units and 10,000 hours on LBH6 units)
- Constant current electronic controller (one controller for all LP units and one for all LPHO units) in a splash proof case, fully potted ballast virtually eliminates common water damage issue
- Full customization available as an option (language, home screen, phone number, QR codes, etc.)

### Sample Screens



### Manufacturer's 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



See website for LUMINOR's complete warranty document including conditions and exclusions.



# BLACKCOMB NSF STANDARD 55, Class A - Equipment Specifications

BLACKCOMB (Standard-output)						BLACKCOMB-HO (High-output, compact design)				
Model	LB6-02XA LB6-02A-12V	LB6-03XA LB6-03A-12V	LB6-06XA LB6-06A-12V	LB6-10XA	LB6-15XA	LBH6-05XA	LBH6-10XA	LBH6-15XA	LBH6-25XA	LBH6-40XA
NSF Class A Flow Rate (40mJ/cm <sup>2</sup> @ 70% UVT)	1.6 GPM	2.2 GPM	3.4 GPM	6.3 GPM	7.9 GPM	2.2 GPM	4.0 GPM	5.4 GPM	7.9 GPM	18.0 GPM
	6.1 lpm	8.3 lpm	12.9 lpm	23.8 lpm	29.9 lpm	8.3 lpm	15.1 lpm	20.4 lpm	29.9 lpm	68.1 lpm
	0.36 m <sup>3</sup> /hr	0.5 m <sup>3</sup> /hr	0.77 m <sup>3</sup> /hr	1.43 m <sup>3</sup> /hr	1.79 m <sup>3</sup> /hr	0.5 m <sup>3</sup> /hr	0.91 m <sup>3</sup> /hr	1.23 m <sup>3</sup> /hr	1.79 m <sup>3</sup> /hr	4.08 m <sup>3</sup> /hr.
Flow Restrictor	Integral									
Port Size	½" FNPT	½" MNPT	¾" MNPT	¾" MNPT	1" MNPT	½" MNPT	¾" MNPT	1" MNPT	1" MNPT	1 ½" MNPT
Electrical	90-265V/50-60Hz. / 12VDC as indicated									
Plug Type	American, Nema 5/15, 3 wire for all 110V systems, replace "X" with "1" suffix (i.e. LB6-101A) European, CEE 7/7, 3 wire for all 230V systems, replace "X" with "2" suffix (i.e. LB6-102A) British Standard, BS 1363, 3 wire for all 230V systems, replace "X" with "3" suffix (i.e. LB6-103A) Australian/New Zealand, AS/NZ 3112, 3 wire for all 230V systems, replace "X" with "4" suffix (i.e. LB6-104A)									
Lamp Watts	8	15	22	39	50	18	34	45	67	101
Power (Watts)	14	20	30	49	62	20 (19 @ 230V.)	38 (36 @ 230V.)	57 (48 @ 230V.)	73 (72 @ 230V.)	115 (108 @ 230V.)
Maximum Current (amps)	1	1	1	1	1	1	1	1	1	1
Replacement Lamp	RL-210	RL-290	RL-470	RL-820	RL-999	RL-210HO	RL-330HO	RL-420HO	RL-600HO	RL-950HO
Replacement Sleeve	RQ-210	RQ-290	RQ-470	RQ-820	RQ-999	RQ-210	RQ-330	RQ-420	RQ-600	RQ-950
Replacement UV Sensor	RS-B2.5V	RS-B2.5V	RS-B2.5V	RS-B2.5V	RS-B2.5V	RSHO-B3.5V	RSHO-B3.5V	RSHO-B3.5V	RSHO-B3.5V	RSHO-B3.5V
Chamber Material	Polished 304 stainless steel, A249 pressure rated tubing					Polished 316L stainless steel, A249 pressure rated tubing				
Reactor Dimensions	2.5 x 10.3" (6.4 x 26.2cm)	2.5 x 14.3" (6.4 x 36.4cm)	2.5 x 21.3" (6.4 x 54.2cm)	2.5 x 35.2" (6.4 x 89.5cm)	2.5 x 40.0" (6.4 x 101.6cm)	3.5 x 11.7" (8.9 x 29.8cm)	3.5 x 16.5" (8.9 x 41.8cm)	3.5 x 20.0" (8.9 x 50.8cm)	3.5 x 26.9" (8.9 x 68.3cm)	3.5 x 40.7" (8.9 x 103.4cm)
Controller Dimensions	6.8 x 3.6 x 3" (17.2 x 9.2 x 7.6 cm)					8.6 x 4.2 x 3.5" (21.7 x 10.8 x 8.9 cm)				
Operating Pressure	7-10.3 bar (10-150 psi)									
Operating Water Temp.	2-40° C (36 - 104°F)									
UV Monitor	YES									
Solenoid Output	YES (but requires optional solenoid module) (MOD-SOL)									
Dry Contacts	YES (but requires optional remote alarm module) (MOD-RAM)									
4-20mA Output	YES (but requires optional 4-20mA module) (MOD-420)									
Lamp Change Reminder	YES (both audible and visual (full colour graphic))									
Lamp Out Indicator	YES (both audible and visual (full colour graphic))									
Shipping Weight	3.0 kg (6.6 lbs)	3.3 kg (7.3 lbs)	4.2 kg (9.3 lbs)	6.8 kg (15.0 lbs)	8.0 kg (17.6 lbs)	4.5 kg (9.9 lbs)	5.4 kg (11.9 lbs)	6.0 kg (13.2 lbs)	7.3 kg (16.1 lbs)	9.8 kg (21.6 lbs)

## Optional Equipment Modules

### UV Concierge

Available for WEB, IOS, and Android platforms providing live, dynamic feedback on all features and functions of your UV system.



**SHERPA Series Water Quality Monitor**  
Installs on all LUMINOR UV systems and allows for remote monitoring of all major and minor alarms that take place on the main UV system. Three LED's visually display system functionality from up to 150' (46m) away.



### Custom Dealer Programmer

Customize your UV controller with your own company name, logo, website, QR code and contact information. Capture the lucrative replacement lamp market by creating a direct link back to your own website!



### Solenoid Module

Used to power a remote normally closed solenoid valve (not included). Solenoid will close on lamp failure or when low UV conditions are detected by the sensor. Available in 110V. (MOD-SOL1) or 230V. (MOD-SOL2)



### TRV (temperature management relief valve)

TRV allows for a small amount of water to be physically released (dumped) from the UV unit to allow for cooling of the water. Used in applications of extended "no flow" conditions, or when the temperature of the treated water is of a critical nature.



### Cooling Fan

To reduce water temperature inside the reactor through mechanics and convection without wasting any water. Runs independently and continuously. Comes with a compact modular power adapter with interchangeable AC clips that operates from 90-264V (47-63Hz.)



### 4-20mA Module

Used for signal transfer to a remote device such as a data logger or computer. Order MOD-420.



### Remote Alarm (Dry Contact) Module

Used for signal transfer to a remote alarm or dry contacts. Order MOD-RAM.



**Lamp Life:** UV lamps are rated for 9000 hours (10000 hours for all LBH6 systems) of continuous use (one-year of operation).

**General Operation and Maintenance:** UV lamps are to be replaced on an annual basis (9000 hours for LB6 systems and 10000 hours for LBH6 systems). Quartz sleeves and UV sensors are to be cleaned every 6-12 months and replaced every 5 years.

This Class A system conforms to NSF/ANSI 55 for the disinfection of microbiologically contaminated water that meets all other public health standards. The system is not intended to convert wastewater or raw sewage to drinking water. The system is intended to be installed on visually clear water.

NSF/ANSI 55 defines wastewater to include human and/or animal body waste, toilet paper, and any other material intended to be deposited in a receptacle designed to receive urine and/or feces (blackwaste), and other waste materials deposited in plumbing fixtures (greywaste).

If this system is used for the treatment of untreated surface waters or ground water under the direct influence of surface water, a device found to be in conformance for cyst reduction under the appropriate NSF/ANSI standard shall be installed upstream of the system.

While testing was performed under standard laboratory conditions, actual performance may vary.

The systems and installation shall comply with applicable provincial/state and local regulations.

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LuminorUV



LuminorUV



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EPA Establishment  
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Carbon  
Neutral



Water  
Quality  
ASSOCIATION



# LUMINOR™ BLACKCOMB

NSF STANDARD 55, Class B



## VALIDATED PERFORMANCE

Independently Certified for Supplemental Disinfection

If you are looking for an independently validated UV system for supplemental disinfection of a potable water source, LUMINOR's "NSF 55 CLASS B" validated systems is your solution.

Available in two version, BLACKCOMB 6.1 includes a true 254nm Teflon® based UV sensor to continuously monitor the UV output (performance) of the system. BLACKCOMB 5.1 is "factory ready" to accept a UV Intensity Module in the future if so desired.

Based on a modular, plug and play platform, the BLACKCOMB system has the most advanced residential controller on the market with a colour user interface with a multitude of screens displaying diagnostics, status, warnings and even QR codes for a link back to LUMINOR's website.

Couple this with the capability to fully customize the colour screens with your own dealer information, or different language, and you can easily see how this UV system shines above all others (the optional Custom Dealer Programmer is required...contact factory for further information)!

### Conditions For Use

Your system will provide years of use provided the system is maintained on a regular basis as per the specifications outlined in the Owner's Manual. For the following system to perform as tested, the following water quality parameters must be met.

Parameter	Level
Hardness	< 120 mg/L (7 gpg)
Iron (Fe)	< 0.3 mg/L (ppm)
Manganese (Mn)	< 0.05 mg/L (ppm)
Tannins	< 0.1 mg/L (ppm)
Turbidity	< 1 NTU
Transmittance	> 75% UVT

For levels outside those specified in the table above, please contact the factory for further technical assistance.



System Tested and Certified by NSF International against CSA B483.1 and NSF/ANSI 55 for Disinfection Performance, Class B

### Product Features

- True 254nm Teflon® based UV sensor continuously measures and displays UV output (as a %) (standard on LB6 / LBH6 units ONLY)
- Colour screen controller with Lightlock™ for protected lamp replacement, includes QR codes, full diagnostics & warnings
- "Future-proof" expandability port for future upgrades and options
- Axial flow, stainless steel polished reactors, designed & manufactured to ASME pressure vessel standards (304 on LB5/6 units and 316L on LBH5/6 units)
- User friendly bayonet style lamp connector (quick ¼ turn removal with no extra tools needed)
- Reliable, industry proven, proprietary low pressure coated UV lamps with ceramic bases for durability and long life (9,000 hours on LB5/6 units and 10,000 hours on LBH5/6 units)
- Constant current electronic controller (one controller for all LP units and one for all LPHO units) in a splash proof case, fully potted ballast virtually eliminates common water damage issue
- Full customization available as an option (language, home screen, phone number, QR codes, etc.)

### Sample Screens



### Manufacturer's 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



See website for LUMINOR's complete warranty document including conditions and exclusions.



# BLACKCOMB NSF STANDARD 55, Class B - Equipment Specifications

Model	BLACKCOMB (Standard-output)					BLACKCOMB-HO (High-output, compact design)				
	LB5-02XB LB6-02XB	LB5-03XB LB6-03XB	LB5-06XB LB6-06XB	LB5-10XB LB6-10XB	LB5-15XB LB6-15XB	LBH5-05XB LBH6-05XB	LBH5-10XB LBH6-10XB	LBH5-15XB LBH6-15XB	LBH5-25XB LBH6-25XB	LBH5-40XB LBH6-40XB
NSF Class B Flow Rate (16mJ/cm <sup>2</sup> @ 70% UVT)	2.9 GPM	5.2 GPM	7.6 GPM	13.0 GPM	22.0 GPM	5.4 GPM	7.6 GPM	13 GPM	22 GPM	28 GPM
	11.0 lpm	19.7 lpm	28.8 lpm	49.2 lpm	83.3 lpm	20.4 lpm	28.8 lpm	49.2 lpm	83.3 lpm	106.0 lpm
	0.7 m <sup>3</sup> /hr	1.18 m <sup>3</sup> /hr	1.73 m <sup>3</sup> /hr	2.95 m <sup>3</sup> /hr	5.00 m <sup>3</sup> /hr	1.23 m <sup>3</sup> /hr	1.73 m <sup>3</sup> /hr	2.95 m <sup>3</sup> /hr	5.00 m <sup>3</sup> /hr	6.36 m <sup>3</sup> /hr
Flow Restrictor	integral	integral	integral	integral	integral	integral	integral	integral	integral	integral
Port Size	½" FNPT	½" MNPT	¾" MNPT	¾" MNPT	1" MNPT	½" MNPT	¾" MNPT	1" MNPT	1" MNPT	1 ½" MNPT
Electrical	90-265V/50-60Hz. / 12VDC / 24VDC as indicated									
Plug Type	American, Nema 5/15, 3 wire for all 110V systems, replace "X" with "1" suffix (i.e. LB6-101B) European, CEE 7/7, 3 wire for all 230V systems, replace "X" with "2" suffix (i.e. LB6-102B) British Standard, BS 1363, 3 wire for all 230V systems, replace "X" with "3" suffix (i.e. LB6-103B) Australian/New Zealand, AS/NZ 3112, 3 wire for all 230V systems, replace "X" with "4" suffix (i.e. LB6-104B)									
Lamp Watts	8	15	22	39	50	18	34	45	67	101
Power (Watts)	14	20	30	49	62	20 (19 @ 230V.)	38 (36 @ 230V.)	57 (48 @ 230V.)	73 (72 @ 230V.)	115 (108 @ 230V.)
Maximum Current (amps)	1	1	1	1	1	1	1	1	1	1
Replacement Lamp	RL-210	RL-290	RL-470	RL-820	RL-999	RL-210HO	RL-330HO	RL-420HO	RL-600HO	RL-950HO
Replacement Sleeve	RQ-210	RQ-290	RQ-470	RQ-820	RQ-999	RQ-210	RQ-330	RQ-420	RQ-600	RQ-950
Replacement UV Sensor	RS-B2.5	RS-B2.5	RS-B2.5	RS-B2.5	RS-B2.5	RSHO-B3.5	RSHO-B3.5	RSHO-B3.5	RSHO-B3.5	RSHO-B3.5
Chamber Material	Polished 304 stainless steel, A249 pressure rated tubing					Polished 316L stainless steel, A249 pressure rated tubing				
Reactor Dimensions	2.5 x 10.3" (6.4 x 26.2cm)	2.5 x 14.3" (6.4 x 36.4cm)	2.5 x 21.3" (6.4 x 54.2cm)	2.5 x 35.2" (6.4 x 89.5cm)	2.5 x 40.0" (6.4 x 101.6cm)	3.5 x 16.5" (8.9 x 41.8cm)	3.5 x 16.5" (8.9 x 41.8cm)	3.5 x 20.0" (8.9 x 50.8cm)	3.5 x 26.9" (8.9 x 68.3cm)	3.5 x 40.7" (8.9 x 103.4cm)
Controller Dimensions	6.8 x 3.6 x 3" (17.2 x 9.2 x 7.6 cm)					8.6 x 4.2 x 3.5" (21.7 x 10.8 x 8.9 cm)				
Operating Pressure	7-10.3 bar (10-150 psi)									
Operating Water Temp.	2-40° C (36 - 104°F)									
UV Monitor	YES on all LB6 / LBH6 units , OPTIONAL on all LB5 / LBH5 units (RS-2.5 for LB5/6 units and RSHO.3.5 for LBH5/6 units)									
Solenoid Output	YES (but requires optional solenoid module (MOD-SOL))									
Dry Contacts	YES (but requires optional remote alarm module (Dry Contacts) (MOD-RAM))									
4-20mA Output	YES (but requires optional 4-20mA module (MOD-420))									
Lamp Change Reminder	YES (both audible and visual (full colour graphic))									
Lamp Out Indicator	YES (both audible and visual (full colour graphic))									
Shipping Weight	3.0 kg (6.6 lbs)	3.3 kg (7.3 lbs)	4.2 kg (9.3 lbs)	6.8 kg (15.0 lbs)	8.0 kg (17.6 lbs)	4.5 kg (9.9 lbs)	5.4 kg (11.9 lbs)	6.0 kg (13.2 lbs)	7.3 kg (16.1 lbs)	9.8 kg (21.6 lbs)

## Optional Equipment Modules

### UV Concierge

Available for WEB, IOS, and Android platforms providing live, dynamic feedback on all features and functions of your UV system.



### Water Quality Monitor

Installs on all LUMINOR UV systems and allows for remote monitoring of all major and minor alarms that take place on the main UV system. Three LED's visually display system functionality from up to 150' (46m) away.



### Custom Dealer Programmer

Customize your UV controller with your own company name, logo, website, QR code and contact information. Capture the lucrative replacement lamp market by creating a direct link back to your own website!



### UV Sensor Module

Allows the 254nm UV wavelength to be measured and displayed via the controller. The sensor plugs directly into the controller and is mounted in the sensor port located on all reactors. (see chart for part numbers)



### Solenoid Module

Used to power a remote normally closed solenoid valve (not included). Solenoid will close on lamp failure or when low UV conditions are detected by the sensor. Available in 110V. (MOD-SOL1) or 230V. (MOD-SOL2)



### TRV (temperature management relief valve)

TRV allows for a small amount of water to be physically released (dumped) from the UV unit to allow for cooling of the water. Used in applications of extended "no flow" conditions, or when the temperature of the treated water is of a critical nature.



### Cooling Fan

To reduce water temperature inside the reactor through mechanics and convection without wasting any water. Runs independently and continuously. Comes with a compact modular power adapter with interchangeable AC clips that operates from 90-264V (47-63Hz.)



### 4-20mA Module

Used for signal transfer to a remote device such as a data logger or computer. Order MOD-420.



### Remote Alarm (Dry Contact) Module

Used for signal transfer to a remote alarm or dry contacts. Order MOD-RAM.



**Lamp Life:** UV lamps are rated for 9,000 hours of continuous use (10,000 hours for LBH5/6 units) (one-year of operation).

**General Operation and Maintenance:** UV lamps are to be replaced on an annual basis (9,000 hours of operation for LB5/6 units and 10,000 hours for LBH5/6 units). Quartz sleeves and UV sensors are to be cleaned every 6-12 months and replaced every 5 years.

This Class B system or component conforms to NSF/ANSI 55 for the supplemental bactericidal treatment of disinfected public drinking water or other drinking water that has been tested and deemed acceptable for human consumption by the state or local health agency having jurisdiction. The system is only designed to reduce normally occurring non-pathogenic, nuisance microorganisms. Class B systems are not intended for treatment of contaminated water.

While testing was performed under standard laboratory conditions, actual performance may vary.

The systems and installation shall comply with applicable provincial/state and local regulations.



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