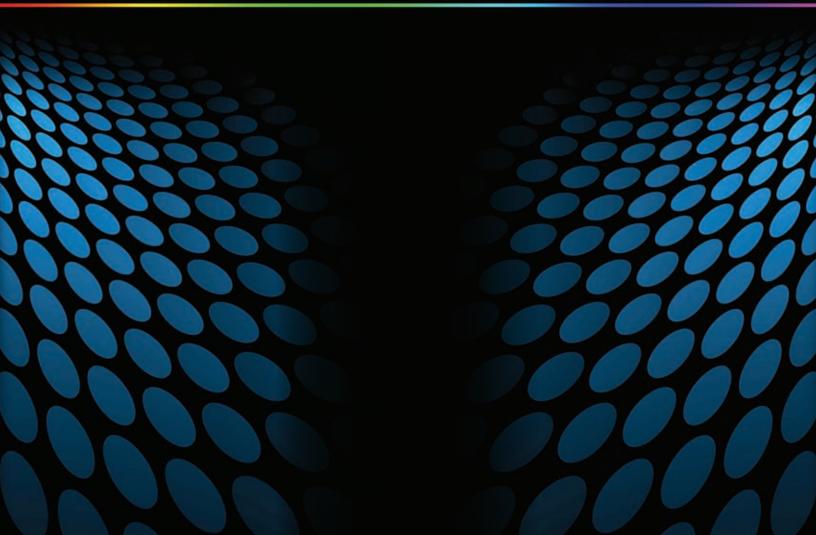
# **POLARIS** SCIENTIFIC UV



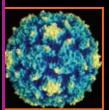




Bacillus



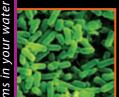
Cyanobacteria



Polio



Cryptosporidium



E. Coli



Shigella

have your water teste tify microorganisms ar taminants, if any.



Your **best choice** in Ultraviolet Sterilization.

# SAFE

No need to handle toxic or corrosive chemicals or by-products

Microbiologically free water without the use of potentially dangerous chemicals

UV imparts no change in taste, odor, pH or conductivity

No trihalomethanes (THM's) formation

# SIMPLE

Fast and simple installation with three connections (two water and one electrical)

Maintenance involves annual lamp replacement (provided water quality parameters are met) with no need to turn off water flow

Automatic, unattended and user friendly operation

# EFFICIENT

Compact units with 304 or 316 (upon request) stainless steel reactor chamber, polished for laboratory and medical use, require minimum space

Microorganisms are inactivated within seconds; eliminates the need for long retention times or retention tanks

Very low power consumption; less than 40-watt bulb to effectively treat from 1 to 100 gallons per minute

High output low pressure mercury vapor lamps with high isolation pin

Little change in water temperature even after prolonged periods of no water flow

Open end high quality guartz sleeve and stainless steel gland units

# **ECONOMICAL**

No moving parts to wear out or break

Lower capital investment when compared to chlorine or ozone systems







# Residential and Commercial UV Sterilization

# POLARIS SCIENTIFIC UV

**Polaris Scientific Ultraviolet** systems provide a sleek, compact design and economical ultraviolet water treatment for low flow and medium flow applications such as: light commercial reverse osmosis systems, water vending machines, food industry, laboratory, medical facility water, pharmaceutical, cosmetic processes, final electronic component rinsing and recirculation loops to name a few.

Polaris Scientific Ultraviolet systems produce little change in water temperature even after prolonged periods of no water flow, making them ideal for many application requirements.





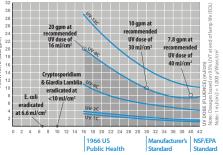
Residential Ultraviolet Sterilization Systems

# **POLARIS SCIENTIFIC UV - 1C**

# PARTS & ACCESSORIES

Electronic Balla	t Quartz Sleev	re Lamp	
EB0624-110/ EB0624-220	QS10	GL10SE4P	
Additic	nal Accessories S	pecific to Your UV	System
UV-NUT-3	UV-SEAL	UV-PLUG	UV-WASHER





GPM	Rated Life (hours)	Lamp Watts	Voltage @ 50/60HZ	Visual Warning	Audible Warning	Number of Lamps	Port Size Inlet/Outlet	Water Chamber	Length	Width	Maximum Pressure	Working Temp.	Wavelength	Microjoules
1	9,000	10W	110V/220V	LED	BUZZER	1	1/4" MNPT	STAINLESS 304	10.47″	2″	125 PSI	35°F⁻ 104°F	254 nm	30 mJ/cm <sup>2</sup>

# **POLARIS SCIENTIFIC UV - 2C**



GPM	Rated Life (hours)	Lamp Watts	Voltage @ 50/60HZ	Visual Warning	Audible Warning	Number of Lamps	Port Size Inlet/Outlet	Water Chamber	Length	Width	Maximum Pressure	Working Temp.	Wavelength	Microjoules	
2	9,000	14W	110V/220V	LED	BUZZER	1	1/4" MNPT	STAINLESS 304	13.74″	2.5″	125 PSI	35°F-104°F	254 nm	30 mJ/cm <sup>2</sup>	

# Polaris Scientific UV-1 C/UV-2C



Residential Ultraviolet Sterilization Systems

# **POLARIS SCIENTIFIC UV - 6C**



GPM	Rated Life (hours)	Lamp Watts	Voltage @ 50/60HZ	Visual Warning	Audible Warning	Number of Lamps	Port Size Inlet/Outlet	Water Chamber	Length	Width	Maximum Pressure	Working Temp.	Wavelength	Microjoules
6	9,000	24W	110V/220V	LED	INDICATOR W/ ALARM	1	1/2" MNPT	STAINLESS 304	23.23″	2.5″	125 PSI	35°F-104°F	254 nm	30 mJ/cm <sup>2</sup>



GPI	ated Life (hours)	Lamp Watts	Voltage @ 50/60HZ	Visual Warning	Audible Warning	Number of Lamps	Port Size Inlet/Outlet	Water Chamber	Length	Width	Maximum Pressure	Working Temp.	Wavelength	Microjoules
8	9,000	32W	110V/220V	LED	INDICATOR W/ALARM	1	3/4" MNPT	STAINLESS 304	27.87″	2.5″	125 PSI	35°F-104°F	254 nm	30 mJ/cm <sup>2</sup>

# Polaris Scientific UV-6C/UV-8C



Residential & Commercial Ultraviolet Sterilization Systems

POLARIS SCIENTIFIC UV - 12C



GPM	Rated Life (hours)	Lamp Watts	Voltage @ 50/60HZ	Visual Warning	Audible Warning	Number of Lamps	Port Size Inlet/Outlet	Water Chamber	Length	Width	Maximum Pressure	Working Temp.	Wavelength	Microjoules
12	9,000	39W	110V/220V	LED	INDICATOR W/ ALARM	1	3/4″ MNPT	STAINLESS 304	36.81″	2.5″	125 PSI	35°F <sup>-</sup> 104°F	254 nm	30 mJ/cm <sup>2</sup>



24	9,000	39W	110V/220V	LED	INDICATOR W/ALARM	2	1" MNPT	STAINLESS 304	✓	36.93″	3.5″	125 PSI	35°F <sup>-</sup> 104°F	254 nm	30 mJ/cm <sup>2</sup>

Polaris Scientific UV-12C/UV-24B



Commercial Ultraviolet Sterilization Systems

# **POLARIS SCIENTIFIC UV - 36B**



GPM	Rated Life (hours)	Lamp Watts	Voltage @ 50/60HZ	Visual Warning	Audible Warning	Number of Lamps	Port Size Inlet/Outlet	Water Chamber	Timer	Length	Width	Maximum Pressure	Working Temp.	Wavelength	Microjoules
36	9,000	39W	110V/220V	LED	INDICATOR W/ ALARM	3	1.5″	STAINLESS 304	~	36.93″	5.5″	125 PSI	35°F · 104°F	254 nm	30 mJ/cm <sup>2</sup>

NOTE: Flanges available upon request.

POLAR PARTS & Electronic Ballast DCW-0604B					-	UV-50E	::::	L			Cryptospor & Giardia La eradicate <10 mJ/c	umblia 503 d at 612808 624 612808 624 609 624 609 625 625 626 626 626 627 627 627 627 627 627 627	UV dose of 30 mJ/cm <sup>2</sup> 40 m	
LIV-NUT-1/		s Specific to Your UV Sy -PLUG UV-WASHE			- 0			L	14	2	50	20 3	0 40	09 05 More Dosages based
	d Life Lamp V	Voltage @	Visual	Audible	Number of	Port Size	Water	Timer	Length	Width	Maximum	Manufacturer's Standard Working	NSF/EP Standa Wavelength	rd

GPM	(hours)	Lamp Watts	50/60HZ	Warning	Warning	Lamps	Inlet/Outlet	Chamber	Timer	Length	Width	Pressure	Temp.	Wavelength	Microjoules
50	9,000	39W	110V/220V	LED	INDICATOR W/ALARM	4	1.5″	STAINLESS 304	✓	36.93″	5.5″	125 PSI	35°F <sup>-</sup> 104°F	254 nm	30 mJ/cm <sup>2</sup>

NOTE: Flanges available upon request.

# Polaris Scientific UV-368/UV-508



GPM	Rated Life (hours)	Lamp Watts	Voltage @ 50/60HZ	Visual Warning	Audible Warning	Number of Lamps	Port Size Inlet/Outlet	Water Chamber	Timer	Length	Width	Maximum Pressure	Working Temp.	Wavelength	Microjoules
60	9,000	39W	110V/220V	LED	INDICATOR W/ ALARM	5	2″ or 2.5″ FLANGE	STAINLESS 304	$\checkmark$	36.93″	5.5″	125 PSI	35°F-104°F	254 nm	30 mJ/cm <sup>2</sup>



GPM	Rated Life (hours)	Lamp Watts	Voltage @ 50/60HZ	Visual Warning	Audible Warning	Number of Lamps	Port Size Inlet/Outlet	Water Chamber	Timer	Length	Width	Maximum Pressure	Working Temp.	Wavelength	Microjoules
80	9,000	39W	110V/220V	LED	INDICATOR W/ALARM	6	2" or 2.5" FLANGE	STAINLESS 304	✓	36.93″	6.26″	125 PSI	35°F <sup>-</sup> 104°F	254 nm	30 mJ/cm <sup>2</sup>

Polaris Scientific UV-608/UV-808



### 5-YEAR LIMITED WARRANTY FOR POLARIS SCIENTIFIC UV CHAMBER

Polaris Scientific Ultraviolet warrants the UV chamber on the Polaris Scientific Ultraviolet product to be free from defects in material and workmanship for a period of five (5) years from the date of purchase. During this time, we will repair or replace, at its option, any defective Polaris Scientific Ultraviolet chamber. Please return the defective part to the Polaris Scientific Ultraviolet dealer you purchased your system from, who will return it to Polaris Scientific Ultraviolet. We will either make the necessary repairs or, if it is determined that a replacement is required, we will provide a replacement part. We will then return the part to the dealer. This warranty does not include shipping and handling charges which will be collected from you by the dealer. Parts repaired or replaced under this five (5) year warranty will be covered under warranty to the end of the original five (5) year warranty period. This warranty is also subject to the conditions and limitations outlined under the heading "General Conditions and Limitations" below.

# ONE-YEAR LIMITED PRO-RATED WARRANTY FOR STRUCTURAL, HARDWARE AND ELECTRICAL COMPONENTS

Polaris Scientific Ultraviolet warrants the structural, hardware, and electrical components to be free from defects in material and workmanship for a period of one (1) year pro-rated from the date of purchase. During this time, we will repair or replace, at its option, any defective parts covered by the warranty. Defective part(s) should be returned to a Polaris Scientific Ultraviolet dealer, who will return it to Polaris Scientific Ultraviolet. We will either make the necessary repairs or, if it is determined that a replacement is required, we will provide a replacement part. We will then return the part to the dealer. This warranty does not include shipping and handling charges which will be collected from you by the dealer. Parts repaired or replaced under this one (1) year pro-rated warranty will be covered under warranty to the end of the original one (1) year pro-rated warranty period. This warranty is also subject to the conditions and limitations outlined under the

### heading "General Conditions and Limitations" below.

### ONE-YEAR LIMITED WARRANTY FOR LAMPS, SLEEVES AND UV SENSORS

Polaris Scientific Ultraviolet warrants original lamps, sleeves and UV sensors to be free from defects in material and workmanship for a period of one (1) year from the date of purchase. During this time, we will repair or replace, at its option, any defective parts covered by the warranty. The warranty period for lamps and sleeves may be verified using date codes in addition to purchase receipts and Polaris Scientific Ultraviolet's database of serial number sales date. We will advise you whether the defective item needs to be returned to the Polaris Scientific Ultraviolet dealer you purchased the equipment from for failure analysis. Replacement lamps and sleeves provided under warranty will be sent to your Polaris Scientific Ultraviolet dealer. If the UV sensor experiences a problem which Polaris Scientific Ultraviolet confirms is covered by warranty, please return the sensor to a Polaris Scientific Ultraviolet dealer you purchased the equipment from who will return it to us. We will either repair or replace the sensor and return the sensor to your dealer. This warranty on lamps, sleeves and sensors does not include shipping and handling charges which will be collected from you by the dealer. Parts replaced under this one (1) year warranty will be covered under warranty to the end of the original one (1) year warranty period. This warranty is also subject to the conditions and limitations outlined under the heading "General Conditions and Limitations" below

GENERAL CONDITIONS AND LIMITATIONS

None of the above warranties cover damage caused by improper use or maintenance, accidents, acts of God or minor scratches or imperfections that do not materially impair the operation of the product. The warranties also do not cover products that are not installed as outlined in the applicable Owner's Manual. Polaris Scientific Ultraviolet System warranty will be deemed null and void if any of the product labels are removed, including the pressure sensitive hologram serial number. The limited warranties described above are the only warranties applicable to the Polaris Scientific Ultraviolet products listed in the "Specific Warranty Coverage" section. These limited warranties outline the exclusive remedy for all claims whether based on contract, tort (including negligence), strict liability or otherwise. Disclaimer of warranties. Except as expressly warranted in writing byPolaris Scientific Ultraviolet, the goods sold byPolaris Scientific Ultraviolet are purchased by the buyer "as is." Polaris Scientific Ultraviolet does not warrant that the goods are of merchantable quality or that they can be used for any particular purpose. Except as expressly warranted in writing byPolaris Scientific Ultraviolet,Polaris Scientific Ultraviolet makes no representation or warranty of any kind with respect to the products.

Limitation of liability. In no event shallPolaris Scientific Ultraviolet be liable to the purchaser or any other entity for more than the invoice price received byPolaris Scientific Ultraviolet for any nonconforming products. Polaris Scientific Ultraviolet shall not be liable to the purchaser or any other entity for personal injury, property damage, or any direct, indirect, special, incidental, consequential, punitive, exemplary, or other damages of any kind, including without limitation the cost of procurement of substitute goods, the loss of profits, products, or production, or the interruption of business, however caused and on any theory of liability, and whether or notPolaris Scientific Ultraviolet has been advised of the possibility of such damages. The essential purpose of this provision is to limit the liability of Polaris Scientific Ultraviolet arising out of the sale of products to the purchaser whether for breach of contract, negligence, or otherwise. These limitations shall apply notwithstanding any failure of essential purpose of any limited remedy and notwithstanding the provisions of any other agreement betweenPolaris Scientific Ultraviolet and the purchaser.

For complete Terms & Conditions see reverse side





UV-NUT-1 Stainless Steel Long Nut for Wire Connection for Models UV-8C – UV-100B



UV-NUT-2 Stainless Steel Short Nut for End Plug for Models UV-8C – UV-100B



UV-NUT-3 Plastic Nut for Wire Connection for Models UV-1C & UV-2C



**UV-PLUG** Plastic Plug for Nuts for Models UV-1C – UV-100B



UV-SEAL Seal for Sleeve and Nut for Models UV-1C – UV-100B



UV-WASHER Washer for Sleeve and Nut for Models UV-1C – UV-100B



UV-32SPRING Stainless Steel Spring for Model UV-8C



UV-39SPRING Stainless Steel Spring for Model UV-12C – UV-100B

GL32SE4P

for Models UV-8C

GI 395F4P

32W 645mm Germicidal Lamp

39W 843mm Germicidal Lamp

Single End 4 Pin 254nm

Single End 4 Pin 254nm

for Models UV-12C - UV-100B



UV-TIMER Counter/Timer for Models UV-24B – UV-100B



**EB0624-110/EB0624-220** Ballast for 10-14W 110V/220V *for Models UV-1C & UV-2C* 



DCW-0604B Ballast for 24-39W 110V/220V for Models UV-6C – UV-100B



GL10SE4P 10W 212mm Germicidal Lamp Single End 4 Pin 254nm for Models UV-1C

GL14SE4P 14W 287mm Germicidal Lamp Single End 4 Pin 254nm for Models UV-2C

GL24SE4P 24W 436mm Germicidal Lamp Single End 4 Pin 254nm for Models UV-6C

QS10 Quartz Sleeve 245mm for 10W UV Lamp for Model UV-1C

QS14 Quartz Sleeve 331mm for 14W UV Lamp for Model UV-2C



QS32 Quartz Sleeve 665mm for 32W UV Lamp for Model UV-8C

QS39 Quartz Sleeve 890mm for 39W UV Lamp for Models UV-12C – UV-100B

# **FEATURES**

- Audible ballast with LED lamp out indicator
- High output low pressure mercury vapor lamps with high isolation pin design
- Open end quartz sleeve and stainless steel gland units
- Operating temperature and sealing efficiency
- Limited 5-year warranty on stainless steel housing
- Limited 1-year warranty on electronics

**Polaris Scientific UV** Sterilization Systems utilize a natural quartz sleeve to protect the lamp and allow the maximum amount of UV rays to penetrate and disinfect the water.

**Polaris Scientific UV** Sterilization Systems germicidal lamps are specially designed UV radiation lamps which produce a rated wave length of 254nm.

**Polaris Scientific UV** Sterilization Systems are your best choice in UV sterilization. With its durable construction, high quality quartz sleeve and performance lamps, **you can't go wrong**.

Your **best choice** in Ultraviolet Sterilization.

Polaris Scientific UV Accessories



The products described in this document are hereby offered for sale to be established by Hydrofit Quick Connect Fittings, Polaris Scientific The products described in this document are nered of safe to be established by Hydroit Quick Connect Fittings, Folaris Scientific Ultraviolet, Hydron Membranes, Aquatrol, Shok Bolk, Hydroicuard, Hydroinix Water Technology, any of its subsidiaries and its authorized distributors. This offer and its acceptance by any customer (the "Buyer") shall be governed by all of the following Terms and Conditions. Buyer's order for any item described in this document, when communicated to Hydrofit Quick Connect Fittings, Polaris Scientific Ultraviolet, Hydron Membranes, Aquatrol, Shok Blok, HydroGuard, Hydronix Water Technology, its subsidiaries or an authorized distributor (the "Seller") verbally or in writing, shall constitute acceptance of this offer. Provided, however, that these terms and conditions shall not operate as a rejection of the Buyer's offer unless such offer contains variances in the description, quantity, price, or delivery schedule of the items.

### 1. Terms and Conditions of Sale

All descriptions, quotations, proposals, offers, acknowledgments, acceptances and sales of the Seller's products are subject to and shall be governed exclusively by the terms and conditions stated herein (the "Agreement"). The Buyer's acceptance of any offer to sell is limited to the terms and conditions in the Agreement. Any terms or conditions in addition to or inconsistent with those stated in the Agreement, proposed by the Buyer in any acceptance of an offer by the Selle; are hereby rejected. No such additional, different or inconsistent terms and conditions shall become part of the agreement between the Buyer and the Seller unless expressly accepted in writing by the Selle; The Seller's acceptance of any offer to purchase by the Buyer is expressly conditioned upon the Buyer's assent to all the terms and conditions in this Agreement, irrespective of any terms in addition to, or inconsistent with those contained in the Buyer's offer. Acceptance of the Seller's products shall be all events constitute such assent.

### 2. Documents

Unless provided otherwise in the Agreement, all catalog descriptions, illustrations, drawings and literature or independently submitted setting the performance, weights and measurements or other specifications provided by the Seller are mere approximations and the Seller reserves the right to alter or amend them at any time. The Seller reserves the right to correct derical or technical errors in the contract documents. The Buyer shall furnism with his order all necessary specifications and information. The Seller takes no responsibility for goods manufactured, priced or delivered not in accordance with the order or the specifications unless the Buyer's order and specifications are clear to the specification of the specifications are clear to the specification of the specifications are clear to the specification of the specification of the specifications are clear to the specification of the specificati and correct.

3. Prices. Unless otherwise provided, all prices contained in our quotations and written acceptances are ex-works and do not include the cost of packing. All orders are accepted on the condition that all such prices are subject to revision by the Seller at any time before the goods are dispatched to take account of any price change. In the event that the Buyer does not place the entire order quoted by the Seller for the Buyer, the Seller reserves the right to revise its prices. The Seller also reserves the right to revise its prices. The Seller also reserves the right to revise its prices. The Seller also reserves the right to revise its prices. The Seller also reserves the right to revise its prices. The Seller also reserves the right to revise its prices. The Seller also reserves the right to revise its prices if the Buyer modifies the specification or quantity of the goods or the delivery requirements after the order has been accepted by the Seller.

### 4. Advice

All advice given in connection with the Seller's goods is provided without charge to the Buyer. ANY ADVICE AND ASSISTANCE GIVEN BY THE SELLER TO THE BUYER IS GIVEN AT THE BUYER'S RISK, AND THE SELLER SHALL NOT BE LIABLE FOR ANY LOSS, DAMAGE OR CLAIM ARISING THEREFROM

### 5. Payment

(a) Unless otherwise provided in the Agreement, or explicitly agreed upon in writing by the Seller, payment is due in full 30 days from date (of on some the performance in the representation of the second of the s The Buyer commits any breach of the Agreement, or if the Buyer becomes insolvent or commits any act of bankrupt or contemplation of liquidation, the Seller will be entitled, without prejudice to the Seller's other rights, to terminate the Agreement or any unfulfilled part thereof, or at the Seller's option to make partial deliveries.

### 6. Modifications and Cancellations

to involutations and cancellations. This Agreement is not subject to oral modification or cancellation. A Buyer's request for modification or cancellation will not be incorporated into the Agreement unless the request is accepted by the Seller in a writing that amends the Agreement. Acceptance of any such requested modification or cancellation shall be at the Seller's discretion and shall be upon such terms and conditions as the Seller may require.

7. Handling Charge. Goods supplied in accordance with the Buyer's order may later be returned to the Seller at the Seller's discretion provided the return is preauthorized in writing, and the merchandise is unused, in original packages, unaltered, clean and no older than 60 days from the date shipment by the Seller. The Buyer will be required to pay to the Seller a handling charge of 25% of the purchase price of the returned goods. A copy of the original invoice for the merchandise must accompany all returns.

### 8. Delivery.

(a) Any delivery dates quoted are approximate only and the Seller shall have no liability for any delays in delivery. (b) Unless provided otherwise, delivery of the goods are ready for dispatch. Regardless of (a) Any density a density density and the series share have to handly for any density in the density. (b) onlines provided otherwise, delivery of the goods shall be made to the share that in a notified the Buyer that the goods are ready for dispatch. Regardless of the method of delivery, delivery shall be made F.O.B. Seller's plant, where the risk of loss shall thereupon pass to the Buyer upon the Seller's delivery to a carrier. Notwithstanding that the Seller's plant, where the risk of loss shall thereupon pass to the Buyer upon the Seller's delivery to a carrier. Notwithstanding that the Seller's plantes are ex-works, the Seller is prepared by special contract to procure carriage or freight and insurance on behalf of the Buyer and at Buyer's cost in which event the Seller shall be under no liability for damage in transit or loss or damage to the goods beyond the point at which the Seller contracts to deliver the same. (c) The Seller will not make drop shipments.

### 9. Inspection and Rejection.

9. Inspection and Rejection.
(a) The following provisions shall apply in relation to all deliveries of goods: the Seller shall not be held liable for any claims of damage in transit, shortage of delivery or loss of goods, unless in the case of shortage of delivery, a separate notice in writing is given to the carrier concerned and to the Seller within thre (3) days of the receipt of the goods, followed by a complete claim in writing within five (5) days of precised of the goods, and in the case of loss of goods, a suparate notice in writing is given to the carrier concerned and to the Seller and a complete claim in writing made within thirty (30) days of the date of consignment. The Buyer must inspect the goods and in the carrier concerned without being inspected, the delivery book of the carrier concerned without being inspected, the delivery book of the carrier concerned without being inspected. The Seller shall have the right to inspect the goods or until the Seller has notified the Buyer than the Seller shows and the Buyer shall retain such goods until the Seller has inspected such goods or until the Seller has notified the Buyer that the Seller shows the signed to the Seller forwarding instructions within ninety (90) days after the date of the seller's notification that the goods are ready for dispatch or to accept delivery of the goods, the Seller's notification that the goods are ready for dispatch or to accept delivery for the goods, the Seller's notification that the goods are ready for dispatch or to accept delivery for the goods, the Seller's notification that the good shows and/or to morcure or effect storage of the goods, the Seller's notification that the goods are ready for dispatch or to accept delivery of the goods, the Seller's notification that the goods are ready for dispatch or to accept delivery of the goods, the Seller's notification that the goods are ready for dispatch or to accept delivery. shall be entitled at the Buyer's risk and expense to store the goods and/or to procure or effect storage of the goods elsewhere. Goods so stored shall be paid for as if they had been dispatched and/or accepted.

### 10. Special Tooling.

Where it is necessary for the Seller to manufacture or to purchase special tooling, including without limitation tools, dies, jigs, mandrills, fixtures, molds, and patterns, in order to execute a contract, the Buyer will be charged with all or a proportion of the cost of such special toolis. Such special tooling shall be and remain the Seller's property nottwithstanding ayment of any charges made by the Buyer. In no event will the Buyer acquire any interest in apparatus belonging to the Seller which is utilized in the manufacture of the items sold hereunder, even if such apparators that have the right to alter, discard or otherwise dispose of any special tooling or other property in its sole discretion at any time.

### 11. Test and Performance.

11. Lets and Performance.
(a) The Seller's goods are, where practicable, submitted to the Seller's standard test before delivery. If special tests are required, these shall be made at the Seller's premises unless otherwise agreed, and will be subject to an extra charge. (b) The Seller accepts no liability for failure to attain any performance figures quoted by the Seller unless the Seller's precifically has guaranteed them with an agreed sum as liquidation damages and the Buyer has suffered actual loss by reason of the failure to attain the figures quoted. (c) Any particulars of weights and measurements, power and consumption, power output or performance relating to the goods and like matters furnished by the Seller to the Buyer in the Seller's adlags, literature or otherwise, are approximate and are intended only to present a general idea of the goods to be complicit, muscling actively and accepted actual general in a term for the decomposition of the decomposition of the decomposition. supplied and unless previously agreed specifically in writing shall not form part of the Agreement.

### 12. Buyer's Property.

Any designs, tools, patterns, materials, drawings, confidential information or equipment furnished to the Seller by the Buyer, or any other Items which become the Buyer's property, may be considered obsolete and may be destroyed by the Seller after two (2) consecutive years have elapsed without the Buyer placing an order for the items which are manufactured using such property. The Seller shall not be responsible for any loss or damage to such property while it is in the Seller's possession or control.

### 13. Taxes.

Unless otherwise indicated, all prices and charges are exclusive of excise, sales, use, property, occupational or like taxes which may be imposed by any taxing authority upon the manufacture, sale or delivery of the items sold hereunder. If any such taxes must be paid by the Seller, or if the Seller is liable for the collection of such tax, the amount thereof shall be in addition to the amounts for the item sold. The Buyer agrees to pay all such taxes or to reimburse the Seller therefore upon receipt of its invoice. If the Buyer claims exemption from any sales, use or other tax imposed by any taxing authority, the Buyer shall promptly indemnify and hold the Seller harmless from and against any such tax, as well as

any interest or penalties thereon which may be assessed if the items are held to be taxable

### 14. Warranty

EXCEPT AS EXPRESSLY WARRANTED IN WRITING BY THE SELLER, THE GOODS SOLD BY THE SELLER ARE PURCHASED BY THE BUYER "AS IS." THE SELLER DOES NOT WARRANT THAT THE GOODS ARE OF MERCHANTABLE QUALITY OR THAT THEY CAN BE USED FOR ANY PARTICULAR PURPOSE. EXCEPT AS EXPRESSIV WARRANTED IN WRITING BY THE SELLER. THE SELLER MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND WITH

SELECE NO DES NOT WARK THAT THE GOUDS ARE OF THE SELLER MARKEN NAME OF QUALITY OR THAT THEY CAN BE USED FOR ANY PARTICULARY OPPOSE. EXCEPT AS EXPRESSIV WARRANDED IN WRITING BY THE SELLER MARKEN OR REPRESENTATION OR WARRANDY OF ANY KIND WITH RESPECT TO THE PRODUCTS. (a) The Seller warrants that the items sold hereunder shall be free from defects in material or workmanship at the time of shipment by the Seller. The Seller warrants that if within 12 months of delivery of the goods to the Buyer the Buyer returns immediately to the Seller's premises any of the said goods which the Buyer believes to be defective, carrier paid, properly packed and clearly marked with the Buyer's full name and address and any other information such as serial numbers which may be necessary to enable the goods to be identified, together with a complete description of the alleged defect, they will be repaired or new goods will be supplied in exchange and the goods so repaired or such new goods will be delivered to the Buyer free of charge at the Seller's preventives: provided, however, that the foregoing warranty shall be applicable only if upon demand by the Seller, the Buyer proves to the Seller's attiSation: (1) that the defect was one caused by any matter beyond the reasonable control of the seller, including, without limitation, accident or normal wear and tear, (b) THIS WARRANTY DOES NOT APPLY UNLESS THE SELLER'S PRODUCTS ARE: (1) USED IN DOMESTIC PLUMBING APPLICATIONS; (II) INSTALLED BY A LICENSED CONTRACTOR, PLUMBER OR QUALIFIED EQUIPMENT INSTALLATION PROFESSIONAL; AND (III) INSTALLED AND OPERATED IN ACCORDANCE WITH PUBLISHED PURPORTI / HYDRONIX WARE goods to the Seller's premises in accordance with this provision shall be paid by the Buyer. The SELLER KYEN THOURING WARE AND OPERATED IN ARCORDONS TO MANLATCHURE BY THE SELLER REVEN THOURING SUPLICED BY THE SELLER BUT INSTALLED, ATACHED OR WELDED BY THE BUYER SELLER OR DODS SIT ATANLATCHER BY THE SELLER REVEN THOURING SUPLICED BY THE SELLER RUND ROOS IT EXTEND TO ANY S NOT MANUFACTURED BY THE SELLER CARRY ONLY THE WARRANTY (IF ANY) OF THEIR MAKERS AND THE BUYER IS ENTITLED TO THE BENEFIT THEREOF ONLY SO FAR AS THE SELLER HAS THE POWER TO TRANSFER IT. (E) THIS WARRANTY COMPRISES THE SOLE AND ENTIRE WARRANTY PERTAINING TO ITEMS PROVIDED HEREUNDER; THE SELLER MAKES NO OTHER WARRANTY, GUARANTEE, OR REPRESENTATION OF ANY KIND WHATSOEVER. ALL OTHER WARRANTIES, INCLUDING BUT NOT LIMITED TO MERCHANTABILITY AND FITNESS FOR PURPOSE, WHETHER EXPRESSED OR IMPLIED, OR ARISING BY OPERATION OF LAW, TRADE USAGE, OR COURSE OF DEALING, ARE HEREBY DISCLAIMED. (f) NOTWITHSTANDING THE FOREGOING, THERE ARE NO WARRANTIES WHATSOEVER ON ITEMS BUILT OR ACQUIRED WHOLLY OR PARTIALLY TO THE BUYER'S DESIGNS OR SPECIFICATIONS.

LIABILITY. IN NO EVENT SHALL THE SELLER BE LIABLETO THE BUYER OR ANY OTHER ENTITY FOR MORE THAN THE INVOICE PRICE RECEIVED BY THE SELLER FOR ANY NON-CONFORMING PRODUCTS. THE SELLER SHALL NOT BE LIABLE TO THE BUYER OR ANY OTHER ENTITY FOR PRESONAL INUIRY. PROPERTY DAMAGE, OR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL, PUNITIVE, EXEMPLARY, SPECIAL, OR OTHER DAMAGES OF ANY KIND, INCLUDING WITHOUT LIMITATION THE COST OF PROCUREMENT OF SUBSTITUTE GOODS, THE LOSS OF PROFITS, PRODUCTS, ON E PRODUCTION, OR THE INTERPUTION OF BUSINESS, HOWEVER CAUSED. THE SELLER SHALL NOT BE LIABLE TO THE BUYER OR ANY OTHER ENTITY ON ANY THEORY OF LIABILITY INCLUDING WITHOUT LIMITATION BEACH OF CONTRACT OR EXPRESS OR IMPLIED WARRANTY, TORT, NEGLIGENCE, FAILURE TO WARN, OR STRICT LIABILITY, AND WHETHER OR NOT THE SELLER HAS BEEN ADVISED OF THE OSUBILITY OF SUCH DAMAGES. THE SESINTIAL PURPOSE OF THIS PROVISION IS TO LIMIT THE LIABILITY OF THE SELLER ARISING OUT OF THE SALE OP PROVISTON STO WHETHER FOR BREACH OF CONTRACT, NEGLIGENCE, OR ANY OTHER THEORY OF LIABILITY. THESE LIMITATIONS CAUSED THE SEVER THE SUCH ANY OTHER BUYER WHITHER FOR BREACH OF CONTRACT, OR EXPRESS OR IMPLIED WARRANTY, TORT, NEGLIGENCE, MANY THEORY OF LIABILITY INCLUDING CHEMPSING ON THE SELLER HAS BEEN ADVISED OF THE SALE OP PROVISION IS TO LIMIT THE LIABILITY OF THE SELLER ARISING OUT OF THE SALE OP PROVISTON THE DEVER WHETHER FOR BREACH OF CONTRACT, NEGLIGENCE, OR ANY OTHER THEORY OF LIABILITY. THESE LIMITATION SCHEMPSING ON THE SALE APPROVISTION FOR ANY OTHER PROVISTOR AND THE POWER OF THE SALE OPPRIVENT. ANY FAILURE OF ESSENTIAL PURPOSE OF ANY LIMITED REMEDY AND NOTWITHSTANDING THE PROVISIONS OF ANY OTHER AGREEMENT BETWEEN THE SELLER AND THE BUYER

16. Indemnity for Infringement of Intellectual Property Rights. (a) The Buyer shall defend and indemnify the Seller against all actions, claims, demands, penalties and costs by third parties in tort, or for infringement, or alleged infringement, of patents, trademarks, copyrights, trade dress, trade secret or other rights of any third party resulting from the goods manufactured in accordance with the Buyer's specifications or based on any information provided by the Buyer. The Buyer Irom the goots manuacured in accorate with the buyer's spectrations or based on any internation provided by the buyer. The buyer will defend any action against the Seller for title, patent, trademark, copyright infingement, or other claimed by a third party at the Buyer's sole cost and expense. (b) The Seller shall have no liability for infringement of any patents, trademarks, copyrights, trade dress, trade secrets or similar rights except as provided in this provision. The Seller will defend and indemnify the Buyer against allegations of infringement of patents, trademarks, copyrights, trade dress and trade secrets ("Intellectual Property Rights"). The Seller will defend at its expense and will pay the cost of any settlement or damages awarded in an action brought against the Buyer based on an allegation that an item sold pursuant to this contract infringes the intellectual Property Rights of a third party. The Seller's obligation to defend and indemnify the Buyer's contingent on the Buyer notifying the Seller within 10 days after sole control over the defense of any allegations or accomposition. If do attraveling to a composition is the sole for a sole control over the defense of any allegations or accomposition is those to a sole the tota sole to that an iteral property Rights of a third buyer to a composition is those to a sole total trade to a composition of the sole to a sole total over the defense of any allegations or accomposition. to the buyer hourying the serie within 10 days aret such control vertile devise of any anegatoris of activity, including an inegatoris in for settlement or componise. If an item sold herender is subject to a claim that it infringes the intellectual Property Rights of a third party, the Seller may, at its sole expense and option, procure for the Buyer the right to continue using said item, replace or modify said item so as to make it non-infringing, or offer to accept return of said item and return the purchase price less a reasonable allowance for depreciation. Notwithstanding the foregoing, the Seller shall have no liability for claims of infringement based on information provided by Buyer, or directed to items delivered hereunder for which the designs are specified in combination or use in a system of any item sold hereunder. The foregoing in this provision shall constitute the Seller's sole and exclusive liability and the Buyer's sole and exclusive remedy for infringement of Intellectual Property Rights.

### 17. Lien

In addition to any right of lien to which the Seller may by law be entitled, the Seller shall have a general lien on all goods of the Buyer in the Seller's possession (although such goods or some of them may have been paid for) for the unpaid price of any other goods sold and delivered to the Buyer by the Seller under the same or other contracts.

### 18 Waiver

The Seller's rights shall not be affected or restricted by any indulgence or forbearance granted to the Buyer. No waiver by the Seller of any breach shall operate as a waiver of any later breach.

### 19. Force Maieure.

19. Force Majeure. The Seller shall be excused from performing any of its obligations under this Agreement which are prevented or delayed by any occurrence not within the reasonable control of the Seller, including but not limited to, accidents, acts of God, destruction or damage to the goods or the Seller's manufacturing plant, delays or failures in delivery of carriers or suppliers, shortages of materials, strikes or other labor matters, floods, earthquakes, fire, riots, explosions, or any regulations, rules, ordinances or orders of any governmental authority, federal, state or local, whether such cause exists at the date of the order or not.

### 20. Buyer's Representation of Solvency

The Buyer hereby represents that as of the signing of this Agreement it was not insolvent within the meaning of the Uniform Commercial Code or any Bankruptcy Laws.

### 21. Assignment and Delegation.

The rights and obligations of the parties under this Agreement may not be assigned or delegated, except on the express written consent of the other party to the assignment or delegation.

# 22. Integration

The rights and obligations of the parties and the terms and conditions set forth herein, together with any amendments, modifications and any different terms and conditions expressly accepted by the Seller in writing, shall constitute a complete and exclusive statement of the terms of this Agreement. This Agreement supersedes not only all prior agreements, but also oral agreements made contemporaneously with the execution of this Agreement. All such materials may not be used to supplement, explain, or contradict the terms of this Agreement

23. Severability. If any of these conditions or any part thereof purports to exclude or restrict or limit any liability and such exclusion or restriction or limitation is prohibited or rendered void or unenforceable by any legislation to which it is subject, or is itself prohibited or rendered void or unenforceable by any legislation to which it is subject, then the exclusion, restriction or limitation on the condition or part thereof in question shall be so prohibited or rendered void or unenforceable and the validity or enforceability of any other part of these provisions shall not thereby be . affected.

24. Governing Law/Limitation on Actions. The terms, conditions, rights, and obligations under this Agreement shall be construed under the laws of the State of California, without regard to principles of conflicts of laws. No actions arising out of the sale of the items sold hereunder or this Agreement may be brought by the Buyer more than two (2) years after such cause of action accrues.

Specifications																
Part Number	GPM (LPM)	Rated Life (hrs)	Lamp Watts	Voltage at 50/60HZ	Visual Warning	Audible Warning	# of Lamps	Port Size I/O	Water Chamber	Timer	Length	Width	Max. Pressure	Working Temp.	Wavelength	Microjoules
UV- 1C	1 (3.8)	9,000	10W	110V/220V	LED	BUZZER	1	1/4" MNPT (.635 cm)	STAINLESS 304		10.47" (26.594 cm)	2" (5.080 cm)	125 PSI 8.788 kgF/cm <sup>2</sup>	35°F <sup>-</sup> 104°F (1.67°C · 40°C)	254 nm	30 mJ/cm <sup>2</sup>
UV-2C	2 (7 <i>5</i> 7)	9,000	14W	110V/220V	LED	BUZZER	1	1/4" MNPT (.635 cm)	STAINLESS 304		13.74" (34.900 cm)	2.5" (6.350 cm)	125 PSI 8.788 kgF/cm <sup>2</sup>	35°F - 104°F (1.67°C · 40°C)	254 nm	30 mJ/cm <sup>2</sup>
UV-6C	6 (22.71)	9,000	24W	110V/220V	LED	INDICATOR W/ ALARM	1	1/2" MNPT (1.270 cm)	STAINLESS 304		23.23" (59.004 cm)	2.5" (6.350 cm)	125 PSI 8.788 kgF/cm <sup>2</sup>	35°F - 104°F (1.67°C · 40°C)	254 nm	30 mJ/cm <sup>2</sup>
UV-8C	8 (30.28)	9,000	32W	110V/220V	LED	INDICATOR W/ ALARM	1	3/4" MNPT (1.905 cm)	STAINLESS 304		27.87" (70.79 cm)	2.5" (6.350 cm)	125 PSI 8.788 kgF/cm <sup>2</sup>	35°F - 104°F (1.67°C · 40°C)	254 nm	30 mJ/cm <sup>2</sup>
UV-12C	12 (45.42)	9,000	39W	110V/220V	LED	INDICATOR W/ ALARM	1	3/4" MNPT (1.905 cm)	STAINLESS 304		36.81" (93.497 cm)	2.5" (6.350 cm)	125 PSI 8.788 kgF/cm <sup>2</sup>	35°F - 104°F (1.67°C - 40°C)	254 nm	30 mJ/cm <sup>2</sup>
UV-24B	24 (90.85)	9,000	39W	110V/220V	LED	INDICATOR W/ ALARM	2	1" MNPT (2.540 cm)	STAINLESS 304	$\checkmark$	36.93" (93.802 cm)	3.5" (8.890 cm)	125 PSI 8.788 kgF/cm <sup>2</sup>	35°F - 104°F (1.67°C · 40°C)	254 nm	30 mJ/cm <sup>2</sup>
UV-36B	36 (136.27)	9,000	39W	110V/220V	LED	INDICATOR W/ ALARM	3	1.5" MNPT (3.810 cm)	STAINLESS 304	$\checkmark$	36.93" (93.802 cm)	5.5" (13.970 cm)	125 PSI 8.788 kgF/cm <sup>2</sup>	35°F - 104°F (1.67°C <sup>-</sup> 40°C)	254 nm	30 mJ/cm <sup>2</sup>
UV-50B	50 (189.27)	9,000	39W	110V/220V	LED	INDICATOR W/ ALARM	4	1.5" MNPT (3.810 cm)	STAINLESS 304	$\checkmark$	36.93" (93.802 cm)	5.5" (13.970 cm)	125 PSI 8.788 kgF/cm <sup>2</sup>	35°F - 104°F (1.67°C · 40°C)	254 nm	30 mJ/cm <sup>2</sup>
UV-60B	60 (227.12)	9,000	39W	110V/220V	LED	INDICATOR W/ ALARM	5	2" or 2.5" (5.080 or 6.350 cm) FLANGE	STAINLESS 304	$\checkmark$	36.93" (93.802 cm)	5.5" (13.970 cm)	125 PSI 8.788 kgF/cm <sup>2</sup>	35°F - 104°F (1.67°C · 40°C)	254 nm	30 mJ/cm <sup>2</sup>
UV-80B	80 (302.83)	9,000	39W	110V/220V	LED	INDICATOR W/ ALARM	6	2" or 2.5" (5.080 or 6.350 cm) FLANGE	STAINLESS 304	$\checkmark$	36.93" (93.802 cm)	6.26" (15.900 cm)	125 PSI 8.788 kgF/cm <sup>2</sup>	35°F - 104°F (1.67°C · 40°C)	254 nm	30 mJ/cm <sup>2</sup>
UV-100B	100 (378.54)	9,000	39W	110V/220V	LED	INDICATOR W/ ALARM	8	2" or 2.5" (5.080 or 6.350 cm) FLANGE	STAINLESS 304	$\checkmark$	36.93" (93.802 cm)	8.62" (21.895 cm)	125 PSI 8.788 kgF/cm <sup>2</sup>	35°F - 104°F (1.67°C <sup>-</sup> 40°C)	254 nm	30 mJ/cm <sup>2</sup>

Parts & Accessories									
Part Number	Lamp	Quartz Sleeve	Electronic Ballast	Additional Accessories Specific to Your UV System					
UV- 1C	GL10SE4P	QS10	EB0624-110/ EB0624-220	UV-NUT-3	-	-	UV-SEAL	UV-WASHER	UV-PLUG
UV-2C	GL14SE4P	QS14	EB0624-110/ EB0624-220	UV-NUT-3	-	-	UV-SEAL	UV-WASHER	UV-PLUG
UV-6C	GL24SE4P	QS24	DCW-0604B	-	-	-	UV-SEAL	UV-WASHER	UV-PLUG
UV-8C	GL32SE4P	Q\$32	DCW-0604B	UV-NUT-1/UV-NUT-2	UV-32 SPRING	-	UV-SEAL	UV-WASHER	UV-PLUG
UV-12C	GL39SE4P	QS39	DCW-0604B	UV-NUT-1/UV-NUT-2	UV-39 SPRING	-	UV-SEAL	UV-WASHER	UV-PLUG
UV-24B	GL39SE4P	QS39	DCW-0604B	UV-NUT-1/UV-NUT-2	UV-39 SPRING	UV-TIMER	UV-SEAL	UV-WASHER	UV-PLUG
UV-36B	GL39SE4P	QS39	DCW-0604B	UV-NUT-1/UV-NUT-2	UV-39 SPRING	UV-TIMER	UV-SEAL	UV-WASHER	UV-PLUG
UV-50B	GL39SE4P	QS39	DCW-0604B	UV-NUT-1/UV-NUT-2	UV-39 SPRING	UV-TIMER	UV-SEAL	UV-WASHER	UV-PLUG
UV-60B	GL39SE4P	QS39	DCW-0604B	UV-NUT-1/UV-NUT-2	UV-39 SPRING	UV-TIMER	UV-SEAL	UV-WASHER	UV-PLUG
UV-80B	GL39SE4P	QS39	DCW-0604B	UV-NUT-1/UV-NUT-2	UV-39 SPRING	UV-TIMER	UV-SEAL	UV-WASHER	UV-PLUG
UV-100B	GL39SE4P	QS39	DCW-0604B	UV-NUT-1/UV-NUT-2	UV-39 SPRING	UV-TIMER	UV-SEAL	UV-WASHER	UV-PLUG

# Water Quality

Water quality plays a major role in the transmission of germicidal ultraviolet rays. It is recommended that the water does not exceed the following maximum concentration levels.

# **Maximum Concentration Levels**

< 0.3 ppm (0.3 mg/L)				
< 7 gpg (120 mg/L)				
< 1 NTU				
< 0.05 ppm (0.05 mg/L)				
< 0.1 ppm (0.1 mg/L)				
> 75%				

Effectively treating water with higher concentration levels than listed above can be accomplished, but may require added measures to improve water quality to treatable levels.

# UV Dose

The units generate a UV dosage of at least 30,000 microwatt-seconds per square centimeter ( $\mu$ W-s/cm<sup>2</sup>), even at the end-of-lamp life (EOL), which is more than sufficient to destroy most waterborne microorganisms, such as bacteria, yeasts, algae, etc.

UV disinfection is affected by many factors and the following should be looked at prior to the installation of the UV system; UV Transmission (transmittance) deals with the effectiveness in which the 2537 Angstrom units (254 nanometers) wavelength of the ultraviolet light is transmitted through the water. The higher the transparency of the water, the more effective the UV system becomes. This optical clarity is evaluated by performing a test which passes through a 1 cm depth. The basic design of the units has taken into account a typical transmission at the desired wavelength. In practical terms this means that a system designed to flow at 24 gallons per minute, at a typical transmissibility could actually have a higher flow rate in liquids with a higher transmissibility. As a general guideline, the following are some typical UV transmission rates (UVT):

City water supplies	85-98%
Deionized or RO water	95-98%
Surface waters (lakes, rivers, etc)	70-90%
Ground water (wells)	90-95%
Other liquids	1-99%



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