# (HYDREL)









FOUNTAIN REFLECTION POOL SWIMMING POOL







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# We produce no ordinary fixtures...

As leading designers and builders of underwater lights, Hydrel offers a special insight into the complex demands of providing efficient, durable lighting for fountains and other water effects.

Every Hydrel fixture is fashioned from superior materials, and the most advanced photometrics are incorporated into its design. Rigorous programs of quality control and final testing build in that extra dimension of performance and reliability that has been the hallmark of Hydrel units for over 50 years.

In short, we produce no ordinary fixtures.



# Hydrel offers the widest line of high quality

### Underwater fixtures for every application

Hydrel offers the widest and most varied line of underwater fixtures in the industry, including niche and base mounted lights for fountains and reflecting pools, special fixtures for wet/dry applications, and swimming pool lights.

These reliable lights are available in a variety of lamp choices and are complemented by a line of accessories and electrical equipment.

All products are designed for easy installation and servicing. All meet the National Electric Code under Article 680, and are also listed by Underwriters Laboratories and NEMKO (IEC 598) for CE Label.

This catalog presents Hydrel's complete line of underwater lights. Application and Installation information is also included.



### Swimming Pool lights

Swimming pool lights require special safeguards, which are incorporated into the versatile line of Hydrel fixtures designed specifically for commercial and residential swimming pools. These fixtures meet Hydrel's high standards for quality construction and styling as well as the rigid safety requirements for swimming pools.

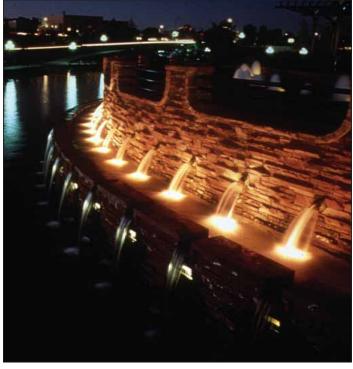
### Reflection Pool and Fountain Pool lights

Hydrel's extensive line of fountain and reflecting pool lights, in niche and base mounted styles, accommodates a wide variety of installations and water effects.

In addition to a standard range of lamp options, Hydrel has pioneered the underwater use of the quartz halogen lamp, providing a light that is especially flattering to many water effects. All fountain and reflection pool lights are designed with a temperature sensing, low water cut-off (LWC) feature to guard against overheating.



# underwater fixtures in the industry



### Wet/Dry lights

The Hydrel line of wet/dry lights is designed especially for use in areas of water features that are prone to being dry or could possibly be dry much of the time. These versatile fixtures can operate totally submerged but, unlike other underwater lights, do not depend upon water for cooling and therefore continue to operate even when water levels are low. This feature makes the wet/dry fixtures ideal for use on the edges of waterfalls, streams, or fountains and in installations with a fluctuation in water level.



#### REFLECTION POOL AND FOUNTAIN POOL LIGHTS

#### HID fixture, page 7



Niche and base mounted styles accommodate a wide variety of installations and water effects. Base mounted models are free-standing. Yoke mounted models are designed for stud or mounting bolts. Wet niche types are available in floor and wall mount models.

4428

#### Base and yoke mount fixtures, pages 7-21



#### Niche mount fixtures, pages 22-27



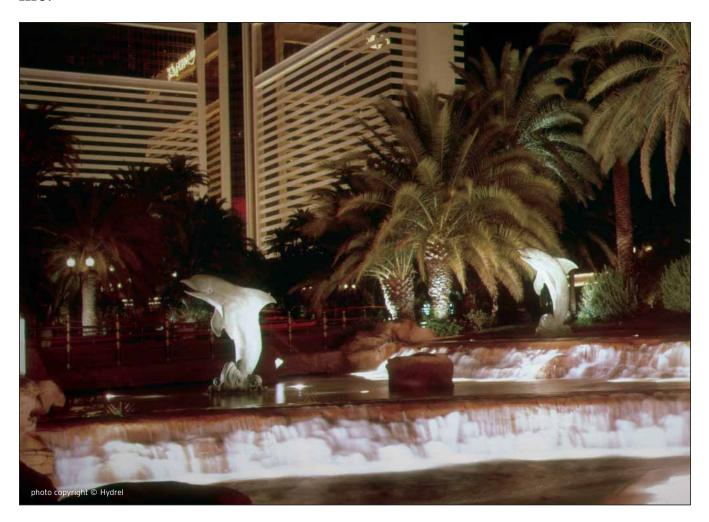


4800

Hydrel reflection pool and fountain pool lights are built to meet or surpass Underwriter Laboratories standards, as well as those of the National Electric Code and NEMKO, per standard IEC598. They meet the safety requirements for fountains and decorative pools. Reflection pool and fountain pool lighting fixtures are not intended for use in swimming pools. Additional safeguards are required for swimming pool lighting.

# 4428 - Metal Halide Fountain Light

This 175 Watt Metal Halide Fountain Light, the first HID underwater light in the industry, delivers the equivalent light output of a 1000 Watt quartz halogen lamp while consuming only one-fifth the power and attaining 21/2 times longer lamp life.



#### One-fifth the Power

Industry's first 175 Watt Metal Halide pool light provides light output equivalent to a 1000 Watt incandescent lamp but uses only one-fifth the power.

#### Over Two Times the Life

IT5 Watt HID lamp provides 10,000 hours of operation compared to 4,000 hours for a 1000 Watt quartz halogen lamp.

- Metal Halide ballast encapsulated and contained in fixture.
- · Heavy wall cast bronze construction.
- Tempered borosilicate clear lens and silicone gaskets.
- Three reflectors a 7° spot, a medium flood, and a wall wash to cover most applications.
- 7° spot produces 60,000 candelas.

- Improved color more light in blue region of the spectrum.
- Wet/Dry listed submersion not required for safe operation.
- Lockable tilt-standard.
- Minimum of 10 feet of 16 3 STW submersible cord provided.
   Cord length must be specified.
- · Lamp included.
- Also available as a niche mounted swimming pool or fountain light.

### Model 4428

#### **DESCRIPTION**

These heavy duty cast bronze underwater metal halide fixtures are the first of their kind for use in fountains, reflecting pools, and illuminating waterfalls. These units are designed to accept an E-I7, I75 Watt metal halide lamp. The integral ballast is completely sealed and encapsulated in a custom epoxy designed for this use. This unit yields a lamp life of up to 10,000 hours of operation, which exceeds any other fixture designed for fountain lighting.

#### **SPECIFICATIONS**

**FIXTURE HOUSING AND DOOR:** Heavy wall cast bronze construction. Natural cast bronze finish.

**FIXTURE BASE:** Cast bronze with 23° adjustable mechanical tilt.

**LAMP:** 175 Watt only, E-17 medium base (ANSI M57), Metal Halide. (Lamp included).

**SOCKET:** Pulse rated medium base with nickel-plated copper screwshell and  $200^{\circ}\,\mathrm{C}$  leads.

**VOLTAGE:** 120 Volt only.

**DISTRIBUTION:** Choice of Spot, Flood, or Wall Wash light distributions.

**BALLAST:** High power factor CWA core & coil ballast encapsulated into the fixture housing.

**LENS:** 83/8" diameter flat clear tempered glass, standard. Optional  $5^{\circ}$  linear spread lens.

**GASKET:** Single piece molded U-shaped silicone.

**CORD:** Minimum of 10' of #16-3 STW submersible cord. Cord entrance is epoxy encapsulated. Cord length must be specified.

**FACTORY LEAK TESTED:** All fixtures are tested at 10 PSI (0.70kg/cm2) internal pressure while totally submerged in water.

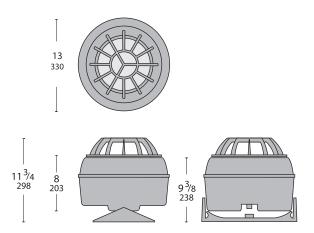
**FASTENERS:** Stainless steel.

**ACCESSORIES:** Internal Source Shield, Wall Wash Louver, Internal Honeycomb Louver, Color Filters.

LISTING: U.L.



4428



Dimensions shown in inches and millimeters.

Model	Volta	ige	Lamp	_	Voltage	Distr	ibution	Lens		Mounting	Access	- - sories <sup>3</sup>	Cord	Set Length	Lamp
4428	SWB	Bronze Salt Water Bronze	175M <sup>1</sup>	E17 MED	<b>120</b> <sup>2</sup>	SP FL WWD	Spot Flood Wall Wash Dist.		Flat Lens Clear Flat Lens 5° spread	BM Base Mount	ISS WWL	Internal Source Shield (Spot only) Wall Wash Louver (WWD only)		10' - 120' of cord available in 5' increments	LP Lamp Installed
											IHL	Internal Honeycomb Louver			
												Color Filter Amber			
											CFBLU	Color Filter Blue			
											CFGRN	Color Filter Green			
											CFRED	Color Filter Red			

Available in 175W Metal Halide only

Available in 120V only
Only one accessory per fixture

### Model 4427

#### **DESCRIPTION**

The 4427 is a heavy-duty, all cast bronze, 1000 Watt quartz halogen fixture for fountain or water effect applications. Yoke mount model accepts 3/8" diameter stud or mounting bolt. Base mount model includes 12" diameter cast bronze base with provisions for floor anchor bolts. Unit is capable of up to 180° of vertical adjustment. Rock guard is standard on both yoke and base mount models.

#### **SPECIFICATIONS**

FIXTURE HOUSING AND ROCK GUARD: Heavy wall cast bronze construction. Natural bronze finish.

LAMP: 120 Volt, PAR 64, 1000 Watt max., Quartz Halogen. (Lamp included).

**SOCKET:** Mogul end prong type with 200°C insulated leads.

**LENS:** 83/8" diameter convex clear tempered heat resistant glass. Amber, blue, green, and red lenses also available.

**GASKET:** Single-piece molded U-shaped silicone.

CORD: Minimum of 10' of #16-3 STW submersible cord. Cord entrance is brass, watertight seal, and epoxy encapsulated.Cord length must be specified.

FACTORY LEAK TESTED: All fixtures are tested at 10 PSI (0.70kg/ cm2) internal pressure while totally submerged in water.

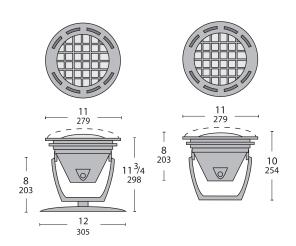
LOW WATER CUT-OFF: Temperature sensing Low Water Cutoff standard.

**FASTENERS:** Stainless steel.

LISTING: U.L., CSA



4427



#### **BASE MOUNT**

YOKE MOUNT

Dimensions shown in inches and millimeters.

	$\perp$
Model	Material

Bronze SWB Salt Water Bronze

P64500I PAR64 MGEP P6410001 PAR64 MGEP

Distribution

MFL Medium Flood CLC 2 Narrow Spot WFL Wide Flood

Convex Lens Clear Convex Lens Amber CLB Convex Lens Blue Convex Lens Green

Convex Lens Red

Mounting

BM Base Mount ALB

Mounting Acc.3 Adjustable

Locking Base 4"- 24" Riser Stem avail, in 2" increments Cord Set Length

10' - 120' of cord available in 5' increments

Lamp

LPI Lamp

Listing Standard Assoc

P641000I - default

CLC - default

Mounting Accessories w/ BM only RSR6 - default with ALB

### Model 4424

#### **DESCRIPTION**

The 4424 is a heavy-duty, cast bronze fixture suitable for fountain or water effect applications. l20 Volt model accepts a 500 Watt PAR 56 quartz halogen lamp or a 300 Watt PAR 56 incandescent lamp. l2 Volt model accepts a PAR 56 screw terminal lamp to 300 Watts max. Yoke mount model accepts  $3/8^{\prime\prime}$  diameter stud or mounting bolt. Base mount model includes l2"diameter cast bronze base with provisions for floor anchor bolts. Unit is capable of up to l80° of vertical adjustment. Rock guard is standard on both yoke and base mount models.

(Now includes Model 4422)

#### **SPECIFICATIONS**

**FIXTURE HOUSING AND DOOR:** Heavy wall cast bronze construction. Natural bronze finish.

**LAMP:** 120 Volt: PAR 56, 500 Watt Quartz Halogen. 12 Volt: PAR 56, 300 Watt max., Quartz Halogen. (Lamp included).

**SOCKET:** 120 Volt: Mogul end prong with 200 °C insulated leads. 12 Volt: Screw terminal.

**LENS:** 83/8" diameter convex clear tempered heat resistant glass. Amber, blue, green, or red lenses also available.

**GASKET:** Single-piece molded U-shaped silicone.

 ${\bf CORD:}$  Minimum of 10' of #10-3 STW for US standard, 3m HO7RN-F-2x4mm2 for European standard submersible cord for 12 Volt fixtures. Minimum of 10' of #16-3 STW for US standard submersible cord for 120 Volt fixtures. Cord entrance is brass, water-tight seal and epoxy encapsulated. Cord length must be specified.

**FACTORY LEAK TESTED:** All fixtures are tested at 10 PSI (0.70kg/cm2) internal pressure while totally submerged in water.

**LOW WATER CUT-OFF:** Temperature sensing Low Water Cutoff standard.

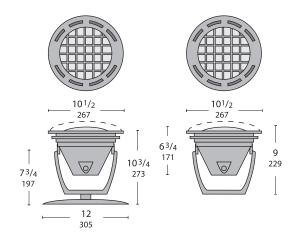
**FASTENERS:** Stainless steel.

LISTING: U.L., CSA, CE, CB, NEMKO



IP-68 √/4M ↓ ↓ ↓ 4424

C € CB APPROVED (N)
Lamp Included



BASE MOUNT YOKE MOUNT

Model	 Material	Lamp Type	Voltage	Distribution	Lens	Mounting	Mounting Acc. <sup>4</sup>	Cord Set Length	Lamp	Options
4424	B Bronze SWB Salt Water Bronze	Incandescent	120 12 <sup>2</sup>	MFL Medium Flood NSP Narrow Spot WFL Wide Flood	CLC <sup>3</sup> Convex Lens Clear CLA Convex Lens Amber CLB Convex Lens Blue CLG Convex Lens Green CLC Convex Lens Green	BM Base Mount YM Yoke Mount	ALB Adjustable Locking Base  RSR_ 5 4" - 24" Riser Stem avail. in 2" increments  1 P565001 - default for 120V 2 P56300ILV - default for 12V. Ti 3 CLC - default 4 Mounting Accessories w/ BM-15 5 RSR6 - default with ALB 6 CLS50 - max for 12V 7 Available in 12V only		Included	Listing CSA Canadian Standard Assoc. IEC* International Electrotechnical Commission  HPDREL

### Model 4421

#### **DESCRIPTION**

The 4421 series is ideal for shallow pool installations. Designed for the 120 Volt T-4 mini-can quartz halogen lamp to 500 Watt max. It is compact in size with an overall height of 83/8". The standard unit employs a medium-angle flood pattern reflector of chrome plated spun copper.

#### **SPECIFICATIONS**

FIXTURE HOUSING AND DOOR: Heavy wall cast bronze construction. Natural bronze finish.

**LAMP:** 120 Volt, T-4 mini-can, 500 Watt max. (Lamp included).

**SOCKET:** Mini-can base type with 200°C insulated leads.

**DISTRIBUTION:** Reflector is parabolic chrome plated spun copper.

LENS: 7 9/16 diam. convex clear tempered heat resistant glass. Amber, blue, green, and red lenses available.

**GASKET:** Single-piece molded U-shaped silicone.

CORD: Minimum of 10' of #16-3 STW submersible cord. Cord entrance is brass, watertight seal, and epoxy encapsulated. Cord length must be specified.

**FACTORY LEAK TESTED:** All fixtures are tested at 10 PSI (0.70kg/ cm2) internal pressure while totally submerged in water.

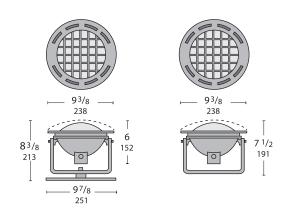
LOW WATER CUT-OFF: Temperature sensing Low Water Cutoff standard.

FASTENERS: Stainless steel.

LISTING: U.L., CSA



4421



**BASE MOUNT** YOKE MOUNT

Dimensions shown in inches and millimeters.

Model	Lamp Type	Voltage	Lens	Mounting	Mounting Acc. <sup>3</sup>	Cord Set Length	Lamp	Options
4421	100Q T4 Mini-can 150Q T4 Mini-can 250Q T4 Mini-can 400Q T4 Mini-can 500Q T4 Mini-can		CLC <sup>2</sup> Convex Lens Clear CLA Convex Lens Amber CLB Convex Lens Blue CLG Convex Lens Green CLR Convex Lens Red	BM Base Mount YM Yoke Mount	ALB Adjustable Locking Base RSR_4 4"- 24" Riser Stem avail. in 2" increments	CSL 10' - 120' of cord available in 5' increments	LPI Lamp Included	<b>Listing CSA</b> Canadial Standard Assoc.

<sup>500</sup>Q - default

RSR6 - default

(HYDREL)

CLC - default

Mount Accessories w / base mount only

### Model 44l3

#### **DESCRIPTION**

The 44l3 low profile fountain light is a preferred option among the line of Hydrel's quartz halogen underwater lighting fixtures. This high performance fixture meets the fountain requirements for high light output, low profile, and adjustability with Hydrel's AIM-Lock<sup>TM</sup> System. The unit is capable of  $360^{\circ}$  of rotational and  $90^{\circ}$  from vertical adjustment. Rock guard is integral.

(Now includes Model 44l4)

#### **SPECIFICATIONS**

**FIXTURE HOUSING, ROCK GUARD, AND BASE:** Heavy wall cast bronze construction. Natural bronze finish.

**ADJUSTABILITY:** Four mounting heights,  $360^{\circ}$  rotational and  $0^{\circ}$ - $90^{\circ}$  from vertical adjustment. AIM-Lock<sup>TM</sup> enables fixture to be relamped without changing aim setting.

**LAMP:** 120 Volt, 400 Watt max. RSC double ended Quartz Halogen (maximum overall length of 31/8"); 500 Watt max., T4 Mini-can, Quartz Halogen. (Lamp included).

**SOCKET:** Two porcelain recessed single contact (RSC) or porcelain with nickel mini-can screwshell (MC), 200°C leads.

**DISTRIBUTION:** Reflector is polished aluminum specular Alzak<sup>®</sup>. Spot or diffuse Alzak<sup>®</sup> Flood.

**LENS:** Flat tempered borosilicate - clear. Amber, green, or red lenses also available.

**GASKET:** Single-piece molded U-shaped silicone.

**CORD:** Minimum of 10' of 16-3 STW submersible cord. Cord entrance is epoxy encapsulated with internal strain relief. Cord length must be specified.

**FACTORY LEAK TESTED:** All fixtures are tested at  $10 \, PSI \, (0.70 \, kg/cm2)$  internal pressure while totally submerged in water.

**LOW WATER CUT-OFF:** Temperature sensing Low Water Cutoff standard.

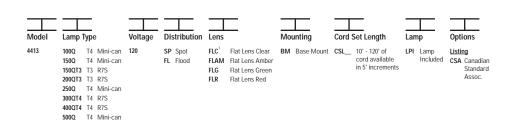
**FASTENERS:** Stainless steel.

LISTING: U.L., CSA



4413





### Model 44ll

#### **DESCRIPTION**

The 44ll fountain light is an added result of Hydrel's development of quartz halogen underwater lighting. This high performance fixture meets the fountain requirements for high light output, low-profile, and adjustability. The cast bronze base, with riser, can be specified to maximum mounting height of 24". The unit utilizes a quartz halogen, T-4 Mini-can lamp to 250 Watts and a spot distribution. Rock guard is integral.

#### **SPECIFICATIONS**

FIXTURE HOUSING, INTEGRAL ROCK GUARD AND BASE: Heavy wall cast bronze construction. Natural bronze finish.

**REFLECTOR:** Polished aluminum specular Alzak®

ADJUSTABILITY: Height adjustable. Rotational adjustment 0-90°. fixture removed for re-lamping via single pull pin.

**LAMP:** 120 Volt, T-4 mini-can, 100, 150, or 250 Watt Quartz Halogen. (Lamp included).

**SOCKET:** Porcelain with nickel mini-can screwshell, 200°C insulated leads.

**LENS:** Flat clear tempered borosilicate.

**GASKET:** Single-piece molded U-shaped silicone.

CORD: Minimum of 10' of #16-3 STW underwater cable. Cord entrance is epoxy encapsulated with external strain relief. Cord length must be specified.

**FACTORY LEAK TESTED:** All fixtures are tested at 10 PSI (0.70kg/ cm2) internal pressure while totally submerged in water.

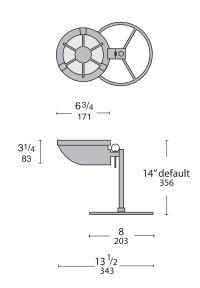
LOW WATER CUT-OFF: Temperature sensing Low Water Cutoff standard.

**FASTENERS:** Stainless steel.

LISTING: U.L., CSA



4411



Dimensions shown in inches and millimeters.

Lamp Type 4411 1000 T4 Mini-can 150Q T4 Mini-can

250Q 1 T4 Mini-can

Mounting

Mounting Accessories BM Base Mount RSR\_2 4"- 24" Riser Stem

Cord Set Length 10' - 120' of

LPI Lamp Included in 5' increments

Listing CSA Canadian Standard

### Model 4418

#### **DESCRIPTION**

The 44l8 heavy-duty cast bronze underwater fixture is ideal for use in small fountains, waterfalls, or reflection pools. It is designed for medium base PAR 38 incandescent lamps. Yoke mount model accepts 3/8" diameter stud or mounting bolt. Base mount model includes 97/8" diameter cast bronze base. Unit is capable of up to 180° of vertical adjustment. Rock guard is standard on both yoke and base mount models.

#### **SPECIFICATIONS**

FIXTURE HOUSING AND ROCK GUARD: Heavy wall cast bronze construction. Natural bronze finish.

LAMP: 120 Volt, PAR38,100, 150 or 250 Watt Incandescent. (Lamp included).

**SOCKET:** Porcelain medium screw base with nickel plated copper shell, 200°C insulated leads.

**LENS:** 61/2" diameter, clear tempered heat resistant glass. Amber, blue, green, and red lenses also available.

**GASKET:** Single-piece molded U-shaped silicone.

CORD: Minimum of 10' of #16-3 STW submersible cord. Cord entrance is brass, watertight seal, and epoxy encapsulated. Cord length must be specified.

FACTORY LEAK TESTED: All fixtures are tested at 10 PSI (0.70kg/ cm2) internal pressure while totally submerged in water.

LOW WATER CUT-OFF: Temperature sensing Low Water Cutoff standard.

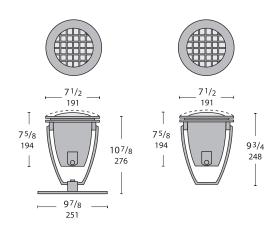
**FASTENERS:** Stainless steel.

ACCESSORIES: Adjustable Locking Base, Riser Stems.

LISTING: U.L., CSA



4418



#### **BASE MOUNT**

YOKE MOUNT

Model	Lamp Type	Voltage	Distribution	Lens	Mounting	Mounting Acc. <sup>3</sup>	Cord Set Length	Lamp	Options
4418	P38100I         PAR38         Med.           P38150I         PAR38         Med.           P38250I         PAR38         Med.	120	SP Spot FL Flood	CLC <sup>2</sup> Convex Lens Clear CLA Convex Lens Amber CLB Convex Lens Blue CLG Convex Lens Green CLR Convex Lens Red	BM Base Mount YM Yoke Mount	ALB Adjustable Locking Base  RSR_4 4"- 24" Riser Stem avail. in 2" increments	CSL 10' - 120' of cord available in 5' increments	LPI Lamp Included	<b>Listing CSA</b> Canadian Standard Assoc.

P38250I - default

CLC - default

Mount Accessories w / base mount only

RSR6 - default with ALB

### Model 44l2

#### **DESCRIPTION**

The decorative 4412 fountain light offers both vertical and horizontal mounting and uses 120 Volt, 116 Watt or 12 Volt, 50 Watt low voltage incandescent lamps. It is provided with a patterned cast bronze leaf for light source concealment.

#### **SPECIFICATIONS**

FIXTURE HOUSING, BASE, AND LILY PAD GUARD: Heavy wall cast bronze construction. Lily pad rock guard standard. Natural bronze finish.

LAMP: 120 Volt: medium screw base A-19 or A-21, 116 Watt max. Incandescent. 12 Volt: medium screw base A-21,50 Watt max. (Lamp included).

**SOCKET:** Porcelain medium screw base with nickel plated copper shell, 200°C insulated leads.

**LENS:** Heat resistant clear glass globe.

**GASKET:** Two-piece molded silicone.

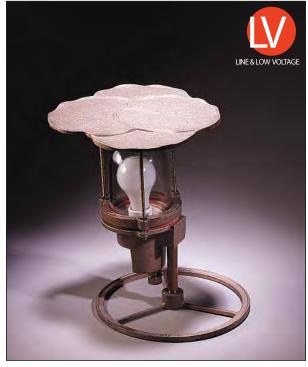
**CORD:** Minimum of 10' of #16-3 STW submersible cord for U.S. standard. Cord entrance is brass, watertight seal, and epoxy encapsulated. Cord length must be specified.

FACTORY LEAK TESTED: All fixtures are tested at 10 PSI (0.70kg/ cm2) internal pressure while totally submerged in water.

LOW WATER CUT-OFF: Temperature sensing Low Water Cutoff standard.

**FASTENERS:** Stainless steel.

LISTING: U.L.

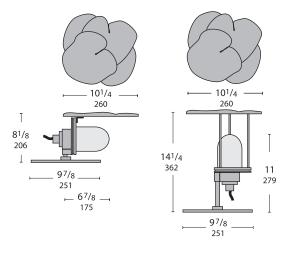


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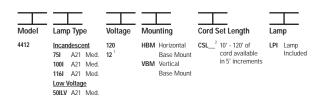
4412 VBM



4412 HBM



HORIZONTAL MOUNT **VERTICAL MOUNT** 



Transformer not included, sold separately CSL50 is max. cord length for 12V fixtures

### Model 4410

#### **DESCRIPTION**

The 4410 all cast bronze fixture is compact and offers complete angular adjustability. This fixture is designed for use with a PAR 36, 12 Volt lamp to 50 Watts. Yoke mount model accepts 3/8" diameter stud or mounting bolt. Base mount model includes brass staff and 8" diameter cast bronze base with provisions for floor anchor bolts. Unit is capable of up to  $180^{\circ}$  of vertical adjustment. Rock guard is standard on both yoke and base mount models. (Lamp included).

#### **SPECIFICATIONS**

**FIXTURE HOUSING AND ROCK GUARD:** Heavy wall cast bronze construction. Natural bronze finish.

**LAMP:**12 Volt, PAR 36 sealed beam, flood or spot distribution 50 Watt incandescent. (Lamp included).

**SOCKET:** Screw terminals with 200°C insulated leads.

**LENS:** Lamp face forms lens.

**GASKET:** Single-piece molded wedge-shaped silicone ring.

**CORD:** Minimum of 10' of #16-3 STW submersible cord. Cord entrance is epoxy encapsulated. Cord length must be specified.

**FACTORY LEAK TESTED:** All fixtures are tested at 10 PSI (0.70kg/cm2) internal pressure while totally submerged in water.

**LOW WATER CUT-OFF:** Temperature sensing Low Water Cutoff standard.

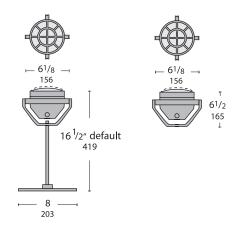
**FASTENERS:** Stainless steel.

**ACCESSORIES:** Amber, blue, green, or red color filters available.

LISTING: U.L.



4410



BASE MOUNT

YOKE MOUNT

Model	Lamp Type	Voltage	Distribution	Mounting	Mounting Acc. 4	Acces	sories	Cord Set Length	Lan	np
4410	P3650ILV PAR36 Screw	<b>12</b> <sup>1</sup>	SP Spot FL <sup>2</sup> Flood	BM Base Mount YM Yoke Mount	RSR_3 4"- 24" Riser Stem avail. in 2" increments	CFAMB CFBLU CFGRN CFRED	Color Filter Amber Color Filter Blue Color Filter Green Color Filter Red	CSL 10' - 50' of cord available in 5' increments	LP	Lamp Installed

Transformer sold separately

FL - default

<sup>3</sup> RSR10 - default

Mount Accessories w / base mount only

### Model 4800

#### **DESCRIPTION**

The 4800 Series base or yoke mounted fixture is smaller in size than conventional units and can operate in as little as 10" of water. It uses 120 Volt, 100 Watt or 150 Watt quartz halogen lamps or a 12 Volt, 75 Watt MR-16 quartz halogen lamp. Rock guard is standard. (Lamp included).

(Formerly Models 4846, 4847, 4848)

#### **SPECIFICATIONS**

**FIXTURE HOUSING AND ROCK GUARD:** Stainless steel housing with heavy wall cast bronze rock guard door assembly. Yoke and base are heavy wall cast bronze.

**LAMP:** 120 Volt: T-4,150 Watt max., Quartz Halogen. 12 Volt: MR-16, 75 Watt max., Quartz Halogen. (Lamp included).

**SOCKET:** 120 Volt: Mini-can, screw base. 12 Volt: bipin GX5.3.

**LENS:** 31/8" diameter, flat clear tempered borosilicate. Clear fresnel spread, amber, blue, green, and red lenses also available. Colored lenses are not fresnel.

**GASKET:** Single-piece molded U-shaped silicone.

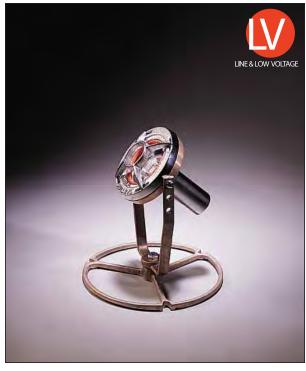
**CORD:** Minimum of 10' of #16-3 STW submersible cord for U.S. standard, 3m of HO7RN-F-2x4mm2 for European standard. Cord entrance is epoxy encapsulated. Cord length must be specified.

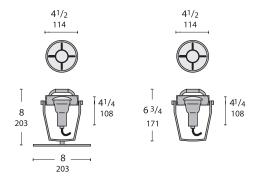
**FACTORY LEAK TESTED:** All fixtures are tested at 10 PSI (0.70kg/cm2) internal pressure while totally submerged in water.

**LOW WATER CUT-OFF:** Temperature sensing Low Water Cut-off standard.

FASTENERS: Stainless steel.

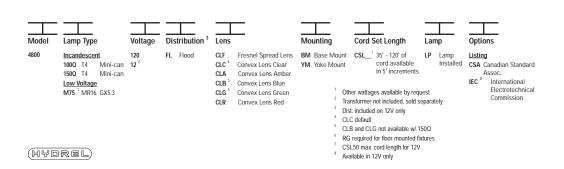
LISTING: U.L., CSA, CE, CB, NEMKO





**BASE MOUNT** 

YOKE MOUNT



## Model 4409

#### **DESCRIPTION**

The 4409 compact, heavy-duty cast bronze fountain light is ideal for up-lighting small water-effect features. It utilizes a low voltage quartz halogen bi-pin lamp to l00 Watts. l20 Volt fixtures include integral, dimmable transformer.

#### **SPECIFICATIONS**

**FIXTURE HOUSING, ROCK GUARD, AND BASE:** Heavy wall cast bronze construction. Natural bronze finish.

**LAMP:** 12 Volt, 100 Watt max., T-3, bi-pin Halogen. (Lamp included).

**SOCKET:** Ceramic GY6.35 bipin mount. Nickel contacts.

**TRANSFORMER:** 120 Volt to 12 Volt integral, dimmable, electronic, fully encapsulated. 12 Volt fixtures require transformer, sold separately

**LENS:** Borosilicate tempered glass.

**GASKET:** Single-piece silicone O-ring.

**CORD:** Minimum of 10' of #16-3 STW submersible cord for U.S. standard. Cord entrance is epoxy encapsulated. Cord length must be specified.

**FACTORY LEAK TESTED:** All fixtures are tested at 10 PSI (0.70kg/cm2) internal pressure while totally submerged in water.

**LOW WATER CUT-OFF:** Temperature sensing Low Water Cutoff standard.

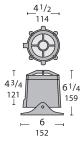
**FASTENERS:** Stainless steel.

**ACCESSORIES:** Amber, blue, green, or red color filters available.

LISTING: U.L., CUL



4409



	lounting Acces	ssories	Cord Set Length	Lamp	Options
4409 75QT3 GY6.35 120 1 FLC Flat Lens Clear BM Bi-pin 12 2 100QT3 GY6.35 Bi-pin	M Base Mount CFAMB CFBLU CFGRN CFRED	Color Filter Blue	CSL 10' - 120' of cord available in 5' increments	LP Lamp Installed	Listing CUL Canadian Underwriters Lab.

Integral transformer included

<sup>&</sup>lt;sup>2</sup> Transformer not included, sold separately

## Model 4415

#### **DESCRIPTION**

The 44l5 Fountain and Reflecting Pool light is a versitile light source offering a low profile and wide range of lamping options.small,  $12\,\mathrm{Volt}$  wet/dry fixture that uses three MR-16, 75 Watt max. quartz lamps. It is available in both  $120\,\mathrm{Volt}$  and  $12\,\mathrm{Volt}$ .

#### **SPECIFICATIONS**

**FIXTURE HOUSING, ROCK GUARD, AND BASE:** Heavy wall construction. Natural bronze finish.

**LAMP:** 120 Volt: A21,116 Volt max. incandescent or 300W max. T-3 Quartz. 12 Volt: (3) MR-16, 75 Watt max., Quartz Halogen. (Lamps included).

**SOCKETS:** Incandescent: medium base, Quartz: RSC single contact base, MRl6-GX 5.3, Bi-pin.

**LENS:** Tempered heat borosicilicate diffused glass.

 $\textbf{GASKET:} \ Single-piece \ molded \ U-shaped \ silicone.$ 

**CORD:** Minimum of 10' of #10-3 ST for US standard, 3m HO7RN-F-2x4mm2 for European standard submersible cord for 12 Volt fixtures. Minimum of 10' of #16-3 ST for US standard submersible cord for 120 Volt fixtures. Cord entrance is brass, water-tight seal and epoxy encapsulated. Cord length must be specified.

**FACTORY LEAK TESTED:** All fixtures are tested at 10 PSI (0.70kg/cm2) internal pressure while totally submerged in water.

**LOW WATER CUT-OFF:** Temperature sensing Low Water Cut-off standard.

**FASTENERS:** Stainless steel.

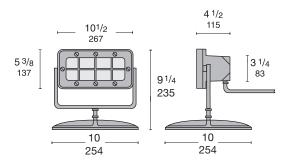
**ACCESSORIES:** Adjustable Locking Base, Riser Stems.

**FINISH:** Black heat-dissipating Hender Lube on the body, door, and yoke base assembly.

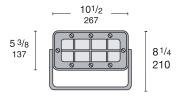
LISTING: U.L.



4415



#### **BASE MOUNT**



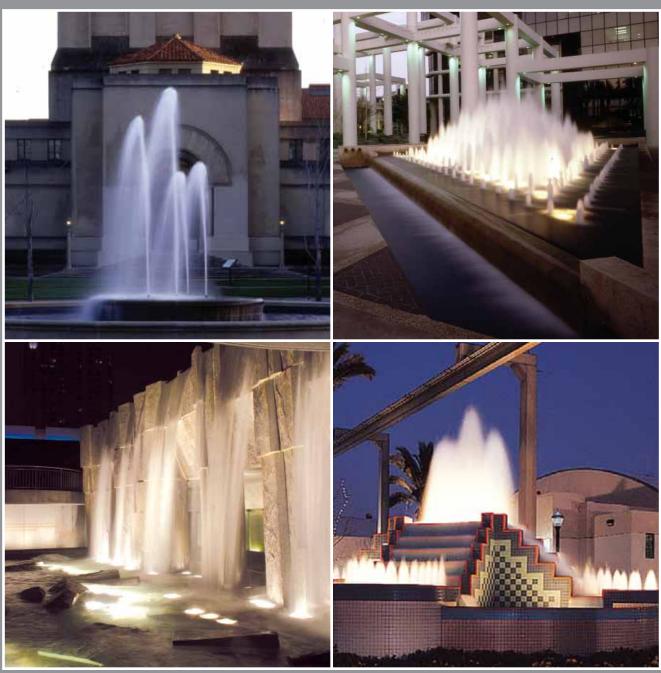
YOKE MOUNT

Dimensions shown in inches and millimeters.

Model	Lamp Type	Voltage Distr. <sup>2</sup>	Mounting	Mounting Acc. <sup>3</sup>	Cord Set Length	Lamp	Options
4415	116I     116W     A21     Med.       200Q     200W     T3     RSC       300Q     300W     T3     RSC       3/M50     3-50W     MR16     GX5.3       3/M75     3-75W     MR16     GX5.3	12 <sup>1</sup> FL Flood 120	BM Base Mount YM Yoke Mount	ALB Adjustable Locking Base RSR_4 4*- 24* Riser Stem avail. in 2* increments	CSL <sup>5</sup> 10' - 50' of cord available in 5' increments	LPI Lamp Included	CSA Canadian Standard Assoc. IEC International Electrotechnical Commission

- <sup>1</sup> Transformer not included, sold separately
- Other Distributions available for the 3/M75 and 3M50 only
- Available w/ Base mount only RSR6 default with ALB
- 50' max. cord length for 12V fixtures

(HYDREL)



photos copyright © Hydrel

# Model 4426 LED RGB Color Changing

#### **DESCRIPTION**

The 4426 Base Mount is designed for use in fountains, reflecting pools, and illuminating waterfalls. This unit uses a Red, Green, and Blue (RGB) underwater color balanced LED array to create DMX controlled color changing lighting effects. Color control is achieved through four channels per fixture, standard DMX512 hardware, at a maximum of 44 frames per second. All channels have logarithmic power for finer color and intensity control. The fourth channel, Intensity, allows the user to vary brightness without affecting the color. The integral power supply and DMX control modules are enclosed in an attached sealed bronze combination box. The proprietary DMX control module senses the LED temperature and adjusts the LED power accordingly to yield a lamp life of up to 50,000 hours of operation. This lamp life exceeds any other fixture designed for this use. For power and signal hook-up, the integral combination box includes a minimum of 10' of submersible rated power cable and a minimum of 10' of submersible rated DMX signal cable.

#### **SPECIFICATIONS**

**FIXTURE HOUSING, ROCK GUARD, AND BASE:** Heavy wall construction. Natural bronze finish.

**LED TYPE:** 60 Watt RGB LED array. (LED Board included).

**CONTROL:** Standard DMX512. 3-Channels per fixture: Red, Blue, Green or 4-channels per fixture: Red, Green, Blue and Intensity.

COMMUNICATION TO FIXTURE: DMX512 direct.

**VOLTAGE:** 120VAC 60HZ only.

**LENS:** Clear Flat Tempered Borosilicate.

**GASKET:** Single piece molded U-shaped silicone gasket.

**CORD:** Minimum of 10' of #16/3ST submersible rated cord for standard 120VAC line, minimum of 25' of submersible rated data cord for DMX512 signal. Cord entrance is epoxy encapsulated. Cord length must be specified.

**FACTORY LEAK TESTED:** Fixtures are tested at 10 PSI (0.70kg/cm2) internal pressure while totally submerged in water.

**LOW WATER PROTECTION:** Temperature sensing circuit reduces power to LEDs to prevent damage.

FASTENERS: Stainless steel.

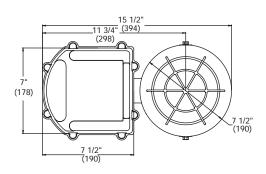
LISTING: U.L.

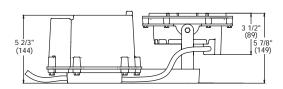


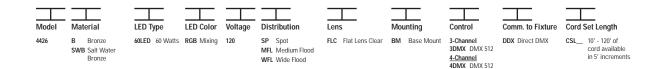
IP-68 <sup>▽</sup>/<sub>4M</sub> ••

4426 BM









Junction Box (Sold Separately)

<sup>&</sup>lt;sup>2</sup> DMX Distribution Components and Signal Generator (by others)

Fixture cables (Power and Signal) connect to separate junction boxes
 a) First Run - 120V Power Supply
 b) Second Run - DMX512 Signal

# Model 4426 LED Monochromatic

#### **DESCRIPTION**

The 4426 Base Mount is designed for use in fountains, reflecting pools, and illuminating waterfalls. These units offer cool white, warm white, amber, blue, cyan, green, royal blue and red monochromatic colors. The system shall be composed of two components: 1) LED array board and 2) Driver. The LED Driver powers via constant voltage or constant current. With a constant current driver, LED lumen output does not change with temperature variations. Hydrel's monochromatic system is a non-dimming, one color light output.

#### **SPECIFICATIONS**

**FIXTURE HOUSING, ROCK GUARD, AND BASE:** Heavy wall cast bronze construction. Natural cast bronze finish.

**LED TYPE:** 60 Watt monochromatic LED. (LED Board included).

LAMP: 120VAC 60HZ only.

**LENS:** Clear Flat Tempered Borosilicate.

**GASKET:** Single piece molded U-shaped silicone gasket.

**CORD:** Minimum of 10' of #16/3ST submersible rated cord for standard 120VAC line. Cord entrance is epoxy encapsulated. Cord length must be specified.

**FACTORY LEAK TESTED:** Fixtures are tested at 10 PSI (0.70kg/cm2) internal pressure while totally submerged in water.

**LOW WATER PROTECTION:** Temperature sensing circuit reduces power to LEDs to prevent damage.

GRN Green RBL Royal

RED Red

Royal Blue

**FASTENERS:** Stainless steel.

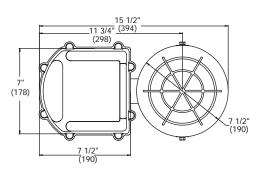
LISTING: U.L.

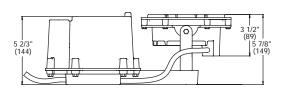


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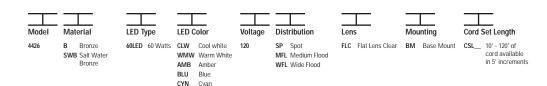
4426 BM







Dimensions shown in inches and millimeters.



### Model 4424

#### **DESCRIPTION**

This heavy-duty cast bronze fixture, with stainless steel formed niche is designed for wet niche installation in floors or walls of fountain pools. It is available in 120 Volt to 500 Watts and 12 Volt to 300 Watts. Fixture is provided with clear tempered lens, silicone gasket, submersible cord, and water-tight brass cord entrance. Fixture is positively locked in niche housing, provided with cast bronze mounting ring, conduit entrance, and grounding lug.

(Now includes Model 4422)

#### **SPECIFICATIONS**

**FIXTURE HOUSING, DOOR AND ELECTRO GRID:** Heavy wall cast bronze construction. Natural bronze finish.

**NICHE:** Stainless steel with cast bronze mounting ring, which locks the fixture into position. Four ears are included for tie to forms or steel structural rods. Pressure grounding lug on interior and exterior surfaces. Conduit entrance 3/4" NPT with 3/4"x1/2" NPT reducer bushing supplied.

**LAMP:** 120 Volt: PAR56,500 Watt max. 12 Volt: PAR56,300 Watt max. (Lamp included).

**SOCKET:** 120 Volt: Mogul prong type with  $200^{\circ}$ C insulated leads. 12 Volt: Terminal connectors with  $200^{\circ}$ C insulated leads.

**LENS:** 8 3/8" diameter convex clear tempered heat resistant glass. Amber, blue, green, and red lenses also available.

**GASKET:** Single-piece molded U-shaped silicone.

**CORD:** Minimum of 35' of #10–3 STW for US standard, 10m HO7RN-F-2x6mm2 for European standard submersible cord for l2V fixtures. Minimum of 35' of #16–3 STW for US standard submersible cord for l20V fixtures. Cord entrance is brass, water-tight seal and epoxy encapsulated. Cord length must be specified. Sufficient cord should be coiled in the fixture niche to allow for the removal of fixture to above water level for relamping.

**FACTORY LEAK TESTED:** All fixtures are tested at 10 PSI (0.70kg/cm2) internal pressure while totally submerged in water.

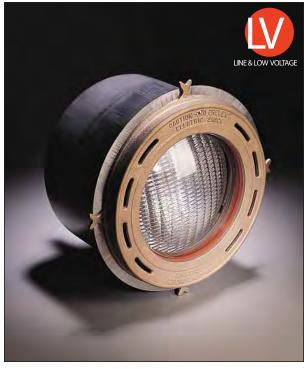
**LOW WATER CUT-OFF:** Temperature sensing Low Water Cutoff standard.

**FASTENERS:** Stainless steel.

ACCESSORIES: Cast bronze exterior Rock Guard available. Rock

Guard required for floor mounted fixtures.

LISTING: U.L., CSA, CE, CB, NEMKO



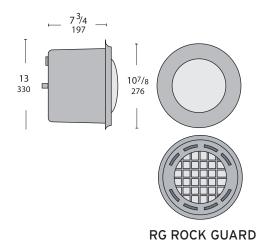
IP-68  $\frac{\nabla}{4\text{M}}$  11 LOW VOLTAGE

4424

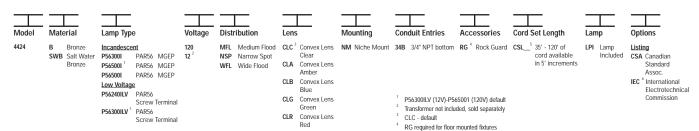


CSL50 max. cord length for 12V

Available in 12V only



Dimensions shown in inches and millimeters.



(HYDREL)

### Model 4421

#### **DESCRIPTION**

The 442l is a wet niche mounted 500 Watt max. quartz halogen fixture. This unit is designed for installation in floors or walls of fountain pools or water effects.

#### **SPECIFICATIONS**

FIXTURE HOUSING AND DOOR: Heavy wall cast bronze construction. Natural bronze finish.

NICHE: Stainless steel with cast bronze mounting ring with provision for positive locking of fixture in position and four ears for tying to forms or steel structural rods. Pressure grounding lug on interior and exterior surfaces. Conduit entrance 3/4" NPT with 3/4"x1/2" NPT reducer.

120 Volt, T-4 mini-can, 100, 150, 250, 400, or 500 Watt LAMP: Quartz Halogen. (Lamp included).

**SOCKET:** Mini-can screw base with 200°C insulated leads.

Distribution: Reflector is parabolic spun copper, chrome plated.

**LENS:** 7 9/16" diameter convex clear tempered heat resistant glass. Amber, blue, green, and red lenses also available.

**GASKET:** Single-piece molded U-shaped silicone.

CORD: Minimum of 35' of #16-3 STW submersible cord. Cord entrance is brass, watertight seal, and epoxy encapsulated. Cord length must be specified. Sufficient cord must be coiled in the niche to allow for the removal of the fixture to above water level for relamping.

**FACTORY LEAK TESTED:** All fixtures are tested at 10 PSI (0.70kg/ cm2) internal pressure while totally submerged in water.

LOW WATER CUT-OFF: Temperature sensing Low Water Cutoff standard.

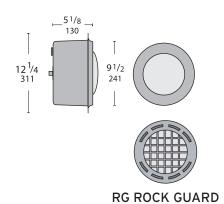
**FASTENERS:** Stainless steel.

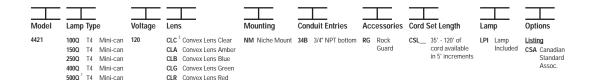
ACCESSORIES: Cast bronze exterior Rock Guard available. Rock Guard required for floor mounted fixtures.

LISTING: U.L., CSA



4421





### Model 44l3

#### **DESCRIPTION**

The 44l3 wet niche light is a preferred option among the line of Hydrel's quartz halogen underwater lighting fixtures. This high performance fixture meets the fountain requirements for high light output, low profile, and adjustability with Hydrel's AIM-Lock<sup>TM</sup> System. The unit utilizes a quartz halogen lamp to 500 Watts with a choice of two light distributions and is capable of up to 360° of rotational and 45° from vertical adjustment. Rock guard is integral. (Now includes Model 44l4)

#### **SPECIFICATIONS**

**FIXTURE HOUSING AND ROCK GUARD:** Heavy wall cast bronze construction. Natural bronze finish.

**NICHE:** Spun copper with cast bronze niche ring. 3/4" conduit hubs are available in the bottom at  $45^{\circ}$ , or in the side with 3/4" xV2" NPT reducer. Hub in bottom standard. Pressure grounding lug on interior and exterior surfaces.

**ADJUSTABILITY:**  $360^{\circ}$  angular adjustment,  $45^{\circ}$  from vertical. AIM-Lock<sup>TM</sup> enables fixture to be relamped without changing aim setting.

**LAMP:** 120 Volt, 400 Watt max. RSC double ended Quartz Halogen (maximum overall length of 31/8"); 500 Watt max., T4 Mini-can, Quartz Halogen. (Lamp included).

**SOCKET:** Two porcelain recessed single contact (RSC), porcelain with nickel mini-can screwshell (MC),  $200^{\circ}$ C leads.

**DISTRIBUTION:** Reflector is polished aluminum specular Alzak<sup>®</sup>. Spot or Diffuse Alzak<sup>®</sup> Flood available.

**LENS:** Flat tempered borosilicate-clear. Amber, green, or red lenses also available.

**GASKET:** Single-piece molded U-shaped silicone.

**CORD:** Minimum of 35' of #16-3 STW submersible cord. Cord entrance is epoxy encapsulated with internal strain relief. Cord length must be specified. Sufficient cord must be coiled in the niche to allow for the removal of the fixture to above water level for relamping.

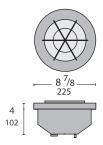
**FACTORY LEAK TESTED:** All fixtures are tested at 10~PSI~(0.70~kg/cm2) internal pressure while totally submerged in water.

**LOW WATER CUT-OFF:** Temperature sensing Low Water Cutoff standard.

Fasteners: Stainless steel. **LISTING:** U.L., CSA



4413



Model	Lamp	 Туре		Voltage	Distr.	Lens	_	Mounting	Condi	uit Entries	Cord	Set Length	Lan	np	Options
4413	300QT4 400QT4	T3 F T3 F T4 M T4 F	R7S Mini-can R7S	120	SP Spot FL Flood	FLC <sup>1</sup> FLAM FLG FLR	Flat Lens Clear Flat Lens Amber Flat Lens Green Flat Lens Red	NM Niche Mount	34S	3/4" NPT bottom 3/4" NPT side 3/4" NPT at 45°	CSL_	35' - 120' of cord available in 5' increments	LPI	Lamp Included	CSA Canadian Standard Assoc.

#### REFLECTION POOL AND FOUNTAIN POOL LIGHTS

#### NICHE MOUNTS

### Model 4415

#### **DESCRIPTION**

The 44l5 is a small wet niche mounted fixture. Its rectangular shape is ideal for steps or small reflecting pools where a low profile is required. It is available with a 45° cut-off louver or rock guard.

#### **SPECIFICATIONS**

FIXTURE HOUSING AND DOOR: Heavy wall cast bronze construction. Natural bronze finish.

**NICHE:** Stainless steel with cast bronze mounting frame, which has provisions for positive locking of fixture in position. Side conduit entrance 3/4" NPT with 3/4"x1/2" NPT reducer bushing or PG16 provided. Pressure grounding lug on interior and exterior surfaces.

**LAMP:** 120 Volt: A-21,116 Watt max., incandescent or 300 Watt max., T-3, Quartz Halogen double ended. 12 Volt: (3) 75 Watt max., MR-16. (Lamp included).

SOCKETS: Incandescent: medium base. Quartz: RSC single contact base. MRl6: Gx5.3 Bi-Pin.

LENS: Tempered boroscilicate diffused glass standard. Clear glass with LLV accessory.

**GASKET:** Single-piece molded U-shaped silicone.

CORD: 120 Volt: Minimum of 35' of #16-3 STW U.S. standard submersible cord. 12 Volt: Minimum of 35' of #10-3 STW U.S. standard or 10m of HO7RN-F-2x6mm2 for European standard submersible cord. Cord entrance is brass, watertight seal, and epoxy encapsulated. Sufficient cord must be coiled in the niche to allow for the removal of the fixture to above water level for relamping. Cord length must be specified

**FACTORY LEAK TESTED:** All fixtures are tested at 10 PSI (0.70kg/ cm2) internal pressure while totally submerged in water.

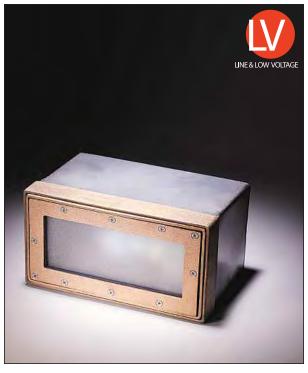
**LOW WATER CUT-OFF:** Temperature sensing low water cut-off standard.

**FASTENERS:** Stainless steel.

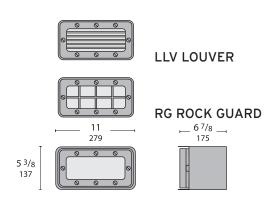
**ACCESSORIES:** Cast bronze exterior Rock Guard available. 45° cut-off cast bronze louver door available (clear lens only). Rock Guard or Louver is required for floor mounted fixtures.

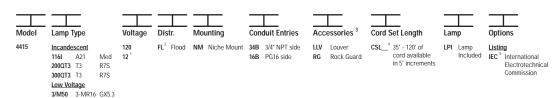
LISTING: U.L., IEC.

3/M75 3-MR16 GX5.3



4415





- Transformer sold separately
- Other dist, avail on 3/M50 and 3/M75 only
- Either LLV or RG required for floor mounted fixtures
- CSL50 max. cord length for 12V fixtures Available in 12V only

### Model 4418

#### **DESCRIPTION**

The 4418 wet niche, heavy-duty cast bronze underwater fixture is ideal for use in walls or floors of small fountains, waterfalls, or reflection pools. Designed for medium base 120 Volt PAR 38 incandescent lamps. Adjustable niche mount also available.

#### **SPECIFICATIONS**

FIXTURE HOUSING AND DOOR: Heavy wall cast bronze construction. Natural bronze finish.

NICHE: Stainless steel with cast bronze mounting frame, which has provisions for positive locking of fixture in position. Four ears for tying to forms or steel structural rods. Pressure grounding lug on interior and exterior surfaces. Conduit entrance 3/4" NPT with 3/4"x1/2" NPT reducer bushing supplied. The adjustable niche mount fixture is capable of 360° rotation with 30° vertical tilt.

LAMP: 120 Volt, PAR 38, 250 Watt max., Incandescent. (Lamp included).

**SOCKET:** Medium screw base with nickel plated copper shell, 200°C insulated leads.

LENS: 61/2" diameter convex clear heat resistant glass. Amber, blue, green, and red lenses also available.

**GASKET:** Single-piece molded U-shaped silicone.

CORD: Minimum of 35' of #16-3 STW submersible cord. Cord entrance is brass, watertight seal, and epoxy encapsulated. Cord length must be specified. Sufficient cord must be coiled in the niche to allow for the removal of the fixture to above water level for relamping.

**FACTORY LEAK TESTED:** All fixtures are tested at 10 PSI (0.70kg/ cm2) internal pressure while totally submerged in water.

LOW WATER CUT-OFF: Temperature sensing Low Water Cutoff standard.

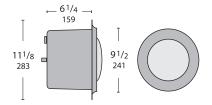
**FASTENERS:** Stainless steel.

ACCESSORIES: Cast bronze exterior Rock Guard. Rock Guard required on adjustable niche mount and floor-mounted fixtures.

LISTING: U.L.



4418





RG ROCK GUARD

Dimensions shown in inches and millimeters.

Model	Lamp Type	Voltage	 Distribution	Lens	Mounting	Conduit Entries	Accessories	Cord Set Length	Lamp
4418	P38100I         PAR38         Med.           P38150I         PAR38         Med.           P38250I         PAR38         Med.	120	SP Spot FL Flood	CLC <sup>2</sup> Convex Lens Clear CLA Convex Lens Amber CLB Convex Lens Blue CLG Convex Lens Green	NM Niche Mount ANM Adjustable Niche Mount	34B 3/4" NPT bottom	RG <sup>3</sup> Rock Guard	CSL 35' - 120' of cord available in 5' increments	LPI Lamp Included

CLR Convex Lens Red

Rock Guard required for floor mounted and adjustable fixtures

### Model 4800

#### **DESCRIPTION**

The 4800 Series wet niche mounted fountain fixture is smaller in size than conventional units. It is available with adjustable round or fixed square bezel and uses 120 Volt, 150 Watt max., T-4 mini-can or 12 Volt, 75 Watt max., MR16 quartz halogen lamp. The stainless steel niche includes a bonding lug and conduit hub. A clear fresnel tempered lens is standard. (Lamp included).

(Formerly Models 4842, 4843, 4845, 4839, 4840)

#### **SPECIFICATIONS**

**FIXTURE HOUSING AND DOOR:** Stainless steel housing with heavy wall cast bronze doors.

**NICHE:** Stainless steel with cast bronze mounting assembly, which has provisions for positive locking of fixture in position. The unit includes a grounding lug and a 3/4" conduit hub with 1/2" reducer or PGI6 conduit hub.

**LAMP:** 120 Volt: T-4,150 Watt max., Quartz Halogen. 12 Volt: MR-16 75Watt max., Quartz Halogen. (Lamp included).

**SOCKET:** 120 Volt, Mini-can, screw base. 12 Volt: bipin mount GX5.3.

**LENS:** 31/8" diameter tempered borosilicate, clear convex standard. Clear fresnel, amber, blue, green, and red lenses also available. Blue or green lens 100 Watt max.

**GASKET:** Single-piece molded U-shaped silicone.

**CORD:** Minimum of 35' of #16-3 STW submersible cord for U.S. standard, 10m of HO7RN-F-2x4mm2 for European standard. Cord length must be specified. Sufficient cord must be coiled in the niche to allow for the removal of the fixture to above water level for relamping.

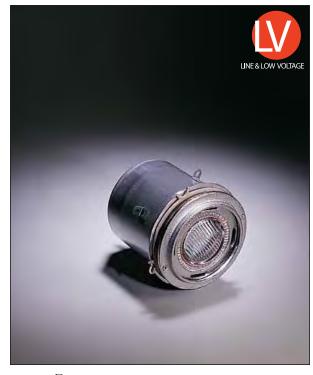
**FACTORY LEAK TESTED:** All fixtures are tested at  $10~PSI~(0.70~kg/cm^2)$  internal pressure while totally submerged in water.

**LOW WATER CUT-OFF:** Temperature sensing Low Water Cutoff standard.

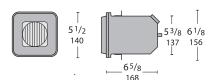
**FASTENERS:** Stainless Steel.

**ACCESSORIES:** Cast bronze exterior Rock Guard available. Rock guard is required for floor mounted fixtures.

LISTING: U.L., CSA, CE, CB, NEMKO



4800



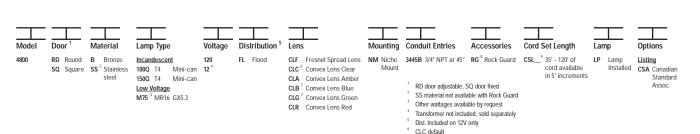
**SQUARE BEZEL** 



#### **ROUND BEZEL**

CLB and CLG not available w/ 150Q RG required for floor mounted fixtures CSL50 max. cord length for 12V

Dimensions shown in inches and millimeters.



(HYDREL)



### WET/DRY LIGHTS

The Hydrel line of wet/dry lights is designed especially for use in areas of water features that are prone to being dry or could possibly be dry much of the time. These versatile fixtures can operate totally submerged but, unlike other underwater lights, are not dependent upon water for cooling and therefore can continue to operate even when water levels are low or non-existent. This feature makes the wet/dry fixtures ideal for use on the edges of waterfalls, streams, or fountains and in installations with a fluctuation in water level.

Wet/Dry Fixtures, pages 30-34.











WD4418

WD4412 HBM

WD4413

WD4415

WD4846

Wet/Dry In-grade Fixtures, pages 35-39.





WD9100

WD9000

Hydrel wet/dry lights are built to meet or surpass Underwriters Laboratories standards as well as those of the National Electric Code. They meet the safety requirements for fountains and decorative pools. Wet/dry lighting fixtures are not intended for use in swimming pools. Additional safeguards are required for swimming pool lighting.



photo copyright © Hydrel

### Model WD4418

#### **DESCRIPTION**

The WD44l8 wet/dry heavy-duty cast bronze fixture is ideal for use in small fountains, waterfalls, or reflection pools. It is designed for medium base PAR 38 incandescent or quartz halogen lamps. Yoke mount model accepts 3/8" diameter stud or mounting bolt. Base mount model includes 97/8" diameter cast bronze base. Unit is capable of up to 180° of vertical adjustment. Rock guard is standard on both yoke and base mount models.

#### **SPECIFICATIONS**

FIXTURE HOUSING AND DOOR: Heavy wall cast bronze construction. Natural bronze finish.

LAMP: 120 Volt, medium screw base, PAR38, 150 Watt max. (Lamp included).

**SOCKET:** Porcelain medium screw base with nickel plated copper shell,  $200^{\circ}$ C insulated leads.

**LENS:** 61/2" diameter convex clear tempered heat resistant glass.

**GASKET:** Single-piece molded U-shaped silicone.

**CORD:** Minimum 10' of #16-3 STW submersible cord. Cord entrance is brass, watertight seal, and epoxy encapsulated. Cord length must be specified.

**FACTORY LEAK TESTED:** All fixtures are tested at 10 PSI (0.70kg/ cm2) internal pressure while totally submerged in water.

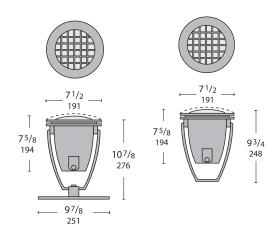
**FASTENERS:** Stainless steel.

**ACCESSORIES:** Adjustable Locking Base, Riser Stems.

LISTING: U.L.



WD4418



**BASE MOUNT** 

YOKE MOUNT

Dimensions shown in inches and millimeters.

$\overline{}$	$\top$	-	
Model	Lamp T	уре	
WD4418	P38100I	PAR38	Med.
	P38120I	PAR38	Med.
	P38150I	PAR38	Med.

120

Distribution SP Spot FL Flood

Mounting Acc.2 BM Base Mount ALB YM Yoke Mount

Adjustable Locking RSR 3 4"- 24" Riser Stem avail. Cord Set Length

10' - 120' of cord available in 5' increments

LPI Lamp

P38150I - default

Mount Accessories w / base mount only RSR6 default w/ ALB

## Model WD44l2

#### **DESCRIPTION**

The decorative WD44l2 wet/dry light offers both vertical and horizontal mounting and uses incandescent lamps to ll6 Watts or l2 Volt, to 50 Watt max. It is provided with a patterned cast bronze lily pad leaf for light source concealment.

#### **SPECIFICATIONS**

FIXTURE HOUSING, BASE, AND LILY PAD GUARD: Heavy wall cast bronze construction. Lily pad rock guards standard. Natural bronze finish.

**LAMP:** 120 Volt: A-19 or A-21, 116 Watt max. 12 Volt: A-21, 50 Watt max. (Lamp included).

**SOCKET:** Porcelain medium screw base with nickel plated copper shell, 200°C insulated leads.

Lens: Heat resistant clear glass globe.

**GASKET:** Two-piece molded silicone.

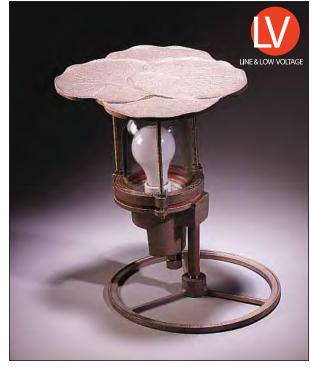
**CORD:** Minimum of 10' of #16-3 STW submersible cord with ground wire positively grounded inside fixture. Cord entrance is a brass watertight seal and epoxy encapsulated. Cord length must be specified.

**FACTORY LEAK TESTED:** All fixtures are tested at 10 PSI (0.70kg/ cm2) internal pressure while totally submerged in water.

LOW WATER CUT-OFF: Temperature sensing Low Water Cutoff standard.

**FASTENERS:** Stainless steel.

LISTING: U.L.

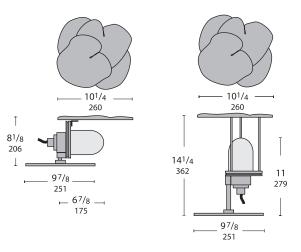


IP-68  $\frac{\nabla}{4M}$  11

**WD4412 VBM** 



**WD4412 HBM** 



HORIZONTAL MOUNT

**VERTICAL MOUNT** 

Lamp Type Cord Set Length Mounting WD4412 CSL 2 10' - 120' of Incandescent HBM Horizontal LPI Lamp Included cord available in 5' increments A21 Med. Base Mount 100I A21 Med. VBM Vertical 116I A21 Med. Base Mount Low Voltage 50ILV A21 Med.

Transformer not included, sold separately

CSL50 is max. cord length for 12V fixtures

### Model WD44B

#### **DESCRIPTION**

The WD44l3 wet/dry fountain light is a preferred option among the line of Hydrel's quartz halogen underwater lighting fixtures. This high performance fixture meets the fountain requirements for high light output, low profile, and adjustability with Hydrel's AIM-Lock™ System. The unit utilizes a l20 Volt quartz halogen lamp to 100 Watt max. or 50 Watt max. MR16, with a choice of two light distributions and is capable of up to 360° of rotational and 45° from vertical adjustment.

#### **SPECIFICATIONS**

FIXTURE HOUSING, INTEGRAL ROCK GUARD DOOR, AND

**BASE:** Heavy wall cast bronze construction. Natural bronze finish.

**NICHE:** Spun copper with cast bronze niche ring. 3/4"conduit hubs are available in the bottom at  $45^{\circ}$ , or in the side with 3/4" x 1/2" NPT reducer. Hub on bottom standard. Pressure grounding lug on interior and exterior surfaces.

**ADJUSTABILITY:** BM: Four mounting heights, adjustable 0°-90°. NM: 360° rotational adjustment within niche, 45° from vertical adjustment. AIM-Lock<sup>TM</sup> enables fixture to be relamped without changing aim setting.

**LAMP:** 120 Volt: 100 Watt max., T-4 Mini-can, Quartz Halogen. 12 Volt: 50 Watt max., MR-16. (Lamp included).

**SOCKET:** 120 Volt: Porcelain with nickel mini-can screwshell, 200°C insulated leads. 12 Volt: Bi-pin GX5.3.

**DISTRIBUTION:** Reflector is polished aluminum specular Alzak<sup>TM</sup> Spot or diffuse Alzak<sup>™</sup> Flood for T4 lamps. MRl6 lamp distribution is determined by lamp type.

**LENS:** Flat clear tempered borosilicate.

**GASKET:** Single-piece molded U-shaped silicone.

**CORD:** Minimum of 10' of #16-3 STW underwater cable on base mount or minimum of 35' on niche mount. Cord entrance is epoxy encapsulated with internal strain relief. Cord length must be specified.

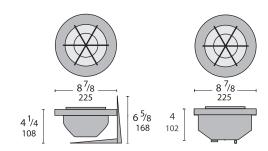
**FACTORY LEAK TESTED:** All fixtures are tested at 10 PSI (0.70kg/ cm2) internal pressure while totally submerged in water.

**FASTENERS:** Stainless steel.

LISTING: U.L.



WD4413 BM WD4413 NM



BASE MOUNT

NICHE MOUNT

Dimensions shown in inches and millimeters.

Model	Lamp	Тур	e	١	
WD4413	Incandescent			1	
	75Q	T4	Mini-can	1	
	100Q	T4	Mini-can		
	Low Voltage				
	M35	MR	MR16 GX5.3		
	NAEO	MAG	11/ CVF 2		

$\Box$		$\Box$		
/oltage	Dis	Distr.		unting
20	SP	Spot	BM	Base

Mount FL Flood NM Niche Mount

Conduit Entries 2 34B 3/4" NPT bottom

3445B 3/4" at 45" 34S 3/4" NPT side

Cord Set Length CSL 10' - 120' of cord LPI Lamp for base mount available in 5' increments 35' - 120' of cord for niche mount available in

Transformer not included, sold separately

Required for NM only Max. cord length for 12V is 50 ft

#### **WET / DRY LIGHTS**

### Model WD44I5

#### **DESCRIPTION**

The WD44l5 is a small, l2Volt wet/dry fixture that uses three MR-16,75 Watt max. quartz lamps. It is ideal for use in or near water applications that are prone to being dry or could possibly be dry much of the time. It is available with a 45° cut-off louver. Rock guard is standard.

#### **SPECIFICATIONS**

FIXTURE HOUSING, ROCK GUARD, AND BASE: Heavy wall construction.

LAMP: (3) 12 Volt, MR-16, Quartz Halogen, 75 Watt max. (Lamps included).

**SOCKETS:** (3) -GX 5.3, Bi-pin.

**LENS:** Tempered heat resistant clear glass.

**GASKET:** Single-piece molded U-shaped silicone.

**CORD:** Minimum 10' of #10 - 3 STW submersible cord. Cord entrance is brass, watertight seal, and epoxy encapsulated. Cord length must be specified.

**FACTORY LEAK TESTED:** All fixtures are tested at 10 PSI (0.70kg/ cm2) internal pressure while totally submerged in water.

**FASTENERS:** Stainless steel.

ACCESSORIES: Adjustable Locking Base, Riser Stems

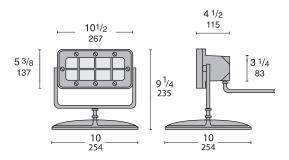
FINISH: Black heat-dissipating Hender Lube on the body, door,

and yoke base assembly.

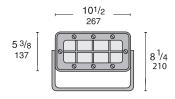
LISTING: U.L.



WD4415



#### **BASE MOUNT**



#### YOKE MOUNT

Model	Lamp Type	Voltage	Distr.	Mounting	Mounting Acc. <sup>2</sup>	Cord Set Length	Lamp
WD4415	3/M20 3-20W MR16 GX5.3 3/M35 3-35W MR16 GX5.3 3/M50 3-50W MR16 GX5.3 3/M75 3-75W MR16 GX5.3	<b>12</b> <sup>1</sup>	FL Flood	BM Base Mount YM Yoke Mount	ALB Adjustable Locking Base RSR_3 4"- 24" Riser Stem avail. in 2" increments	CSL 10' - 50' of cord available in 5' increments	LPI Lamp Include

Transformer not included, sold separately

Available w/ Base mount only RSR6 default with ALB

### Model WD4846

#### **DESCRIPTION**

The WD4846 yoke and base mounted fixtures are ideal for small fountain and reflective pools. Designed for MR-l6 lamp, l2 Volt bipin mount, 50 Watt max. The lamp housing is stainless steel with cast bronze door with a clear tempered borosilicate lens standard. Lamp included.

#### **SPECIFICATIONS**

**FIXTURE HOUSING, DOOR AND ROCK GUARD:** Stainless steel construction with cast bronze doors and rock guard. Yoke and base are sand cast bronze.

**LAMP:** 12 Volt, MR-16, EYC, 50 Watt, Quartz Halogen. (Lamp included).

**SOCKET:** Bi-pin GX5.3.

**LENS:** 31/8" diameter tempered borosilicate, clear standard. Fresnel spread lens also available.

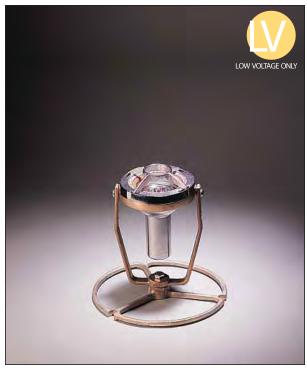
**GASKET:** Single-piece molded U-shaped silicone.

**CORD:** Minimum 10' of #16-3 STW submersible cord. Cord entrance is epoxy encapsulated. Cord length must be specified.

**FACTORY LEAK TESTED:** All fixtures are tested at 10 PSI (0.70kg/cm2) internal pressure while totally submerged in water.

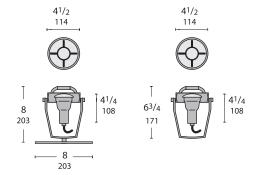
**FASTENERS:** Stainless steel.

LISTING: U.L.



IP-68  $\frac{\nabla}{4M}$  11 LOW VOLTAGE

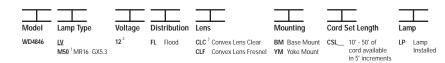
WD4846



**BASE MOUNT** 

YOKE MOUNT

Dimensions shown in inches and millimeters.



CLC default

Other wattages available by request

<sup>&</sup>lt;sup>2</sup> Transformer not included. sold separately

# WD9000 Series - Wet / Dry In - grade Lights

The Hydrel Wet/Dry 9000 Series provides state-of-the-art performance in the world's first in-grade wet/dry fixtures.

The Wet/Dry 9000 Series reflects the unique blend of innovation and experience that is the hallmark of Hydrel lighting and provides in-grade fixtures that can withstand the harshest environments.

Modular design, precision reflectors, optically active lenses, polymer rough-in section, watertight connectors, dry air purge, and underwater seals, combine to achieve outstanding fixtures applicable to a wide range of water feature installations.

Installation is greatly facilitated by a design that allows preinstallation of the rough-in section with the addition of the critical lighting components later. Presealed watertight modules prevent condensation and assure watertight sealing during lamp replacement. Efficient lamps combined with Hydrel's precision reflectors provide optimum performance and a wide choice of dramatic lighting effects not available in typical wet/dry lights.



photo copyright ©, Hydrel

# Model WD9100 Model WD9150

## **DESCRIPTION**

The WD 9100 Series wet/dry up-lights represent the state-of-the-art in flush up-light construction. These multipurpose modular units are designed for mounting in areas that are prone to being submerged in water or could possibly be wet much of the time. The lamp module, which includes the lamp, is factory sealed and thermally protected. The fixtures are available as round or square models, with or without integral junction box, and include cast bronze rock guard. Lens and reflector combinations provide a range of light distributions. Lamp is included.

## **SPECIFICATIONS**

## LAMP MODULE HOUSING, DOOR, ROUGH-IN SECTION:

Stainless steel lamp module housing, sealed and purged of all moisture to -100°F. Cast bronze door locks the lamp into the rough-in section with tamper proof fasteners. The rough-in housing is injection molded ABS, U.V. stabilized, impact and corrosion resistant.

 ${\bf ROCK}$  GUARD: Heavy-duty cast bronze Rock Guard required (NEC).

**LAMP:** 120Volt,T-4Mini-can or PAR38,250 Watt max., Incandescent. (Lamp included).

**VOLTAGE:** 120 Volt only.

**DISTRIBUTIONS:** T-4 lamps: SP-Spot reflector; MFL - Medium Flood reflector; WWD-Wall Wash reflector w/ 5° axial spread lens (FLC5). PAR38 Lamps: SP-Spot; FL-Flood.

**LENS:** Flat clear tempered glass standard. Convex lenses are also available.

**CONDUIT ENTRIES:** NM Single V2" or 3/4"NPT bottom opening standard. Remote junction box sold separately.BM Two V2" or 3/4"NPT bottom openings available in an integral cast bronze junction box. Suitable for thru-branch wiring. Box has volume of 24 cubic inches.

**CORD:** NM Minimum of 35' of #16-3 STW submersible cord for connection to a remote junction box, sold separately. BM Minimum of 10' of #16-3 STW submersible cord. Integral bronze junction box included. Cord length must be specified.

LISTING: U.L.



WD9100



## **WET / DRY LIGHTS**

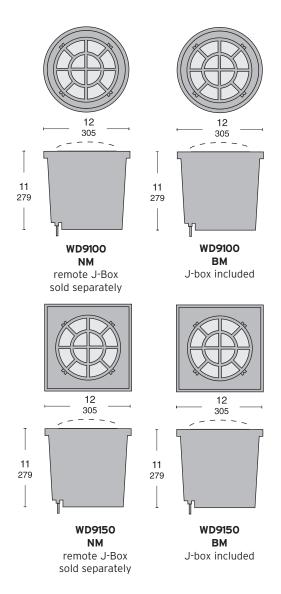




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Model	Lamp Type	Voltage	Distribution	Lens	Mounting	Conduit Entries	Accessories	Cord Set Length	Lamp
WD9100 Round WD9150 Square	Incandescent   MED base   P381001   100W   PAR38   P381501   100W   PAR38   P382501   250W   PAR38	120	SP 1 Spot MFL Medium Flood FL 12 Flood WWD 3 Wall Wash	FLC 5 Flat Lens Clear FLC5 3 Flat Lens Clear 5 vauli spread FLC10 Flat Lens Clear 10 tilt FLC30 Flat Lens Clear 30 spread FLF Flat Lens Frosted CLC Convex Lens Frosted CLF Convex Lens Frostee	NM <sup>4</sup> Niche Mount BM <sup>5</sup> base Mount	348 3/4" NPT bottom 12B 1/2" NPT bottom		CSL NM 35' - 120' of cord available in 5' increments BM 10' - 120' of cord available in 5' increments	LP Lamp Installed

PAR38 lamps available SP or FL distributions only, lens options available for modifying PAR38 distributions FL distribution not available wi 1000 or 1500 WWD distribution requires a FLC5 lens NM mounting requires remote J-box, sold separately BM mounting includes integral J-box

# Model WD9000 Model WD9050

## **DESCRIPTION**

The WD9000 Series wet/dry up-lights represent the state-of-the-art in flush up-light construction. These multipurpose modular units are designed for mounting in areas that are prone to being submerged in water or could possibly be wet much of the time. The lamp module is factory sealed and thermally protected. The small 8" footprint of the fixture allows for placement in tight areas. The fixtures are available as round or square models, with or without integral junction box, and include cast bronze rock guard. A choice of included lamps provides a variety of light distributions.

#### **SPECIFICATIONS**

## LAMP MODULE HOUSING, DOOR, ROUGH-IN SECTION:

Stainless steel lamp module housing, sealed and purged of all moisture to -l00°F. Cast bronze door locks the lamp into the rough-in section with tamper proof fasteners. The rough-in housing is injection molded ABS, U.V. stabilized, impact and corrosion resistant.

**ROCK GUARD:** Heavy-duty cast bronze Rock Guard required (NEC).

**LAMP:** 120 Volt: PAR16, PAR20, and PAR30 to 75 Watt, incandescent. 12 Volt: MR-16 and PAR 36, to 75 Watt, incandescent.(Lamp included).

**VOLTAGE:** 120 or 12 Volt.

**DISTRIBUTIONS:** Beam spread by lamp type.

**LENS:** Flat clear tempered glass, standard. Convex lenses are also available.

**CONDUIT ENTRIES:** NM Single V2" or 3/4" NPT bottom opening standard. Remote junction box sold separately.BM Two V2" or 3/4" NPT bottom openings available in an integral cast bronze junction box. Suitable for thru-branch wiring. Box has volume of 17 cubic inches.

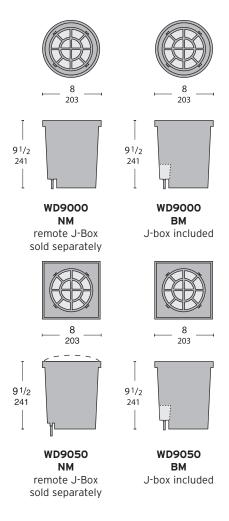
**CORD:** NM Minimum of 35' of #16-3 STW submersible cord for connection to a remote junction box, J-box sold separately. BM Minimum of 10' of #16-3 STW submersible cord. Integral bronze junction box included. Cord length must be specified.

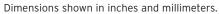
LISTING: U.L.



WD9000

## **WET / DRY LIGHTS**





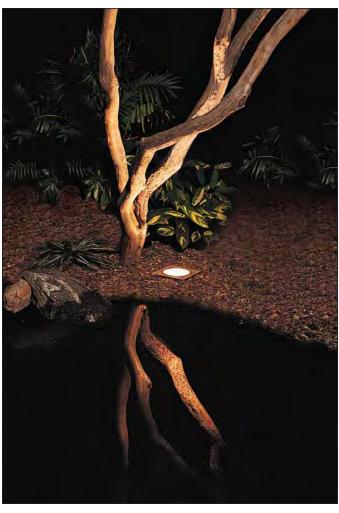


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Model	Lamp Type	Voltage	Distribution <sup>2</sup>	Lens	Mounting	Conduit Entries	Accessories	Cord Set Length	Lamp
WD9000 Round WD9050 Square	Incandes	12 <sup>1</sup> 120	VNSP Very Narrow Spot NSP Narrow Spot SP Spot NFL Narrow Flood FL Flood WFL Wide Flood	CLC Convex Lens Clear CLF Convex Lens Frosted FLC Flat Lens Clear 10° Tilt FLF Flat Lens Frosted  Flat Lens Frosted	NM <sup>4</sup> Niche Mount BM <sup>5</sup> Base Mount	34B 3/4* NPT bottom  12B 1/2* NPT bottom	IHL Internal Honeycomb Louver BTR Brass Trim Ring Round BTS Brass Trim Ring Square STR Stainless Steel Trim Ring Round STS Stainless Steel Trim Ring Square MSR Modular Support Ring PC2112 20 cu. in. Potting Compound	CSL6 NM 35' - 120' of cord available in 5' increments BM 10' - 120' of cord available in 5' increments	LP Lamp Installed
	P3675ILV 75W PAR36			1 Transformer sold separately 2 Not all distributions valid w/ all 1 FLC default 4 MM mounting requires remote . 5 BM mounting includes integral 6 CSL50 is max. cord length for 1	J-box, sold separately J-box	mfg.			(HYDR

(HYDREL)

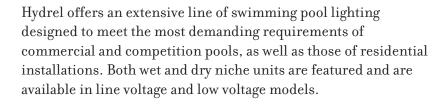


# SWIMMING POOL LIGHTS

Swimming Pool, Wet Niche HID Fixture, page 43.



4428 SWM Swimming Pool, Dry Niche Fixture, page 44.





4429 SWM

Hydrel swimming pool lights are built to meet or surpass Underwriters Laboratories standards as well as those of the National Electric Code. They meet the safety requirements for swimming pool lights, which are demanding and prescribe additional safeguards.

Swimming Pool, Wet Niche Fixtures, pages 45-50.



4427 SWM



4421 SWM



4425 SWM



4800 SWM



4426 SWM 🚯





# 4428 - Metal Halide Pool Light

This 175 Watt metal halide pool light, the first HID underwater light, delivers the equivalent light output of a 1000 Watt incandescent lamp while consuming only one-fifth the power and attaining 21/2 times longer lamp life.

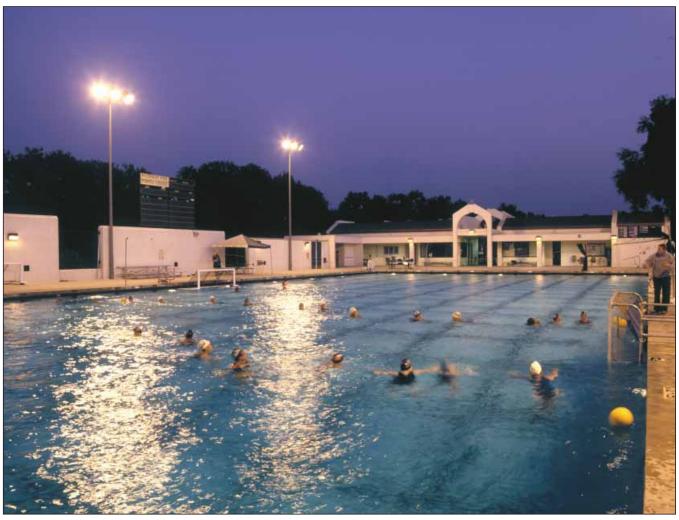


photo copyright ©, Hydrel

## One-fifth the Power

Industry's first 175 Watt Metal Halide pool light provides light output equivalent to a 1000 Watt incandescent lamp but uses only one-fifth the power.

## Over Two Times the Life

- Metal Halide ballast encapsulated and contained in fixture.
- Heavy wall cast bronze construction.
- Tempered borosilicate spread lens and silicone gaskets.
- Improved color more light in the blue region of the spectrum.
- Temperature sensing low water cutoff-standard.

- "Electro-Grid" safety featurestandard.
- Retro-fits into existing, industry standard residential 500 Watt niche.
- · Lamp included.
- Also available as a base mounted fountain and water feature fixture.

# Model 4428 SWM

#### **DESCRIPTION**

These heavy-duty cast bronze underwater metal halide fixtures are the first of their kind for use in swimming pools. These units are designed to be recessed into a stainless steel niches as wet niche type fixtures. These units accept an E-17,175 Watt metal halide lamp and utilize a stainless steel safety "Electro-Grid" located between the lamp and the lens. The integral ballast is completely sealed, encapsulated in a custom epoxy designed for this use. This unit yields a lamp life of up to 10,000 hours of operation.

## **SPECIFICATIONS**

FIXTURE & DOOR: Heavy wall cast bronze construction. Natural cast bronze finish. Stainless steel door finish also available.

**ELECTRO-GRID:** Stainless steel welded wire.

NICHE: Stainless steel with cast bronze mounting ring with provision for positive locking of fixture in position, four ears for tying to forms or steel structural rods. Pressure grounding lug on interior and exterior surfaces. Conduit entrance 3/4" NPT with 3/4" x1/2" NPT reducer. 4428 Wet Niche Swimming Pool Fixture can be field adjusted for installation into existing industry standard residential pool wet niche.

**LAMP:** E-17 medium base M-57,175Watt, Metal Halide (ANSI M57), 10,000 hours. Lamp included.

**SOCKET:** Pulse rated medium base with nickel-plated copper screwshell and 200°C leads.

**VOLTAGE:** 120 Volt only.

**BALLAST:** High Power Factor CWA core & coil ballast encapsulated into the fixture housing.

**DISTRIBUTION:** Asymmetrical flood with downward deflection to provide uniform lighting.

**LENS:** 83/8" diameter flat linear spread tempered borosilicate

**GASKET:** Single piece molded U-shaped silicone.

CORD: Minimum of 35' of #16-3 STW submersible cord. Cord entrance is water-tight, epoxy encapsulated. Cord length must be specified. Sufficient cord must be coiled in the niche to allow for the removal of the fixture to above water level for relamping.

**FACTORY LEAK TESTED:** All fixtures are tested at 10 PSI (0.70kg/ cm<sup>2</sup>) internal pressure while totally submerged in water.

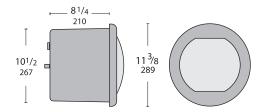
LOW WATER CUT-OFF: Temperature sensing Low Water Cut-off, standard.

Fasteners: Stainless steel.

LISTING: U.L.



4428 SWM



Dimensions shown in inches and millimeters.



Available only in 175W Metal Halide

Available in 120 Volt only
Fixture can be retrofitted into other manufacturer's niches. Consult factory

# Model 4429SWM

## **DESCRIPTION**

The 4429 dry niche swimming pool light is designed for use in marine parks, zoos, and other aquarium installations for illumination of viewing pools. It provides the ultimate in safety, quality, styling, and construction. This fixture is accessible from outside the pool for easy relamping and maintenance.

## **SPECIFICATIONS**

FIXTURE HOUSING, DOOR AND ELECTRO-GRID: Heavy wall cast bronze construction. Natural bronze finish.

**LAMP:** 120 Volt: PAR 64,1000 Watt or PAR 56, 500 Watt max. 12 Volt: PAR 56, 300 Watt max. (Lamp included).

**SOCKET:**120 Volt: Mogul end prong type with 200°C insulated leads. 12Volt: Ring Terminal connectors with 200°C insulated leads.

**LENS:** Tempered heat resistant glass, 30° spread and 15° downward deflection.

**GASKET:** Single-piece molded U-shaped silicone.

INTEGRAL JUNCTION BOX: Two 3/4" or 1"NPT side conduit entries available for thru-branch wiring. Grounding lugs located in the junction box and one on outer surface of fixture housing.

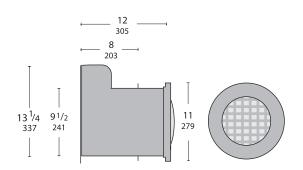
BACK HOUSING COVER: Cast bronze with stand-off bosses to permit ventilation and allow for rear access and relamping.

**FASTENERS:** Stainless steel.

LISTING: U.L., CSA



4429 SWM



Dimensions shown in inches and millimeters.

Model	Material	Lamp Type	Distribution <sup>2</sup>	Lens	Conduit Entries	Accessories	Application	Lamp	Options
4429	<b>B</b> Bronze	Incandescent P56300I PAR56 MGEP	MFL Medium Flood NSP Narrow Spot	CLS <sup>3</sup> Convex Lens Clear Swim CLSA Convex Lens Amber Swim	34B 3/4" NPT 1B 1" NPT	TLMSK Tile Mask EJB Extended J-Box	SWM Swimming Pool Fixture	LPI Lamp Included	Listing CSA Canadian
		P56500I PAR56 MGEP P561000I PAR64 MGEP	WFL Wide Flood VNSP Very Narrow Spot	CLSB Convex Lens Blue Swim CLSG Convex Lens Green Swim CLSP Convex Lens Red Swim					Standard Assoc.

Transformer not included, sold separately

CLS default

P56300II V PAR56 Screw Terminal

Not all distributions available w/ all lamps

## **SWIMMING POOL LIGHTS**

# Model 4427 SWM

## **DESCRIPTION**

These heavy-duty cast bronze fixtures, with stainless steel forming niches are designed for wet niche installation in swimming pools. They accommodate 120 Volt PAR 64 1000 Watt quartz lamps. A cast bronze safety "Electro-Grid," is located between the face of the lamp and the lens.

## **SPECIFICATIONS**

FIXTURE HOUSING, DOOR AND ELECTRO-GRID: Heavy wall cast bronze construction. Natural bronze finish. Stainless steel door finish also available.

**NICHE:** Stainless steel with cast bronze mounting ring with provision for positive locking of fixture in position. Four ears for tying to forms or steel structural rods. Pressure grounding lug on interior and exterior surfaces. Conduit entrance 3/4" NPT with 3/4"x1/2" NPT reducer.

**LAMP:**120Volt, PAR 64,1000 Watt max. Lamp included.

**SOCKET:** Mogul end prong type with 200°C insulated leads.

**LENS:** Tempered heat resistant glass with 30° spread and 15° downward deflection. Amber, blue, green, and red lenses also available.

**GASKET:** Single-piece molded U-shaped silicone.

CORD: Minimum of 35' of #16-3 STW submersible cord. Cord entrance is brass, watertight seal, and epoxy encapsulated. Cord length must be specified. Sufficient cord must be coiled in the niche to allow for the removal of the fixture to above water level for

FACTORY LEAK TESTED: All fixtures are tested at 10 PSI (0.70kg/ cm<sup>2</sup>) internal pressure while totally submerged in water.

LOW WATER CUT-OFF: Temperature sensing Low Water

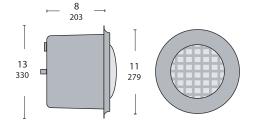
Cut-off standard.

**FASTENERS:** Stainless steel.

LISTING: U.L., CSA.



4427 SWM



Dimensions shown in inches and millimeters.

	$\perp$
Model	Material

4427

Bronze SWB Salt Water Bronze

Incandescent PAR64 MGEP P64500I P6410001 PAR64 MGER Voltage Distribution 6

MFL Medium Flood NSP Narrow Spot WFL Wide Flood

CLS3 Convex Lens CLSA Convex Lens Amber Swim

CLSB Convex Lens Blue Swim CLSG Convex Lens Green Swim CLSR Convex Lens Red Swim

Conduit Entries NM Niche Mount 34B 3/4" NPT bottom CSL

Cord Set Length 35' - 120' of cord available in 5' increments

Application

SWM Swimming Pool Fixture

LPI Lamo

Options Finish SS Stainless

Steel Listing CSA Canadian Standard Assoc.

P641000I - default

Not all distributions available w / all lamps

CLS - default

# Model 4421 SWM

## **DESCRIPTION**

The 442l is a compact wet niche mounted 500 Watt max. quartz halogen fixture for swimming pools. It is designed to accept the T-4 mini-can quartz lamp. The overall depth of the niche is 6", making it ideal for installation within a shallow wall.

## **SPECIFICATIONS**

**FIXTURE HOUSING, AND DOOR:** Heavy wall cast bronze construction. Stainless steel door finish also available.

**NICHE:** Stainless steel with cast bronze mounting ring with provision for positive locking of fixture in position. Four ears for tying to forms or steel structural rods. Pressure grounding lug on interior and exterior surfaces. Conduit entrance 3/4" NPT with 3/4"x1/2" NPT reducer.

 $\textbf{LAMP: } 120\,\text{Volt}, \text{T-}4\,\text{mini-can}, 500\,\text{Watt max. Quartz Halogen. Lamp included.}$ 

**SOCKET:** Mini-can base type with 200°C insulated leads.

**DISTRIBUTION:** Reflector is parabolic spun copper, chrome plated.

**LENS:** Heat resistant tempered glass with 30° spread and 15° downward deflection.

**GASKET:** Single-piece molded U-shaped silicone.

**CORD:** Minimum of 35' of #16-3 STW submersible cord. Cord entrance is brass, watertight seal, and epoxy encapsulated. Cord length must be specified. Sufficient cord must be coiled in the niche to allow for the removal of the fixture to above water level for relamping.

**FACTORY LEAK TESTED:** All fixtures are tested at 10 PSI (0.70kg/cm2) internal pressure while totally submerged in water.

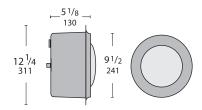
**LOW WATER CUT-OFF:** Temperature sensing Low Water Cutoff standard.

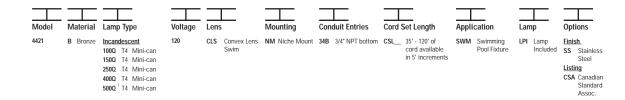
**FASTENERS:** Stainless steel.

LISTING: U.L., CSA.



4421 SWM





# Model 4425 SWM

## **DESCRIPTION**

This heavy-duty cast bronze fixture, recessed in a stainless steel forming niche, is designed for wet niche installations and accommodates 120 Volt lamps to 500 Watts and 12 Volt lamps to 300 Watts. A cast bronze safety "Electro-Grid" is located between the face of the lamp and the lens.

## **SPECIFICATIONS**

**FIXTURE HOUSING, DOOR AND ELECTRO-GRID:** Heavy wall cast bronze construction. Natural bronze finish. Stainless Steel door finish is also available.

**NICHE:** Stainless steel with cast bronze mounting ring with provision for positive locking of fixture in position. Four ears to tie to forms or steel structural rods. Pressure grounding lug on interior and exterior surfaces. Conduit entrance 3/4" NPT with 3/4"x1/2" NPT reducer bushing supplied 1"NPT conduit entrance also available.

**LAMP:** 120 Volt: PAR56,500 Watt max. 12 Volt: PAR56, 300 Watt max. (Lamp included).

**SOCKET:** 120 Volt: Mogul end prong with 200°C insulated leads. 12 Volt: Ring Terminal connectors with 200°C insulated leads.

**LENS:** Heat resistant tempered glass with 30° spread and 15° downward deflection. Amber, blue, green, and red lenses also available.

**GASKET:** Single-piece molded U-shaped silicone.

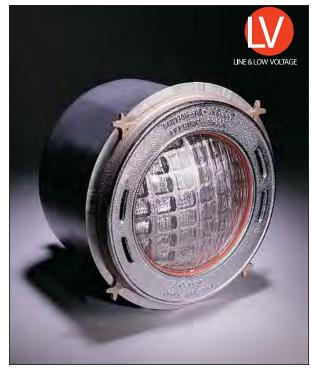
**CORD:** Minimum of 35' of #10-3 STW for US standard, 10m HO7RN-F-2x6mm2 for European standard submersible cord for 12Volt fixtures. Minimum of 35' of #16-3 STW for US standard submersible cord for 120 Volt fixtures. Cord entrance is brass, water-tight seal and epoxy encapsulated. Cord length must be specified. Sufficient cord must be coiled in the niche to allow for the removal of the fixture to above water level for relamping.

**FACTORY LEAK TESTED:** All fixtures are tested at 10 PSI (0.70kg/cm2) internal pressure while totally submerged in water.

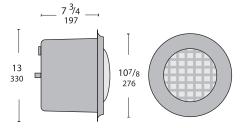
**LOW WATER CUT-OFF:** Temperature sensing Low Water Cut-off standard.

**FASTENERS:** Stainless steel.

LISTING: U.L., CSA, CE, CB, NEMKO.



4425 SWM



Model	Mate	erial	Lamp Typ	- - pe	Voltage	Dist	ribution <sup>3</sup>	Lens		Mounting	Co	onduit Entries	Cord	Set Length	Appli	ication	Lan	np	Opti	ons
4425	B SWB	Bronze Salt Water Bronze	P56300I P56500I P56300I Low Voltar P56300ILV	PAR56 MGEP PAR56 MGEP PAR56 MGEP <b>Ge</b>	120 12 <sup>2</sup>		Medium Flood Narrow Spot Wide Flood	CLSB	Convex Lens Clear Swim Convex Lens Amber Swim Convex Lens Blue Swim Convex Lens Green Swim Convex Lens Red Swim	NM Niche Mount	1B	3 <sup>5</sup> 1" NPT bottom	6300ILV uded, sol available 2V ength for	w / all lamps	SWM	Swimming Pool Fixture	LPI	Lamp Included	Listin CSA	Stainless Steel

# Model 4426 LED RGB Color Changing

## **DESCRIPTION**

The 4426 is designed to be recessed into a stainless steel niche as a"wet niche" type fixture. These units use a Red, Green, and Blue (RGB) underwater color balanced LED array to create DMX controlled color changing lighting effects. Color control is achieved through four channels per fixture, standard DMX512 hardware, at a maximum of 44 frames per second. All channels have logarithmic power for finer color and intensity control. The fourth channel, Intensity, allows the user to vary brightness without affecting the color. The integral power and control modules are enclosed in an attached sealed combination box. The proprietary control module senses the LED temperature and adjusts the LED power accordingly to yield a lamp life of up to 50,000 hours of operation. This lamp life exceeds any other fixture designed for this use. For power and signal hook-up, the integral combination box includes a minimum of 35' of submersible rated power cable and a minimum of 35' of submersible rated DMX signal cable. Power and signal are distributed to the fixture via a double conduit system which terminates into standard conduit entrances at the back of the niche.

## **SPECIFICATIONS**

**FIXTURE HOUSING AND DOOR:** Heavy wall cast bronze construction. Natural cast bronze finish. Stainless steel bezel finish is also available

**NICHE:** Stainless steel with cast bronze mounting ring which locks the fixture into position. Niche has four ears to tie to forms or steel structural rods. Pressure grounding lugs on interior and exterior surfaces. Niche conduit entrances are 3/4" NPT.

**LED TYPE:** 60 Watt RGB LED array. (LED Board included.)

**CONTROL:** Standard DMX512. 3-channels per fixture: Red, Green, Blue or 4-channels per fixture: Red, Green, Blue and Intensity.

**COMMUNICATION TO FIXTURE:** DMX512 direct.

**VOLTAGE:** 120VAC 60HZ only.

LENS: 8 5/8" (219mm) diameter convex linear spread tempered

glass.

**GASKET:** Single piece molded U-shaped silicone gasket.

**CORD:** Minimum of 35' of #16/3ST submersible rated cord for standard 120VAC line, minimum of 35' of submersible rated data cord for DMX512 signal. Cord entrance is epoxy encapsulated. Cord length must be specified. NOTE: Sufficient cord should be coiled in the niche to allow for the fixture to be removed and brought above water level for maintenance.



IP-68 <sup>▽</sup>/<sub>4M</sub> ♦ ♦ 4426

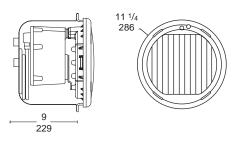
CB APPROVED LED Board Included

**FACTORY LEAK TESTED:** Fixtures are tested at 10~PSI~(0.70 kg/cm2) internal pressure while totally submerged in water.

**LOW WATER PROTECTION:** Temperature sensing circuit reduces power to LEDs to prevent damage.

FASTENERS: Stainless steel.

LISTING: U.L., C.U.L.



Model	Material	LED Type	LED Color	Voltage	Distribution	Lens	Mou	unting	Control	Comm. to Fixture	Cord Set Length
4426	B Bronze SWB Salt Water Bronze SS Stainless Steel	60LED 60 Watts	RGB Mixing	120	WFL Wide Flood	CLS Convex Lens Swim	NM	Niche Mount	3-Channel 3DMX DMX 512 4-Channel 4DMX DMX 512	DDX Direct DMX	CSL 35' - 120' of cord available in 5' increments

Junction Box (Sold Separately)

<sup>&</sup>lt;sup>2</sup> DMX Distribution Components and Signal Generator (by others)

<sup>Niche to be installed to accomodate two conduit runs.

a) First Conduit Run - 120V Power Supply
b) Second Conduit Run - DMX512 Signal</sup> 

# Model 4426 LED Monochromatic

## **DESCRIPTION**

The 4426 is designed to be recessed into a stainless steel niche as a"wet niche" type fixture. These units offer cool white, warm white, amber, blue, cyan, green, royal blue and red monochromatic colors. The system shall be composed of two components: 1) LED array board and 2) Driver. The LED Driver powers via constant voltage or constant current. With a constant current driver, LED lumen output does not change with temperature variations. Hydrel's monochromatic system is a non-dimming, one color light output.

## **SPECIFICATIONS**

FIXTURE HOUSING AND DOOR: Heavy wall cast bronze construction. Natural cast bronze finish. Stainless steel bezel finish is also available.

**NICHE:** Stainless steel with cast bronze mounting ring which locks the fixture into position. Niche has four ears to tie to forms or steel structural rods. Pressure grounding lugs on interior and exterior surfaces. Niche conduit entrances are 3/4" NPT.

**LED TYPE:** 60 Watt monochromatic LED. (LED Board included.)

**VOLTAGE:** 120VAC 60HZ only.

**LENS:** 8 5/8" (219mm) diameter convex linear spread tempered glass.

**GASKET:** Single piece molded U-shaped silicone gasket.

**CORD:** Minimum of 35' of #16/3ST submersible rated cord for standard 120VAC line. Cord entrance is epoxy encapsulated. Cord length must be specified. NOTE: Sufficient cord should be coiled in the niche to allow for the fixture to be removed and brought above water level for maintenance.

**FACTORY LEAK TESTED:** Fixtures are tested at 10 PSI (0.70kg/ cm2) internal pressure while totally submerged in water.

**LOW WATER PROTECTION:** Temperature sensing circuit reduces power to LEDs to prevent damage.

RBL

RED Red

Royal Blue

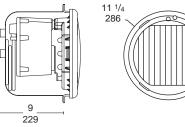
**FASTENERS:** Stainless steel.

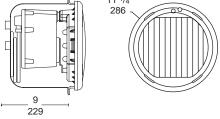
LISTING: U.L., C.U.L.



IP-68 <sup>▽</sup>/<sub>4M</sub> 11 CB APPROVED N
LED Board Included

4426





Dimensions shown in inches and millimeters.

LED Color Model Material **LED Type** Voltage Distribution Mounting Cord Set Length 60LED 60 Watts CLW WFL Wide Flood CLS Convex Lens Swim NM Niche Mount CSL 35' - 120' of Bronze Cool white cord available in 5' increments SWB Salt Water WMW Warm White Bronze Stainless Steel BLU Blue CYN Cvan GRN Green

# Model 4800 SWM

#### **DESCRIPTION**

The  $4800\,\mathrm{Series}$  wet niche mounted swimming pool light is smaller in size than conventional units. It is available with round or square bezel and uses  $120\,\mathrm{Volt}, 150\,\mathrm{Watt}$  max.,  $T-4\,\mathrm{mini}$ -can or  $12\,\mathrm{Volt}, 75\,\mathrm{Watt}$  max., MR16 quartz halogen lamp. The stainless steel niche includes a bonding lug and conduit hub. A clear fresnel spread tempered lens is standard. Lamp included.

(Formerly Models 4842, 4843, 4845, 4838, 4839, 4840)

## **SPECIFICATIONS**

**FIXTURE HOUSING AND DOOR:** Stainless steel housing with heavy wall cast bronze doors. Stainless steel door finish also available.

**NICHE:** Stainless steel with cast bronze mounting assembly, which has provisions for positive locking of fixture in position. The unit includes a grounding lug and a 3/4" conduit hub with 1/2" reducer or PGl6 conduit hub.

**LAMP:** 120 Volt: T-4,150 Watt max., Quartz Halogen. 12 Volt: MR-16 75 Watt max., Quartz Halogen. (Lamp included).

**SOCKET:** 120 Volt: Mini-can, screw base.12 Volt: bipin mount GX5.3.

**LENS:** 31/8" (80mm) diameter tempered borosilicate, clear fresnel spread standard. Clear, amber, blue, green, and red lenses also available. Colored lenses are not fresnel.

**GASKET:** Single-piece molded U-shaped silicone.

**CORD:** Minimum of 35' of #16-3 STW submersible cord for U.S. standard, 10m of HO7RN-F-2x4mm2 for European standard. Cord entrance is epoxy encapsulated. Cord length must be specified. Sufficient cord must be coiled in the niche to allow for the removal of the fixture to above water level for relamping.

**FACTORY LEAK TESTED:** All fixtures are tested at 10 PSI (0.70kg/cm2) internal pressure while totally submerged in water.

**LOW WATER CUT-OFF:** Temperature sensing Low Water Cutoff standard.

FASTENERS: Stainless Steel.

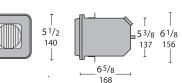
LISTING: U.L., CSA, CE, CB, NEMKO



IP-68 √/<sub>4M</sub> 11

4800 SWM





## **SQUARE BEZEL**



## **ROUND BEZEL**

Model	Door 1	Material	Lamp Type <sup>3</sup>	Voltage	Distribution	Lens	Mounting	Conduit Entries	Cord Set Length	Application	Lamp	Options
4800 (H Y D	RD Round SQ Square	B Bronze SS <sup>2</sup> Stainless Steel	Incandescent   1000   T4	120 12 <sup>4</sup>	FL Flood	CLS * Convex Lens Swim  CLSA Convex Lens Amber Swim  CLSB * Convex Lens Green Swim  CLSG * Convex Lens Green Swim  CLSR Convex Lens Red Swim  CLC Convex Lens Clear Swim		3445B 3/4" NPT at 45" 1645B PG16 at 45"  RD door adjustable, 2 SS door available in 3 Other wattages avail.  Transformer not inclu CLB and CLG not av CSL50 max. cord len Available in 12V only	round only able by request ded, sold separately ailable w/ 150Q gth for 12V	SWM Swimming Pool Fixture	LP Lamp Installed	Listing CSA Canadian Standard Assoc. IEc <sup>8</sup> International Electrotechnical Commission





## **UNDERWATER ACCESSORIES**

## **Underwater Accessories**

Complementing their underwater lights, is Hydrel's full line of accessories manufactured to the high standards required for underwater fountain and pool products.

## Electronic Water Level and Cut-Off Controls

See Page 57-60 for installation details.

MODEL #

**ELWC** deck & remote

mount

**ELWC1** conduit mount



## **Colored Lenses**

Green, Red, Amber, and Blue available for most fixtures.



# 6 152 63/4 172 3 "(76)min. 1 13 "(330)max. 13 "(330)max. 172 ELWC

Dimensions shown in inches and millimeters.

## Low Voltage Transformers

Low voltage lighting fixtures require that the line voltages be stepped down. This is normally accomplished with a transformer or series of transformers located in the pool equipment area. Hydrel offers such units in sizes from  $300\, tol000\, Watts$ .

**Note:** Special consideration must be given to the length of cords used with low voltage underwater fixtures.

## **Potting Compound**

PC21 is a re-enterable potting compound which pours yellow and cures transparent so that connections are easily located. It meets NEC requirements for potting underwater junction boxes.

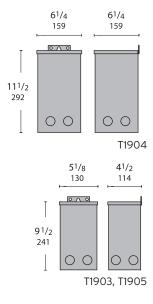
**PC21** 35 CU. IN. **PC2112** 20 CU. IN.



MODEL #

**T1904** 1000 Watt Transformer **T1905** 500 Watt Transformer

T1903 300 Watt Transformer





PC21

## **UNDERWATER ACCESSORIES**

## **Underwater Junction Boxes**

Hydrel Underwater Junction Boxes are designed for the connection of supply cords from underwater fountain fixtures and service conduits. They feature heavy cast bronze construction, neoprene gaskets, internal ground lugs and stainless steel hardware.

All hubs may be tapped either 1/2" NPT or 3/4" NPT with other drillings available upon request. When ordering, specify the catalog number, hub location, and hub size.

Letters around perimeter indicate side drill locations. Letters within box indicate bottom drill locations.



JB1701



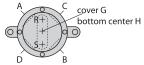
JB1703



JB1705



JB1706



**Outside Dim:** 

4<sup>3</sup>/4" (121) dia. x 3" (76) deep

#### Inside Dim:

3<sup>1</sup>/2"(89) dia. x 2"(51) deep 25 cubic inches)

Cover may have single  $^{1}/^{2}$ " or  $^{3}/^{4}$ " hub. Bottom may also have single 1" hub.



#### **Outside Dim:**

3<sup>3</sup>/8"(86) x 4<sup>3</sup>/8"(111)  $\times 2^{1/2}$ " (64) deep

#### Inside Dim:

3"(76) x 2"(51) x 2"(51) deep (12 cubic inches)



#### **Outside Dim:**

 $4^{3}/4$ " (121) sq. x  $2^{1}/2$ " (64) deep

#### Inside Dim:

3"(76) sq. x 2"(51) deep (18 cubic inches)



#### **Outside Dim:**

 $5^{3}/8$ "(137) sq. x  $2^{1}/2$ "(64) deep

#### Inside Dim:

4"(102) sq. x 2"(51) deep (32 cubic inches)



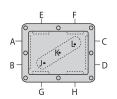
JB1708





JB1711





Outside Dim:

7<sup>3</sup>/8"(188) x 5<sup>3</sup>/8" x 2<sup>1</sup>/2" (137) deep

#### Inside Dim:

6"(153) x 4"(102) x 2"(51) deep (48 cubic inches)

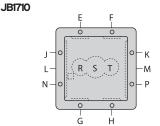
Bottom may have single 1" or 11/4" hub. around screws

## Outside Dim:

7<sup>5</sup>/8"(194) x 6<sup>1</sup>/2"(165) x 4<sup>7</sup>/16" (113) deep

#### Inside Dim:

5<sup>3</sup>/16"(132) x 4<sup>1</sup>/8"(105) x 3<sup>11</sup>/16" (94) deep (62 cubic inches



## Outside Dim:

7<sup>5</sup>/8"(194) sq. x 4<sup>3</sup>/4"(121) deep

## Inside Dim:

6" (153) sq. x 4" (102) deep (144 cubic inches)

Bottom may have maximum three 1" hubs or two 11/4" hubs or one 2" hub.



## Outside Dim:

internal cord seal included

 $4^{1}/2$ " (115) dia. x  $3^{5}/8$ " (93) deep

to fixture

## Inside Dim:

 $2^{3}/4$ " (71) dia. x  $2^{1}/4$ " (58) deep (10 cubic inches)

(HYDREL)

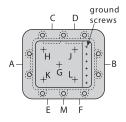
## **UNDERWATER ACCESSORIES**

## **Deck Mounted Junction Box**

Specifically designed for deck or in remote wall mountings, this deck Junction Box meets all the requirements of the NEC. It features cast bronze construction, neoprene gasket, one hub at each end, and two hubs on one side. The entire bottom and one side of the box are suitable for drilling. Fasteners are stainless steel.

Note: Specify USR Strain Reliefs for the total number of fixtures. USR sold separately.





JB1719

**Outside Dim:** 7<sup>5</sup>/8"(194) x 6<sup>1</sup>/2"(165) x 4<sup>7</sup>/16"(113) deep

# **Inside Dim:** 5<sup>3</sup>/16"(132) x 4<sup>1</sup>/8"(105) x 3<sup>11</sup>/16"(94) deep (62.0 cubic inches)

## **Cord Seals**

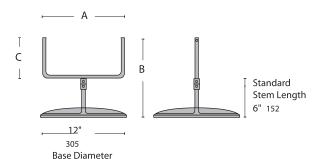


Constructed of brass with neoprene grommet, these seals are for use in underwater junction boxes for fixture cord entrance seals.

MODEL	NPT	CORD	)	Α	В
CS14302	1/2	18-3		7/8	11/2
CS143022	1/2	16-3*	(3 x 1.5)	7/8	11/2
CS14304	3/4	18-3		11/4	13/4
CS14303	3/4	14-3	(2 x 4)	11/4	13/4
CS143032	3/4	12-3		11/4	13/4
CS143033	3/4	10-3	(2 x 6)	11/4	13/4

## ALB - Adjustable Locking Base

This fountain lighting accessory base allows for variable fixture height and includes Hydrel's Pre-Focus Aim-Set feature. Multiple riser heights available.



MODEL		Α		В		С
ALB15	101/2	(267)	12 5/8	(321)	8 5/8	3 (219)
ALB21	77/8	(200)	11	(279)	7	(178)
ALB22	711/16	(195)	12	(305)	8	(203)
ALB24	711/16	(195)	12	(305)	8	(203)
AI R27	7 11/16	(195)	12	(305)	8	(203)

## SR Strain Relief

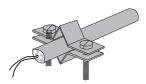


A threaded cord grip that prevents cord movement from pulling on connections.

Used where J-box is mounted above the floor or deck.

MODEL	C (NPT)	CORD	Α	В
SR50	1/2	16-3*	7/8	13/8
SR754	3/4	18-3	11/4	11/2
SR75	3/4	10-3	11/4	11/2

\* 18-2 / 16-1 cord fits SR50 & CS143022 parts



## **USR Strain Relief**

Universal Strain Relief (USR) Strain Reliefs, used where J-boxes are mounted flush to floor or deck. Specify for the total number of fixtures so mounted.



## **INSTALLATION - SWIMMING POOLS**

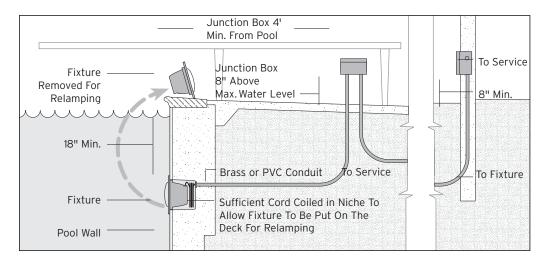
## Wet Niche Fixture & Junction Box Installation

Hydrel fixtures are designed to meet National Electric Code (U.S.A.), Article 680 requirements. The N.E.C. requires that fixtures must be installed so that the top of the fixture is at least 18" below normal water level. The junction box shall be located at least 8" above maximum water level, pool deck, or ground, whichever is greater. The junction box shall be located not

less than 4' from the perimeter of the pool, unless separated from the pool by a fence, wall or other permanent barrier. Junction boxes mounted above grade in the walkway around the pool shall be afforded additional protection by locating them in such places as under a diving board, adjacent to fixed structures, etc. Check local codes to assure compliance.

#### **GROUND FAULT CIRCUIT** INTERRUPTERS - (GFCI'S)

120 Volt swimming pool and fountain lights are required to be on GFCI circuits. Hydrel recommends a maximum of four lights or 1000 Watts of load per GFCI.



## Recommended Lighting Design

The following information will be useful in determining the lighting requirements for swimming pools.

- 1. Establish the lamp wattage and number of fixtures per square feet required based on the size of the pool and spacing as shown on the chart below.
- 2 Establish the approximate fixture wattage

OUTDOOD*	LAMBIMATTO	WALL A	IAV EEET	"D" DEDTI
OUTDOOR*	LAMP WATTS		IAX. FEET	"D" = DEPTH
POOL	PER SQ. FT.	POOL DEPTH	POOL DEPTH	BELOW
		OVER 5 FT.	UNDER 5 FT.	WATER
RESIDENTIAL	0.5 TO 1			18"
COMMERCIAL	1 TO 1.5	16'	18'	18"
COMPETITION	1.5 TO 2**	14'	16'	18"
DIVING POOL	2 TO 3	14'		36"

For indoor pools increase lighting by 25% (x 1.25)

2. Latabilan the approximate	IIXtuie	wattage
using the following formula:		

Pool Area x Watts per Sq. F	Ft _	Watts per Fixture	
Number of Fixtures		watts per Fixture	=

number of fixtures.
Using low wattage lamps will
produce a more even light
distribution Increase lighting

3. Select the fixture that comes

For in-between wattages, use next highest wattage or increase the

closest to meeting wattage

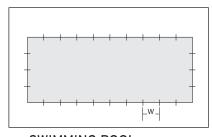
requirements

requirements when pool walls are other than white.

The recommendations are for standard type pools.

For special applications, consult your Hydrel representative.

FOR WHITE BOTTOM POOLS							
LAMP WATTS PER SQ. FT							
12 VOLTS - 75 WATTS	120 VOLTS - 250 WATTS						
0.15 WATTS / SQ FT.	0.25 WATTS / SQ. FT.						
0.25 WATTS / SQ. FT.	0.50 WATTS / SQ. FT.						
0.50 WATTS / SQ. FT.	0.75 WATTS / SQ. FT.						



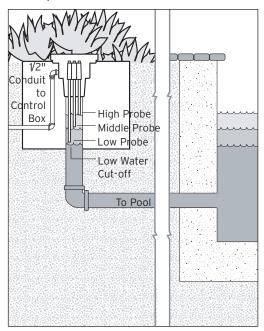
**SWIMMING POOL** 

<sup>\*\*</sup> Never center lights in racing lanes

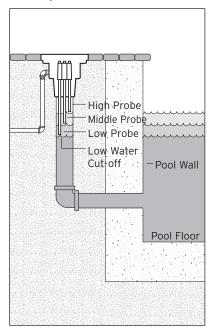
## **INSTALLATION - CONTROLS**

## ELWC Electronic Level and Low Water Cut-off

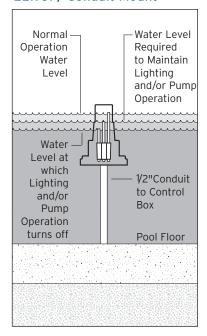
#### **ELWC / Remote Mount**



**ELWC / Deck Mount** 



**ELWC1 / Conduit Mount** 



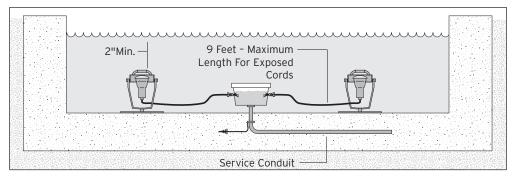
The ELWC and the ELWCl maintain water level and also protect pump and lighting equipment against overheating should water level drop below the minimum required for cooling.

The units consist of a control box and sensor housing. The ELWC is designed for deck or remote mounting with the sensor housing set in a down position. The ELWCl is for conduit mounting with the sensor housing set in an up position.

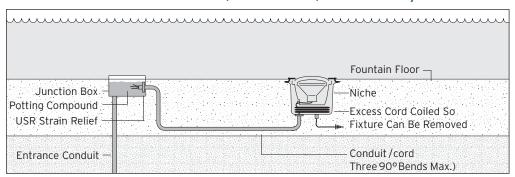
These units are electrically connected to a remotely located control box. The sensor units monitor the pool water level by making the electrically conductive water a part of the control unit. This is accomplished with a series of three stainless steel probes which must be cut to the proper length for the specific pool. The water is maintained between the high and middle probe as the control senses the water position and activates or shuts off the water supply solenoid. The low probe is the cut-off which senses the absence of water and turns off the lighting and pump equipment.



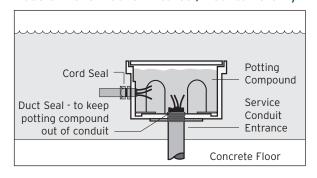
## Junction Box & Fixture Installation / Base or Yoke Mount / Fountains Only



## Junction Box & Fixture Installation / Niche Mount / Fountains Only



# Underwater Junction Box / Installation Detail Base or Yoke Mount Fixtures / Fountains Only

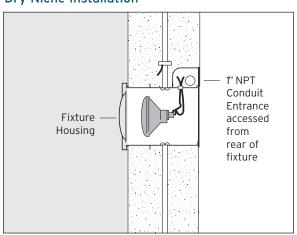


## Junction Box Selection Guide

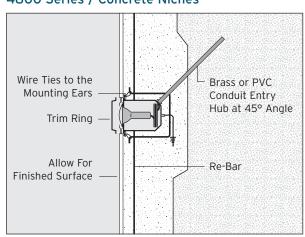
All conductors are to be considered in calculations.

CONDUCTOR SIZE A.W.G.	REQ. SPACE IN BOX FOR EACH CONDUCTOR
18	15 CU. IN.
16	175 CU. IN.
14	2.0 CU. IN.
12	2.25 CU. IN.
10	2.5 CU. IN.
8	3.0 CU. IN.
6	5.0 CU. IN.

## **Dry Niche Installation**



## 4800 Series / Concrete Niches

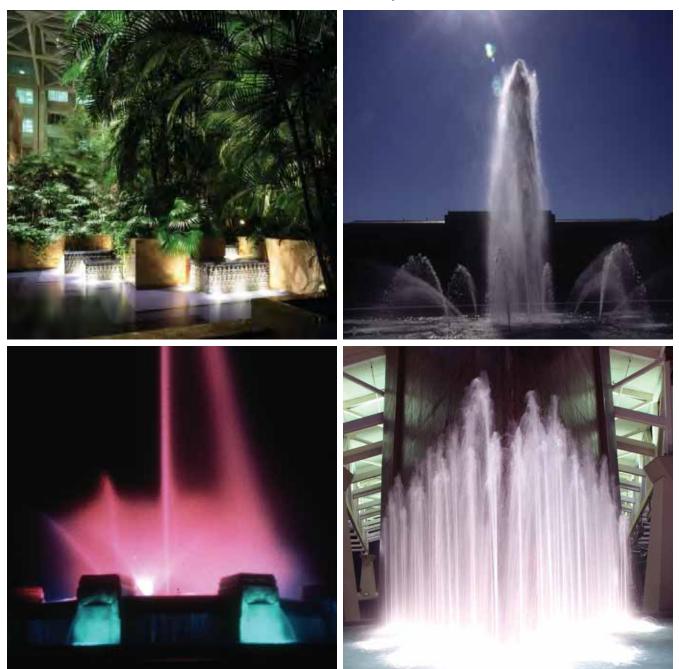


## **INSTALLATION - FOUNTAINS**

## Underwater Lighting Wattage Table

			HEIGHT OF FOUNTAIN EFFECT								
DISTRIBUTION	H/W	5'	10'	15'	20'	25'	30'	35	40'	45'	50'
WIDE FLOOD	1TO1	250W	500W	1000W	2000W	3000W					
FLOOD	2 TO 1	150W	300W	500W	900W	1000W	1500W	2000W			
SPOT	Single	150W	150W	250W	300W	500W	600W	1000W	1200W	2000W	2000W

 $*\,H/W$  is height-to-width ratio of water effect





## **APPLICATION**

Hydrel's low wattage, low profile fountain pool lights are ideal for lighting miniature pools and fountains

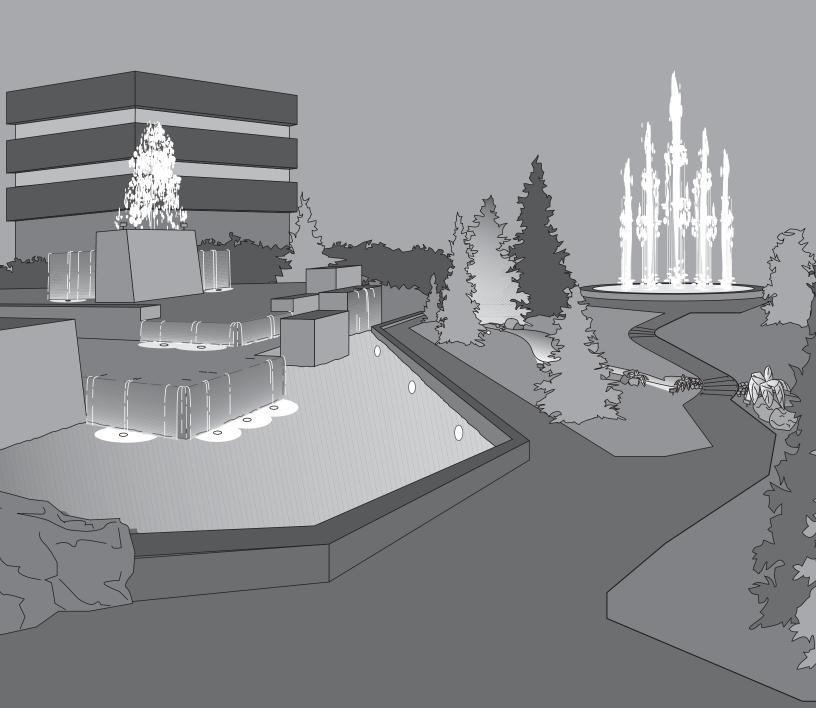
Lighting design for commercial and residential pools are facilitated by Hydrel's extensive line of fixtures. All Hydrel swimming pool lights are built to meet the rigid safety requirements for swimming pool lights and therefore meet or surpass U.L. standards and those of the National Electric Code.

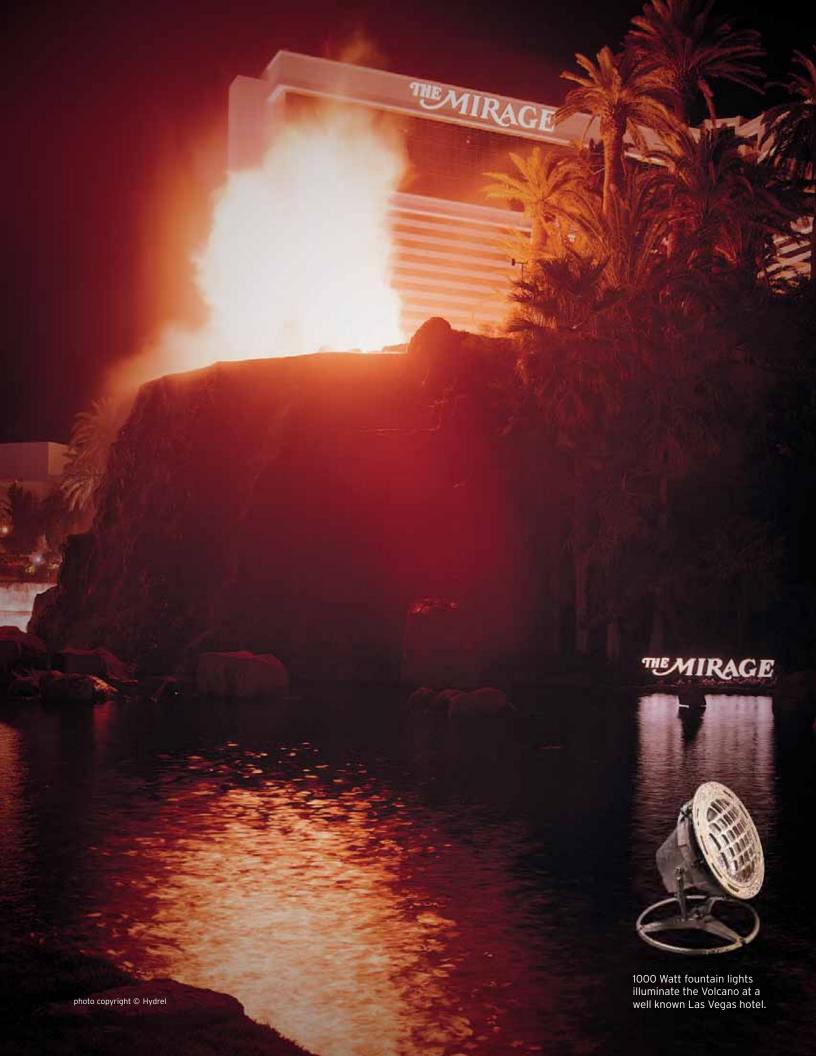
The Hydrel line of Wet/Dry lights also include the WD9000 Series in-grade lights. These fixtures are ideal for illuminating landscape features placed close to swimming pools, fountains or reflection pools.

Hydrel's extensive line of fountain pool lights easily accommodate any water effect installations with features varying from shallow pools to tal fountains

Lighting effects in and on the edges of streams, ponds, lakes, or waterfalls are made possible by Hydrel's line of Wet/Dry lights. These versatile fixtures can operate totally submerged but, unlike other underwater lights, are not dependent upon water for cooling and therefore can operate when water levels are low.

The high wattage models of Hydrel's line of underwater lights illuminate even the larges fountains with spectacular, dependable lighting.





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