

New Underwater LED Lighting

From the Nuclear Parts Center

Rugged, brilliant, nuclear-grade lighting that increases safety and lowers maintenance costs.

Challenge

Nuclear power plants require safe and reliable lighting to improve visibility for underwater applications, thereby improving efficiency and reducing costs.

Solution

Framatome is the exclusive channel to the North American nuclear market for the new BIRNS Lumena-6. It 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.

The BIRNS Lumena-6 is custom engineered for underwater use in areas of high radiation. This advanced lighting system enhances safety and performance in nuclear fuel handling applications.

The plug-and-play BIRNS Lumena-6 operates on any mains outlet from 90-300 VAC and draws only 600W. Like all BIRNS nuclear lighting systems, it features smooth edges, is easily decontaminated, and is constructed of all nuclear-compatible materials and captivated parts.

It is meticulously designed with a rugged water-cooled power system and detachable deep-submergence BIRNS Millennium 3K power cable assembly. The cable assembly is crafted with stainless steel and high-strength polyurethane, and is 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.

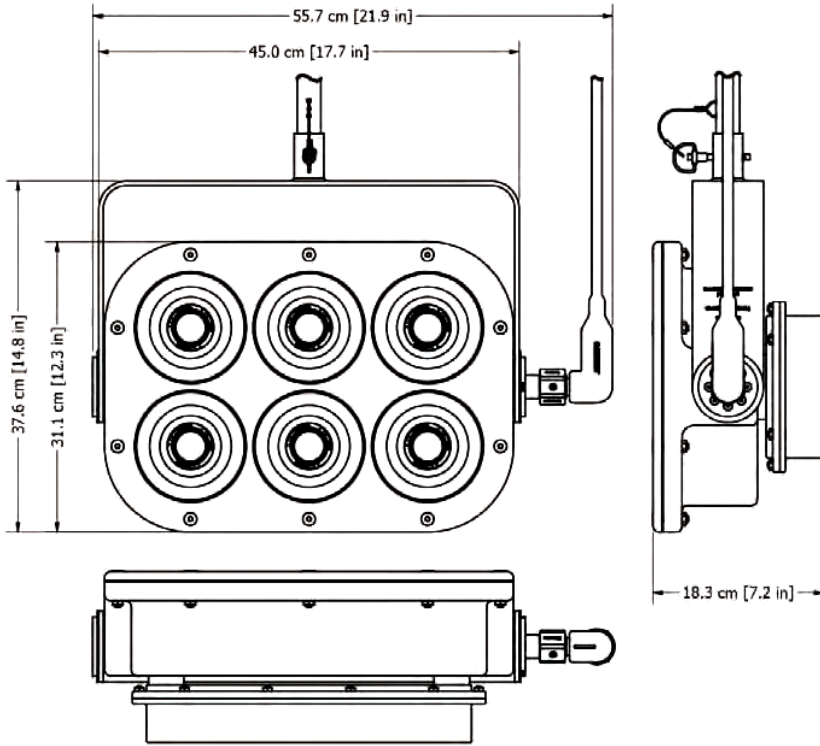


Customer benefits

- Daylight illumination capability with brilliant 85,000 lumen output; 5,000K color temp.
- Extended long-term use with 80,000 hour lamp life, which runs 12 hours a day for 18 years before relamping.
- Streamlined integrated power-supply design uses a single power cord.
- No topside power supply required. The power cord plugs into any standard mains outlet from 90 to 300 VAC.
- Flexibility of three lens options: polycarbonate, tempered glass or quartz lens.
- Choice of medium or wide beam options (30° or 70°).
- Improved safety with the robust design; all-captivated parts, anodized aluminum and stainless steel housing.
- Rugged UNS S31600 stainless-steel indexed connectors.

Your performance
is **our** everyday **commitment**

Lumena-6 Specifications



*BIRNS continually upgrades and improves their products; specifications may be subject to change without notice.

To order:

1. Select the Beam Angle and Lens
(defaults are medium beam and polycarbonate, respectively).

5360-W S

→ **LENS**

BEAM ANGLE

M: Medium
W: Wide

P: Polycarbonate
S: Tempered borosilicate glass
Q: Quartz

2. Choose 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. Choose 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 TYPE

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

PLUG STYLE

A: 90-degree
B: Straight
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 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)



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