

EMERGENCY LIGHTING FIXTURE



- **Seismically Qualified**
 - **Nuclear containment-grade materials & Construction**
 - **8 hours of automatic SSE lighting**
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- **NEW!**
 - **Suitability for 277VAC input** (Model 4701 now accepts 120-, 220-, 240-, and 277-VAC input)
 - **Improved wiring materials** (new models are fabricated with XLPE-insulated wire)
 - New units offer **optional LED indicator lights**, in place of incandescent lamps

BIRNS now works with [Homewood Energy Services \(HES\)](#) to serve the North American Nuclear industry with high-performance Emergency Lighting Fixtures. BIRNS manufactures the products, and HES provides technical and customer support; now, through HES, you can obtain BIRNS Safety-Related Emergency Lighting Fixtures qualified to IEEE nuclear standards under [10 CFR 50 Appendix B!](#)

For excellent Customer Service, please [email Mr. Kevin Monaco](#), telephone (256)882-2796 or fax (256)213-9685.

General Information

The BIRNS Emergency Lighting Fixture (ELF) Model 4701 is a seismically-qualified nuclear-grade incandescent wall-mounted emergency light. It has integral sealed rechargeable batteries and solid-state charging circuitry that provides a minimum of eight hours emergency illumination. The BIRNS ELF Model 4701 is designed in accordance with UL 924. "Emergency

Lighting Equipment", and NFPA 70, "National Electrical Code".

This unit was designed to provide features lacking in other fixtures of this type. Thus, the BIRNS ELF Model 4701 is constructed entirely of stainless steel and incorporates many internal and external improvements. The most advanced unit we've ever seen, the BIRNS ELF's mirror finish all-stainless-steel construction and glare-free silver-on-black labeling make it rugged enough for the refuel floor and beautiful enough for the boardroom. This outstanding unit provides the following features and benefits:

1. Seismically qualified (documentation available on request)
 2. Provides 8 hours of emergency illumination
 3. Extremely easy maintenance:
 - a. Maintenance-free batteries (no need to maintain electrolyte levels)
 - b. Wire-free plug-in components (including the PCB!)
 - c. Long-life indicator lights
 - d. Simple push-button test switch verifies proper operation of all major internal circuitry
 - e. Fuses may be replaced, by hand, in 30 seconds
 - f. Charger Module plugs into spring-loaded card-edge connector
 - g. Integrated Transformer Assembly/Cable Harness provides easy access to field-replaceable components
 4. Suitable for use inside primary nuclear containment:
 - a. All 304 stainless-steel construction
 - b. Nuclear-compatible materials
 5. Adaptable to nearly any situation:
 - a. Slim design (only 89 mm depth)
 - b. Seven (7) conduit knock-outs
 - c. Wide voltage input range (120, 220, 240, or 277 VAC)
 - d. Standard model includes two adjustable 18-W lampheads, but models are available with one, two, three, or zero lampheads
- **IMPORTANT POINT!** If your facility presently has Holophane M-19 units, you can upgrade to BIRNS Model 4701 units, without any change to your mounting configuration! The BIRNS ELF has identical [mounting configuration](#) and [envelope dimensions](#) as the M-19 units, while providing multiple improvements in reliability and serviceability.

Documents

- The [Foundation Load Summary](#) (stress analysis) summarizes the dynamic seismic spectra analysis and static dead weight analysis of the BIRNS Model 4701 mounting.
- The [Seismic Test Report No. 54628](#) details the dynamic seismic testing performed on the BIRNS Model 4701 by Wyle Laboratories, Scientific Services & Systems Group, and includes all seismic response spectra. *Please note: this document is 65 pages long, and comprises approximately 60MB of data.*
- Select here for [Detailed Technical Specifications](#) of the BIRNS Emergency Lighting Fixture Model 4701.

Drawings

- The [Assembly Drawing 4701-01-10](#) details the BIRNS Model 4701 with the front cover removed, showing all internal components, itemized per the incorporated List of Material.
- The [Layout Drawing 4701-01-12](#) shows the BIRNS Model 4701 with the cover installed.
- The [Features and Specifications Drawing 4701-01-11](#) details the primary features, benefits, and specifications of the BIRNS Model 4701.
- The [Overall Dimensions Drawing 4701-01-40](#) details the overall "envelope" dimensions of the BIRNS Model 4701.
- The [Installation Dimensions Drawing 4701-01-30](#) details the location of the mounting "attachment points" of the unit. Note: Model 4701 is designed to bolt to the wall by means of three 5/16-inch bolts.
- The [Battery Shelf Life & Storage Drawing 06B-001B](#) shows the expected shelf life of the batteries (the "Capacity Retention Ratio"), when they are stored in a Level 'B' warehouse for various periods at four different temperatures.

Manuals

- The [Instruction Manual MAN-4701-102](#) incorporates Operational and Installation instructions.