



LUMENA-6™

The BIRNS Lumena-6™ is an advanced, brilliant underwater LED floodlight that reduces nuclear fuel handling costs by bringing daylight visibility to reactor cores, fuel transfer canals and storage pools. This 85,000 lumen, low maintenance system provides immense light output, efficiency and quality.



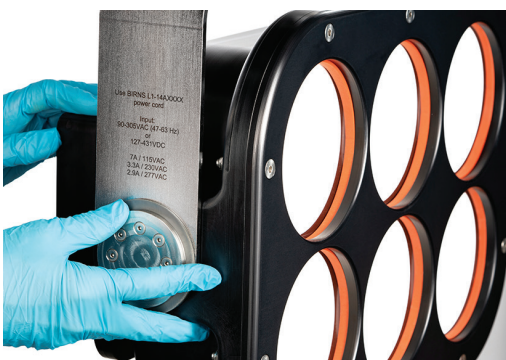
High Performance . . . Under Pressure®

The BIRNS Lumena-6, Model 5360, is a powerful LED lighting system, custom engineered for underwater use in areas of high radiation and nuclear contamination. It is meticulously designed with a rugged water cooled power system and detachable deep-submergence BIRNS Millennium™ 3K power cable assembly.

This advanced lighting system enhances safety and performance in nuclear fuel handling applications. The plug-and-play BIRNS Lumena-6 operates on any mains supply from 90-300 VAC and draws only 600W. Like all BIRNS nuclear lighting systems, it is designed with smooth edges, easily decontaminated, and constructed of all nuclear-compatible materials and captivated parts.

KEY FEATURES

- Brilliant 85,000 lumen output; 5,000K color temp.
- 80,000 hour lamp life
- Streamlined integrated power-supply design uses a single power cord
- Mains input 90-300 VAC/600W power draw
- Polycarbonate, tempered glass, or quartz lens
- Choice of Medium or Wide beam options (30° or 70°)
- Robust design; all-captivated parts, anodized aluminum and stainless steel housing
- Rugged UNS S31600 stainless-steel indexed connectors



The BIRNS Lumena-6, shown here with wide flood reflectors. Note the rounded corners and edges.



The unit can be tilted in any angle, without tools, and stays in set position.

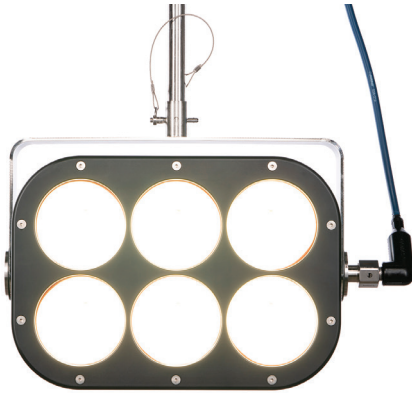


Aimed 90°. Note the integrated, water-cooled electronics enclosure.



LUMENA-6™

**High Performance . . .
Under Pressure®**



*Broad, evenly-distributed "Daylight" illumination,
without hotspots or shadows.*

The system includes an exclusive BIRNS deep-ocean power cable assembly, crafted with stainless steel and high strength polyurethane, and available in lengths from 3m-30m. This cable is ideal for use in the nuclear environment, as it is radiation-tolerant and easy to decontaminate.



The BIRNS L1-14A power cord can be detached and reattached, in seconds, without tools. The hexagonal locking collar is easy for workers to grip, even when wet. Inspection ports allow workers to immediately verify proper sealing.



The solid stainless-steel rod securing the unit to the mounting pole is captivated. It cannot be withdrawn without concurrent pressure on the release button.

The light can be easily adjusted in a wide range of angles, and has the option of three lens materials: polycarbonate, tempered glass, or quartz.

The BIRNS Lumena-6 design obviates the need for cumbersome topside power supplies. All that's needed on the surface is a mains power outlet of any voltage from 90 to 300 VAC.



No topside power supply required. The power cord plugs into any standard mains outlet from 90 to 300 VAC.

1720 Fiske Place, Oxnard, CA 93033-1863, U.S.A.
T +1.805.487.5393 • F 805.487.0427 • Toll-Free 1.888.BIRNS.88

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SPECIFICATIONS

5360-W S

BEAM ANGLE

M: Medium
W: Wide

LENS

P: Polycarbonate
S: Tempered Borosilicate glass
Q: Quartz

1. To order: first select the Beam Angle and Lens (defaults are Medium Beam and Polycarbonate, respectively). Then choose a Mounting Pole and Power Cable Assembly.

2. Mounting Pole

Mounting poles are 1.5m (5 ft.) long and available in two standard styles. Custom lengths and styles are available on special order.



Bail and T-bar
(44N-002)



Bail, T-bar and hook
(44N-010)

3. Power Cable Assembly

Select the cable length, plug, and plug style.

L1-14A - 10 B B

LENGTH (m)

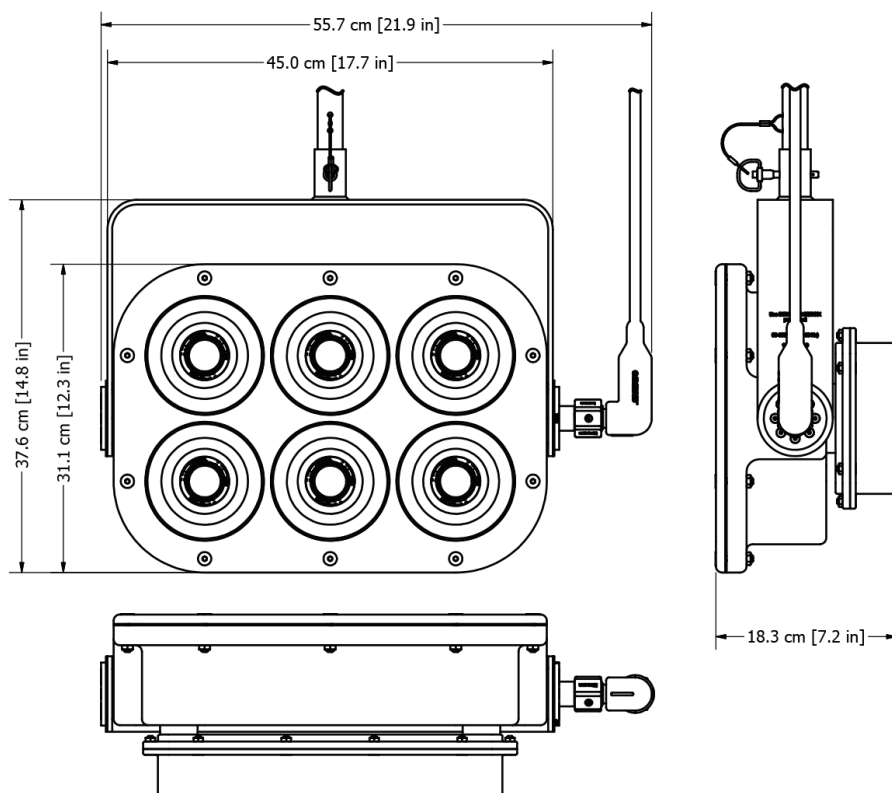
03: 3m
05: 5m
10: 10m
15: 15m
30: 30m
45: 45m

PLUG STYLE

A: 90-degree
B: Straight
X: No Plug

PLUG TYPE

B: USA 3-prong
C: Europlug
F: Schuko plug
X: No Plug



ELECTRICAL

Mains Input (VAC):	90-305
Frequency (Hz):	47 to 63
Power (W):	600W
Power Factor (%):	≥98 / 115VAC ≥95 / 230VAC ≥93 / 277VAC

LIGHTING/PHOTOMETRIC

Lamp Type:	High-power LED
Light output:	85,000 lm
Color Temperature:	5000 K
Average Rated Lamp Life:	80,000 hours
Operating Position:	Universal
Fixture Type:	Flood
Beam Angle/Element:	30° or 70° reflectors available

MODEL NUMBER

Model Number:	5360
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MATERIALS

Housing:	AL 6061-T6, Hard Black Anodized
Mounting Hardware:	300-series stainless steel
Support Bracket:	Type 304 stainless steel
Connectors, coupling ring:	Type 316 stainless steel
Cable jacket, overmolding:	PUR (Polyurethane)

ENVIRONMENTAL & QUALIFICATIONS

Radiation Tolerance:	2 x 10 ⁵ Gy
Depth Rating:	30m (100 feet)
IP Rating:	IP 68

DIMENSIONS

Length:	55.7 cm (21.9 in)
Height:	37.6 cm (14.8 in)
Width:	18.3 cm (7.2 in)
Weight (in air):	19.2 kg (42.5 lbs)
Weight (in water):	4.5 kg (10 lbs)

*We continually upgrade and improve our products; specifications may be subject to change without notice.

LUMENA-6 Data Sheet Rev. A

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