



System Assessment and Validation for Emergency Responders (SAVER)

Dive Lights Market Survey Report

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System Assessment and Validation for Emergency Responders

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FOREWORD

The U.S. Department of Homeland Security (DHS) established the System Assessment and Validation for Emergency Responders (SAVER) Program to assist emergency responders making procurement decisions. Located within the Science and Technology Directorate (S&T) of DHS, the SAVER Program conducts objective assessments and validations on commercially available equipment and systems and develops knowledge products that provide relevant equipment information to the emergency responder community. The SAVER Program mission includes:

- Conducting impartial, practitioner-relevant, operationally oriented assessments and validations of emergency response equipment
- Providing information, in the form of knowledge products, that enables decision-makers and responders to better select, procure, use, and maintain emergency response equipment.

SAVER Program knowledge products provide information on equipment that falls under the categories listed in the DHS Authorized Equipment List (AEL), focusing primarily on two main questions for the responder community: “What equipment is available?” and “How does it perform?” These knowledge products are shared nationally with the responder community, providing a life- and cost-saving asset to DHS, as well as to Federal, state, and local responders.

The SAVER Program is supported by a network of Technical Agents who perform assessment and validation activities. As a SAVER Program Technical Agent, the Space and Naval Warfare Systems Center (SPAWARSYSCEN) Atlantic has been tasked to provide expertise and analysis on key subject areas, including communications, sensors, security, weapon detection, and surveillance, among others. In support of this tasking, SPAWARSYSCEN Atlantic developed this report to provide emergency responders with information gathered during a market survey of commercially available dive lights, which fall under AEL reference number 03WA-01-ULHH titled Lights, Underwater, Personal.

For more information on the SAVER Program or to view additional reports on dive lights or other technologies, visit www.firstresponder.gov/SAVER.

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1. INTRODUCTION

Dive lights are primarily used by public safety divers to provide additional illumination during dive operations that are conducted in poorly-lit conditions. Such conditions may occur during nighttime dives, as well as when searching inside sunken vessels or vehicles, examining underwater structures, and diving at great depths. Dive lights may also be used by divers to signal other divers or mark their location during dive operations. To provide emergency responders with information on dive lights, the System Assessment and Validation for Emergency Responders (SAVER) Program conducted a market survey.

This market survey report is based on information gathered from September 2014 through June 2015 from vendors, Internet research, an emergency responder focus group, and a government issued Request for Information (RFI) that was posted on the Federal Business Opportunities website. For inclusion in this report, the dive lights had to have a depth rating of at least 300 feet.

Due diligence was performed to develop a report that is representative of products in the marketplace.

2. DIVE LIGHTS OVERVIEW

Dive lights are waterproof lights that are designed for individual use during dive operations. They vary in body style, bulb type, brightness, and beam angle.

2.1 Body Style

Dive lights have a torch, pistol grip, lantern, or canister body style (Figure 2-1 to Figure 2-4). Torch, pistol grip, and lantern dive lights are typically handheld but may also be affixed to a diver via a mount, such as a soft or hard Goodman style handle (Figure 2-5 and Figure 2-6). Canister dive lights have a canister that houses the battery, which attaches to a diver's tank or buoyancy control device (BCD), and a cable with a light head at the end that is usually attached to a Goodman style handle. A Goodman style handle fits over a diver's hand allowing the diver to have both hands free. A soft Goodman style handle is composed of soft material, such as soft neoprene and is flexible while a hard Goodman style handle is composed of hard material, such as plastic or metal and is rigid.



Figure 2-1. Torch Body Style



Figure 2-2. Pistol Grip Body Style

Image courtesy of Princeton Tec



Figure 2-3. Lantern Body Style

Image courtesy of Intova



Figure 2-4. Canister Body Style



Figure 2-5. Soft Goodman Style Handle



Figure 2-6. Hard Goodman Style Handle

A variety of mounting options for dive lights of all body styles may be offered by the vendor and/or may be available through third-party vendors.

2.2 Bulb Type

There are three common bulb types used in dive lights: 1) incandescent (e.g., xenon, halogen), 2) high intensity discharge (HID), and 3) LED. Dive lights using incandescent bulbs typically provide warmer, more natural colors and are generally less expensive than dive lights using HID bulbs or LEDs. Dive lights using HID bulbs are typically brighter than dive lights using incandescent bulbs or LEDs. Dive lights using LEDs are typically smaller, lighter, more durable, and require less power than other dive lights. Dive lights using incandescent or HID bulbs get hot in use whereas LEDs burn much cooler.

2.3 Brightness and Beam Angle

The brightness of a dive light is expressed in lumens and may be user adjustable. Typically, more lumens result in a brighter light.

The beam angle of a dive light is expressed in degrees and may be user adjustable. A wide beam angle is commonly called a flood beam, while a narrow beam angle is usually called a spot beam. Dive lights that provide a flood beam may be useful when illuminating large areas during dive operations, such as when photographing an entire underwater crime scene, whereas dive lights with a spot beam are helpful when illuminating specific targets. In addition, spot beams typically provide better illumination over longer distances than flood beams, since sediment in the water reflects light back to the diver, and this effect is more pronounced the wider the beam angle.

3. PRODUCT INFORMATION—VENDOR PROVIDED

This section provides general product specifications on over 100 dive lights that range in price from \$17 to \$2,080. All dive lights with a canister body style have a minimum cable length of 41 inches. All of the dive lights are negatively buoyant. Some of the dive lights can be used out of the water; however, limitations on out-of-water use vary across products. Therefore, the vendors are the best source to obtain additional information regarding out-of-water use. Specifications presented in Table 3-1 were obtained directly from vendors and their websites. The information has not been independently verified by the SAVER Program.

Table 3-1. Dive Lights Specifications – Vendor Provided

Vendor	Product	MSRP	Warranty ¹	Body Style	Dimensions (inches) (LxWxH or LxD)	Weight (pounds)	Brightness (lumens)	Bulb Type	Beam Angle	Strobe Mode	User-Replaceable Battery	Battery Type	Battery Runtime (hours) ²
Bigblue Dive Lights/ BosskUSA	AL220	\$50	1 year	Torch	5.8x1.1	0.19 ³	220	LED	8°		✓	2 AA	2
	AL450N	\$80	1 year	Torch	4.6x1.7	0.45 ⁴	450	LED	8°		✓	3 AAA	4
	AL450W	\$66	1 year	Torch	4.4x1.4	0.36 ⁴	450	LED	40°		✓	3 AAA	4
	AL1000NP	\$166	1 year	Torch	5.7x1.4	0.43 ⁴	100, 200, 400, 1000	LED	10°	✓	✓	Proprietary	2 to 20
	AL1000WP	\$166	1 year	Torch	5.3x1.5	0.43 ³	100, 200, 400, 1000	LED	85°	✓	✓	Proprietary	2 to 20
	CF450	\$122	1 year	Torch	5.2x1.5	0.43 ⁴	450	LED	6° to 31°		✓	3 AAA	4
	CF1000P	\$208	1 year	Torch	6.8x1.5	0.58 ⁴	100, 250, 500, 1000	LED	7° to 37°	✓	✓	Proprietary	2 to 20
	TL2800P	\$376	1 year	Torch	5.4x2.5	1.00 ⁴	280, 700, 1400, 2800	LED	10°	✓	✓	Proprietary	1.5 to 15
	TL4000P	\$546	1 year	Torch	4.1x2.8	1.31 ⁴	400, 1000, 2000, 4000	LED	10°	✓	✓	Proprietary	2 to 20
	TL15000P	\$1,400	1 year	Torch	6.9x4.9	5.43 ⁴	1500, 3750, 7500, 15000	LED	10°	✓	✓	Proprietary	3 to 30
	TL15000PC	\$1,600	1 year	Canister	C: 5.6x4.1 H: 4.14x4.88	C: 5.43 ⁴ H: 3.16	1500, 3750, 7500, 15000	LED	10°	✓	✓	Proprietary	3 to 30
	XL- QUATTRO	\$300	1 year	Torch ⁵	7.9x2.6	2.07 ⁴	500, 1000	LED	8°		✓	8 AA	1.7 to 2.5

See page 14 for notes and definitions of the abbreviations used throughout this matrix.

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Vendor	Product	MSRP	Warranty ¹	Body Style	Dimensions (inches) (LxWxH or LxD)	Weight (pounds)	Brightness (lumens)	Bulb Type	Beam Angle	Strobe Mode	User-Replaceable Battery	Battery Type	Battery Runtime (hours) ²
Dive Rite	BX-1 Handheld Light (LT6640)	\$85	1 year	Torch	5.0x1.7	0.44	600 or 800 ⁶	LED	8°		✓	3 AAA or 1 18650	2 to 4
	LX20 (LT6000)	\$750	1 year	Torch	5.8x2.2	1.25	2000	LED	6°	✓	✓	4 18650	4 to 6
	LX25 series	\$900	1 year	Canister	C: 9.0x2.6 H: 2.7x2.0	3.80 ⁷	3000	LED	6°	✓	✓	Proprietary	3.5 to 8
EDGE-HOG GEAR	Morph 1000 Backup Light	\$220	1 year	Torch	7.3x1.1	0.25	250, 500, 1000	LED	8°	✓	✓	1 18650	1 to 2
	Morph 1000 - Core Light System	\$600	1 year	Canister	C: 5.1x2.0 H: 4.92x3.54	C: 0.95 H: 0.25	250, 500, 1000	LED	8° or 70° ⁸	✓		Proprietary	5 to 6
Hollis	LED 3	\$90	1 year	Torch	5.8x2.0	0.75	230	LED	8°	✓	✓	3 AA	6
	LED 6	\$105	1 year	Torch	8.1x1.8	1.00	360	LED	8°	✓	✓	3 C	7
	LED 15 series	\$400 to \$600	1 year	Canister	C: 5.5x2.8 H: 3.5x1.75	4.00 ⁷	1000	LED	8°			Proprietary	6
	LED 25 series	\$550 to \$850	1 year	Canister	C: 7.3x2.8 H: 3.5x1.75	5.00 ⁷	1250	LED	8°			Proprietary	8
Ikelite Underwater Systems	Gamma series	\$120	1 year	Torch	5.6x1.4	0.25	220	LED	10°	✓	✓	2 CR123	10
	PC Halogen series	\$36	Lifetime	Torch	6.0x2.5	1.00	Unknown	Halogen	12°		✓	4 C	4

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Ikelite Underwater Systems	PC LED series	\$74	Lifetime	Torch	6.0x2.5	1.05	205	LED	12°		✓	4 C	10
	PCa Halogen series	\$32	Lifetime	Torch	4.0x2.5	0.66	Unknown	Halogen	12°		✓	6 AA	2.5
	PCa LED series	\$74	Lifetime	Torch	4.0x2.5	0.70	205	LED	12°		✓	6 AA	7
	PCm Halogen series	\$30	Lifetime	Torch	4.0x2.0	0.51	Unknown	Halogen	12°		✓	4 AA	1.5
	PCm LED series	\$66	Lifetime	Torch	4.0x2.0	0.54	205	LED	12°		✓	4 AA	5
	SpD Tech Dive Light Kit (1410.08)	\$500	1 year	Canister	C: 7.0x5.0x1.5 H: 6.5x3.5	4.10 ⁷	Unknown	Halogen	60° to 80°				Proprietary
Intova	Teranova (TTN1)	\$1,599	1 year	Lantern	4.1x7.1x8.8	7.30	10000	LED	10°	✓	✓	Proprietary	1.5 to 6
Light & Motion	GoBe 500 SPOT	\$179	2 years	Torch	4.9x1.9	0.38	70, 225, 500	LED	20°	✓		Proprietary	1.5 to 12
	GoBe+ 500 SEARCH	\$299	2 years	Torch	5.2x1.9	0.43	70, 225, 500	LED	8°	✓		Proprietary	2.2 to 18
	GoBe+ 700 SPOT	\$279	2 years	Torch	4.9x1.9	0.39	100, 325, 700	LED	20°	✓		Proprietary	1.5 to 12
	GoBe+ 700 WIDE	\$279	2 years	Torch	4.9x1.9	0.39	100, 325, 700	LED	60°	✓		Proprietary	1.5 to 12

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Light & Motion	Sola Dive 800 S/F series	\$399	2 years	Torch	4.0x2.1	0.54	125, 250, 500 ⁹	LED	12°	✓		Proprietary	1.2 to 4.7
							200, 400, 800 ¹⁰		60°				
	Sola Dive 1200 S/F series	\$599	2 years	Torch	4.0x2.1	0.56	125, 250, 500 ⁹	LED	12°	✓		Proprietary	1.2 to 4.7
							300, 600, 1200 ¹⁰		60°				
	Sola Dive 1200 SPOT	\$549	2 years	Torch	4.0x2.1	0.58	300, 600, 1200	LED	12°, 60°	✓		Proprietary	1 to 4
Sola Dive 2000	\$799	2 years	Torch	4.0x2.1	0.56	150, 300, 600 ⁹	LED	12°	✓		Proprietary	0.9 to 3.7	
						500, 1000, 2000 ¹⁰		60°					
Sola Tech 600	\$599	2 years	Torch	5.0x2.1	0.73	150, 300, 600	LED	8°	✓		Proprietary	3 to 12	
Light Monkey Enterprises LLC	2 Watt LED	\$115	1 year	Torch	5.0x1.4	0.30	125	LED	13°		✓	2 CR123	6
	3 Watt LED	\$175	1 year	Torch	8.0x1.8	0.85	400	LED	8°		✓	3 C	10
	9 Watt LED (2.6-9 LED)	\$580	1 year	Torch	7.5x1.8	0.90	600	LED	6°			Proprietary	3.5
	9 Watt LED (5.2-9 LED)	\$715	1 year	Canister	C: 7.5x1.8 H: 4.5x3.5	C: 1.25 H: 0.75	600	LED	6°			Proprietary	3.5

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Vendor	Product	MSRP	Warranty ¹	Body Style	Dimensions (inches) (LxWxH or LxD)	Weight (pounds)	Brightness (lumens)	Bulb Type	Beam Angle	Strobe Mode	User-Replaceable Battery	Battery Type	Battery Runtime (hours) ²	
Light Monkey Enterprises LLC	12 Watt LED (5.2-12 LED)	\$820	1 year	Canister	C: 7.5x2.0 H: 4.5x3.5	C: 2.38 H: 0.80	750	LED	6°			Proprietary	5	
	21 Watt HID	10-21 HID	\$1,450	1 year	Canister	C: 9.0x3.0 H: 4.0x4.5	C: 4.50 H: 1.30	1500	HID	6°			Proprietary	5
		20-21 HID	\$1,765			C: 12.0x3.0 H: 4.0x4.5	C: 6.40 H: 1.30							10
		26-21 HID	\$1,920			C: 12.5x3.5 H: 4.0x4.5	C: 6.40 H: 1.30							13
	21 Watt LED	10-21 LED	\$1,345	1 year	Canister	C: 9.0x3.0 H: 4.0x4.5	C: 4.50 H: 1.30	1100	LED	6°			Proprietary	5
		20-21 LED	\$1,700			C: 12.0x3.0 H: 4.0x4.5	C: 6.30 H: 1.30							10
		26-21 LED	\$1,800			C: 12.5x3.5 H: 4.0x4.5	C: 6.40 H: 1.30							13
	26 Watt LED	10-26 LED	\$1,450	1 year	Canister	C: 9.0x3.0 H: 4.5x4.5	C: 4.50 H: 1.25	1700	LED	6°			Proprietary	3.8
		15-26 LED	\$1,605			C: 11.0x2.8 H: 4.5x4.5	C: 5.25 H: 1.25							5.8
		20-26 LED	\$1,765			C: 12.0x2.0 H: 4.5x4.5	C: 6.30 H: 1.25							7.7
		26-26 LED	\$1,900			C: 12.5x3.5 H: 4.5x4.5	C: 6.30 H: 1.25							13

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Light Monkey Enterprises LLC	32 Watt LED	10-32 LED	\$1,555	1 year	Canister	C: 9.0x3.0 H: 4.5x4.5	C: 4.50 H: 1.25	2500	LED	6°		Proprietary	3.3
		15-32 LED	\$1,715			C: 11.0x2.8 H: 4.5x4.5	C: 5.25 H: 1.25						4.8
		20-32 LED	\$1,870			C: 12.0x3.0 H: 4.5x4.5	C: 6.30 H: 1.25						6.5
	35 Watt HID	20-35 HID	\$1,870	1 year	Canister	C: 12.0x3.0 H: 8.5x4.5	C: 4.40 H: 1.70	3000	HID	6°		Proprietary	6.7
		26-35 HID	\$2,020			C: 12.5x3.5 H: 8.5x4.5	C: 7.50 H: 1.70						7.5
		50 Watt HID (20-50 HID)	\$2,080	1 year	Canister	C: 12.5x3.5 H: 8.0x4.5	C: 7.00 H: 1.25	5000	HID	6°			Proprietary
Pelican Products Inc.	Nemo 1900 Flashlight (1900N)	\$17	Lifetime	Torch	9.0x4.5x0.8	0.05	11	Xenon	Unknown		✓	2 AAA	1.5
	Nemo 1960 LED Flashlight (1960N)	\$24	Lifetime	Torch	7.0x4.2x1.0	0.07	24	LED	Unknown		✓	2 AAA	3
	Nemo 2000 Flashlight (2000N)	\$50	Lifetime	Torch	9.2x2.1	0.33	53	Xenon	Unknown		✓	3 C	5

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Pelican Products Inc.	Nemo 2010 LED Flashlight (2010N)	\$83	Lifetime	Torch	9.2x4.8x2.1	0.34	109	LED	Unknown		✓	3 C	32
	Nemo 2400 Flashlight (2400N)	\$49	Lifetime	Torch	11.9x6.5x2.1	0.22	45	Xenon	Unknown		✓	4 AA	3.8
	Nemo 2410 LED Flashlight (2410N)	\$81	Lifetime	Torch	9.3x4.7x2.1	0.23	126	LED	Unknown		✓	4 AA	7.5
	Nemo 4300 Flashlight (4300N)	\$78	Lifetime	Pistol Grip	3.4x11.2x12.4	1.04	175	Xenon	Unknown		✓	8 C	6
Princeton Tec	Genesis	\$130	1 year	Torch	5.5x1.5	0.45	650	LED	10°	✓	✓	2 CR123	5
	Impact XL	\$40	Lifetime	Torch	6.5x1.5	0.43	65	LED	10°		✓	4 AA	50
	League	\$50	Lifetime	Torch	6.5x1.8x2.0	0.45	210	LED	12°		✓	4 AA	10
	Sector 5	\$110	Lifetime	Pistol Grip	4.5x2.5x6.5	1.43	550	LED	15°		✓	4 C	24
	Sector 7	\$130	Lifetime	Pistol Grip	6.5x2.5x6.5	2.37	700	LED	15°		✓	8 C	30
	Shockwave II	\$80	Lifetime	Pistol Grip	6.5x2.5x6.5	1.62	205	Xenon	20°		✓	8 C	10
	TEC 40	\$23	Lifetime	Torch	6.5x1.5	0.40	28	Halogen	10°		✓	4 AA	5

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Vendor	Product	MSRP	Warranty ¹	Body Style	Dimensions (inches) (LxWxH or LxD)	Weight (pounds)	Brightness (lumens)	Bulb Type	Beam Angle	Strobe Mode	User-Replaceable Battery	Battery Type	Battery Runtime (hours) ²
Princeton Tec	Torrent LED	\$75	Lifetime	Torch	6.8x2.0	0.80	280	LED	15°		✓	8 AA	30
Sartek Industries Inc.	EBL220C	\$165	Lifetime	Torch	7.3x1.9	1.81	220	LED	8°, 25°, or 45° ⁸		✓	3 C	24
	EBL220D	\$175	Lifetime	Torch	9.6x1.9	1.81	220	LED	8°, 25°, or 45° ⁸		✓	3 D	48
	EBL1200C	\$375	Lifetime	Torch	7.3x1.9	1.19	1200	LED	8°, 25°, or 45° ⁸		✓	3 C	1 to 24
	EBL1200D	\$395	Lifetime	Torch	9.6x1.9	1.19	1200	LED	8°, 25°, or 45° ⁸		✓	3 D	3 to 24
	EBL2200	\$125	Lifetime	Torch	7.5x1.0	0.44	220	LED	7°		✓	3 AA	2 to 24
	EBL2200LI	\$175	Lifetime	Torch	4.8x1.0	0.19	220	LED	7°		✓	1 18650 or 2 CR123	4 to 24
	EBL2200LI-Micro	\$150	Lifetime	Torch	3.5x1.0	0.25	220	LED	7°, 25°, or 45° ⁸		✓	Proprietary	0.5 to 2
	HID35CBDS/CBDL12L10 series	\$1,795	Lifetime	Canister	C: 13.5x2.5 H: 7.8x3.0	C: 3.88 H: 1.50	3600	HID	3° to 60°		✓	Proprietary	3.5
	LED1200MIC RO4L10 series	\$1,065	Lifetime	Canister	C: 5.4x2.4 H: 4.0x2.0	C: 2.50 H: 0.50	1200	LED	8°, 25°, or 45° ⁸		✓	Proprietary	4
	LED1200MIC RO4N5 series	\$1,005	Lifetime	Canister	C: 5.4x2.4 H: 4.0x2.0	C: 2.44 H: 0.50	1200	LED	8°, 25°, or 45° ⁸		✓	Proprietary	2
LED1200MIN I4L20 series	\$1,305	Lifetime	Canister	C: 5.4x2.4 H: 4.0x2.0	C: 3.19 H: 0.50	1200	LED	8°, 25°, or 45° ⁸		✓	Proprietary	8	

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Sartek Industries Inc.	LED1200MIN I4N10 series	\$1,185	Lifetime	Canister	C: 8.0x2.4 H: 4.0x2.0	C: 3.13 H: 0.50	1200	LED	8°, 25°, or 45° ⁸		✓	Proprietary	4
Tabata USA Inc. (TUSA)	TUL-300	\$79	1 year	Torch	6.2x1.5	NP	200	LED	42°		✓	2 CR123	3
	TUL-400	\$94	1 year	Torch	5.1x1.5	0.36	165	LED	50° to 60°	✓	✓	3 AAA	2 to 7
	TUL-410	\$94	1 year	Torch	5.1x1.5	0.36	220	LED	5° to 7°	✓	✓	3 AAA	2 to 7
	TUL-600	\$229	1 year	Pistol Grip	4.0x2.3	NP	600	LED	12°	✓		Proprietary	1 to 4
	TUL-1000	\$399	1 year	Pistol Grip	4.0x2.3	NP	520, 1000	LED	12°, 60°	✓		Proprietary	1 to 4
Tovatec	Beacon Torch (BCON)	\$379	1 year	Torch	10.6x1.3x2.8	2.38	750, 1250, 2500	LED	11°			Proprietary	2 to 12
	Compact Torch (ICOM)	\$60	1 year	Torch	5.5x1.4	0.41 ⁴	230	LED	12°	✓	✓	3 AAA	3
	IFL 660 series	\$75	1 year	Torch	6.2x1.5	0.50 ⁴	300	LED	7°		✓	1 18650 or 2 CR123	6
	IFL WA Zoom series	\$90	1 year	Torch	6.3x1.5	0.53 ⁴	300	LED	9° to 45°		✓	1 18650 or 2 CR123	2 to 3
	Search Light (SL1)	\$160	1 year	Torch	11.0x2.3	0.91 ⁴	800	LED	8°	✓	✓	3 C	7
	SportTac 2000 (ST2000)	\$69	1 year	Torch	4.8x1.4	0.27 ⁴	220	LED	12° to 75°	✓	✓	1 CR14500	1.3
	Ultra III Torch (ULTRA III)	\$90	1 year	Torch	8.9x2.0	1.25	500	LED	14°		✓	6 AA	6

See page 14 for notes and definitions of the abbreviations used throughout this matrix.

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Vendor	Product	MSRP	Warranty ¹	Body Style	Dimensions (inches) (LxWxH or LxD)	Weight (pounds)	Brightness (lumens)	Bulb Type	Beam Angle	Strobe Mode	User-Replaceable Battery	Battery Type	Battery Runtime (hours) ²
Underwater Kinetics	Aqualite Pro 20° (12434)	\$290	Lifetime ¹¹	Torch	5.0x1.5	0.40	160, 300, 430, 750	LED	20°	✓	✓	Proprietary	1.6 to 12
	Aqualite-S 20° (12516)	\$180	Lifetime ¹¹	Torch	5.0x1.5	0.40	80, 200, 500	LED	20°		✓	Proprietary	1.5 to 9
	C4 eLED series	\$151	Lifetime ¹¹	Pistol Grip	6.8x5.6x3.2	1.56	190, 275	LED	15°		✓	4 C	8 to 15.8
	C4 Xenon series	\$85	Lifetime ¹¹	Pistol Grip	6.6x5.6x3.2	1.59	139, 278	Xenon	15°		✓	4 C	4 to 5
	C8 eLED series	\$194	Lifetime ¹¹	Pistol Grip	7.2x7.1x3.2	2.25	270, 400	LED	15°		✓	8 C	13.9 to 19.7
	C8 Xenon series	\$97	Lifetime ¹¹	Pistol Grip	7.2x7.1x3.2	2.19	355, 638	Xenon	15°		✓	8 C	4 to 5
	Light Cannon eLED series	\$215	Lifetime ¹¹	Pistol Grip or Lantern ¹²	7.3x7.1x3.2 ¹³	2.25	530, 825	LED	20°		✓	8 C	9 to 14
	Mini Q40 eLED Plus	\$68	Lifetime ¹¹	Torch	6.5x1.6x1.4	0.38	77	LED	10°		✓	4 AA	4 to 10
	Mini Q40 Xenon	\$41	Lifetime ¹¹	Torch	6.1x1.6x1.4	0.34	38	Xenon	10°		✓	4 AA	4 to 10
	SL3 eLED	\$72	Lifetime ¹¹	Torch	7.5x2.0	0.81	125	LED	15°		✓	3 C	32
	SL4 eLED	\$105	Lifetime ¹¹	Torch	6.2x1.5 x1.7	0.94	400	LED	10°		✓	4 C	10
	SL4 Xenon	\$56	Lifetime ¹¹	Torch	6.3x1.8x2.5	0.94	113	Xenon	10°		✓	4 C	4 to 5
	Super Q eLED Rechargeable	\$132	Lifetime ¹¹	Torch	4.4x1.5x1.4	0.22	90	LED	15°		✓	2 CR123	4

See page 14 for notes and definitions of the abbreviations used throughout this matrix.

Dive Lights Market Survey Report

Vendor	Product	MSRP	Warranty ¹	Body Style	Dimensions (inches) (LxWxH or LxD)	Weight (pounds)	Brightness (lumens)	Bulb Type	Beam Angle	Strobe Mode	User-Replaceable Battery	Battery Type	Battery Runtime (hours) ²
Underwater Light Dude	LD-15 Primary Light (mini)	\$1,095	3 years ¹⁴	Canister	C: 5.5x2.6 H: 3.0x2.0	C: 1.80 H: 1.38	800, 1100, 1500	LED	6°	O		Proprietary	3.3 to 10
	LD-15 Primary Light (short)	\$1,295			C: 8.5x2.6 H: 3.0x2.0	C: 2.80 H: 1.38							6.7 to 20
	LD-15 Primary Light (tall)	\$1,495			C: 11.5x2.6 H: 3.0x2.0	C: 3.80 H: 1.38							10 to 30
	LD-26 Primary Light (mini)	\$1,345	3 years ¹⁴	Canister	C: 5.5x2.6 H: 3.0x2.0	C: 1.80 H: 1.38	800, 1500, 2600	LED	8.2°	O		Proprietary	2.5 to 10
	LD-26 Primary Light (short)	\$1,545			C: 8.5x2.6 H: 3.0x2.0	C: 2.80 H: 1.38							5 to 20
	LD-26 Primary Light (tall)	\$1,745			C: 11.5x2.6 H: 3.0x2.0	C: 3.80 H: 1.38							7.5 to 30
	LD-35 Primary Light (mini)	\$1,545	3 years ¹⁴	Canister	C: 5.5x2.6 H: 3.0x2.0	C: 1.80 H: 1.38	800, 2100, 3500	LED	8.2°	O		Proprietary	1.7 to 10
	LD-35 Primary Light (short)	\$1,745			C: 8.5x2.6 H: 3.0x2.0	C: 2.80 H: 1.38							3.3 to 20

See page 14 for notes and definitions of the abbreviations used throughout this matrix.

Dive Lights Market Survey Report

Vendor	Product	MSRP	Warranty ¹	Body Style	Dimensions (inches) (LxWxH or LxD)	Weight (pounds)	Brightness (lumens)	Bulb Type	Beam Angle	Strobe Mode	User-Replaceable Battery	Battery Type	Battery Runtime (hours) ²
Underwater Light Dude	LD-35 Primary Light (tall)	\$1,945	3 years ¹⁴	Canister	C: 11.5x2.6 H: 3.0x2.0	C: 3.80 H: 1.38	800, 2100, 3500	LED	8.2°	O		Proprietary	5 to 30

Notes:
 ✓—product is equipped with corresponding feature
 Blank cell—product is not equipped with corresponding feature
 C—canister
 H—light head
 NP—information not provided
 O—optional
 Dimensions—L—length; W—width; H—height; D—diameter
¹Limitations on the warranty may apply. Contact vendor for warranty exclusions and specifics.
²Battery runtime may vary with battery type, brightness setting, mode, and water conditions.
³Weight is measured in seawater with batteries.
⁴Weight includes batteries.
⁵Removable lantern grip is included with purchase.
⁶The light provides 600 lumens when using AAA batteries and 800 lumens when using an 18650 battery.
⁷The weight is for the cable, canister, and light head.
⁸Beam angle is selected at time of purchase.
⁹Lumen output at a 12° beam angle.
¹⁰Lumen output at a 60° beam angle.
¹¹Lifetime on defects in materials and workmanship; 10 years for plastics; 3 years for rubber; 1 year for LEDs and electronics; 90 days for proprietary batteries; and 30 days for xenon bulbs.
¹²Body style is chosen at time of purchase.
¹³Dimensions are for the body of the light and do not include pistol grip or lantern mount attachments.
¹⁴Excludes the battery, which has a 1-year warranty.

Information in the table is based on data gathered from vendors and their websites from September 2014 through June 2015.

4. VENDOR CONTACT INFORMATION

Additional information on the dive lights included in this market survey report can be obtained from the vendors listed in Table 4-1.

Table 4-1. Vendor Contact Information

Vendor	Phone Number	Website
Bigblue Dive Lights/BoskUSA	(727) 442-2300	www.bigbluedivelights.com
Dive Rite	(800) 495-1046	www.diverite.com
EDGE-HOG GEAR	(888) 810-4811	www.edge-gear.com
Hollis	(510) 729-5110	www.hollis.com
Ikelite Underwater Systems	(317) 923-4523	www.ikelite.com
Intova	(877) 837-0074	www.intova.net
Light & Motion	(831) 645-1538	www.lightandmotion.com
Light Monkey Enterprises LLC	(386) 202-4690	www.lightmonkey.us
Pelican Products Inc.	(800) 473-5422	www.pelican.com
Princeton Tec	(800) 257-9080	www.princetontec.com
Sartek Industries Inc.	(631) 473-3555	www.sarind.com
Tabata USA Inc. (TUSA)	(800) 482-2282	www.tusa.com/us-en
Tovatec	(719) 219-0814	www.tovatec.com
Underwater Kinetics	(800) 852-7483	www.uwkinetics.com
Underwater Light Dude	(704) 299-0733	www.uwlightdude.com

5. SUMMARY

This market survey report provides information on over 100 dive lights. The products differ in body style, cost, brightness, bulb type, beam angle, battery type, and warranty duration. All dive lights with a canister body style have a minimum cable length of 41 inches. All of the dive lights are negatively buoyant. Most can be mounted for hands-free use, weigh less than 5 pounds, and feature an LED bulb type and user-replaceable batteries. Some of the dive lights can be used out of the water; however, limitations on out-of-water use vary across products.

Emergency responder agencies that consider purchasing dive lights should carefully research each product's overall capabilities and limitations in relation to their agency's operational needs.