

Guide Specifications

ENERGY EFFICIENT LIGHTING 16500



Section 16500

LIGHTING

This section includes energy efficient interior and exterior lighting equipment manufactured by ASL (American Scientific Lighting Corporation).

Since this section has been prepared according to principles established in the Manual of Practice published by The Construction Specifications Institute (CSI) including the use of section numbers and titles from 1995 Edition of MasterFormat, this guide specification may be used in conjunction with most commercially available master specification sections, perhaps with minor editing.

The following should be noted in using this guide specification:

- *Notes to the Specifier are indicated in "blue italics". This note should be deleted from an edited project specification section in order to have a clean printed page.*
- *Optional text requiring a selection by the user is enclosed within brackets e.g.:*
"Section [01330] [_____]"
- *Items requiring user input are enclosed within brackets, e.g.:*
"Section [_____]"
- *Metric equivalents to inch-pound units follow the inch-pound unit statement and are contained within parentheses, e.g.:*
"1/4 inch (6 mm)"

Metric measurements are rationalized units based on the SI system of measurement. Delete either the (metric) or inch-pound units of measure depending on project requirements; do not include both units in a project specification, as conflicting requirements or misinterpretation could result.

This guide specification is available in both hard copy and electronic PDF format. Please contact ASL (American Scientific Lighting Corporation) at toll-free telephone 1-800-369-1101 or 1-718-369-1100, or facsimile toll free 1-800-552-3465 or 1-718-369-1105 for copies of product data or further assistance.

This section includes proprietary, and descriptive type specifications. Edit to avoid conflicting requirements.

1 GENERAL

1.1 SECTION INCLUDES

SECTION INCLUDES is a short word summary of the content of this section.

- A. Energy efficient lighting fixtures, including:
 1. Housing.
 2. Energy efficient lamps.
 3. Ballasts.
 4. Diffusers and lenses.
 5. Poles.
 6. Hardware and accessories.

B. Lighting Applications:

1. Commercial recessed and surface fixtures.
2. Lighting poles.
3. ADA Lighting
4. Pendant and chain hung
5. Decorative
6. Utility
7. Vanity
8. Sconces
9. Nautical
10. Lanterns
11. Security and vandal-proof.
12. Flood
13. Cutoff lights.
14. Directional
15. Emergency lighting units.
16. Under-cabinets
17. [High] [Low] Bay Industrial
18. Recessed Down Light
19. Retrofit

1.2 RELATED SECTIONS

List the section number - the section name: then the description as it applies to the work of this section.

- A. Section 09510 - Suspended Acoustical Ceilings.
- B. Section [_____-_____]: [_____] ceiling.
- C. Section 16050 - Basic Materials and Methods: Supports and anchors.

1.3 REFERENCES

Specify ADA for fixtures which meet ADA standards, as identified in the ASL catalog.

- A. [American with Disabilities Act (ADA).]
- B. American National Standards Institute (ANSI).
- C. [Environmental Protection Agency (EPA).]
- D. National Electrical Manufacturers Association (NEMA).
- E. Underwriters Laboratory (UL).
- F. Electrical Testing Laboratory (ETL).

1.4 SUBMITTALS

Do not request submittals if design drawings describe the products of this section. Product data submittals add expense to the project.

- A. Submit product data to requirements of Section [01005] [01300].
- B. Provide product data on fixtures, including housings, lamps, ballasts, diffusers, and all related accessories and finishes.

1.5 QUALITY ASSURANCE

- A. Provide only fixtures manufactured in U.S.A.

1.6 WARRANTY

Three year warranty is standard with ASL.

- A. Manufacturer's warranty: [Three (3)] years, to include replacement or repair of defective parts.

1.7 EXTRA MATERIALS

Edit to meet project requirements.

- A. Provide extra stock as specified. Deliver to Owner prior to final inspection and takeover procedure.
- B. Lamp sockets: [One set for each fixture provided.] [_____]
- C. Housing: Assembled, [one set for each fixture provided,] [mounting hardware,] [_____]
- D. Lamps: [One set for each fixture provided.] [_____]
- E. Lenses: [3] percent minimum, 1 each size and type.
- F. Ballasts: [One set for each fixture provided.] [_____].

2 PRODUCTS

2.1 MANUFACTURERS

A. ASL (American Scientific Lighting Corporation), 25 Twelfth Street, Brooklyn, New York 11215 - 3820, Tel 718-369-1100 or Toll-free 800-369-1101, Fax 718-369-1105 or Toll-free 800-552-3465, E-mail: info@asllighting.com, Web site: www.asllighting.com

B. [_____].

2.2 LIGHTING FIXTURES

A. Provide lighting fixtures as scheduled. Include features specified in this section.

Following is a sample paragraph identifying specific project selections. Copy the paragraph for each selection, or each type of fixture, depending on the scope of the project. Specify only materials and quality in this article, and show individual fixture selections in the Schedule.

B. Lighting Fixtures (Tag [____]):

1. [Surface mounted ceiling] [Pendant] [Chain hung] [Wall mounted] [Bracket mounted].
2. Housing: [steel] [aluminum] [polycarbonate] construction, [hinged with latches,] [vented for ballast heat dissipation,] [conduit entry box,] [grounded cord and plug].
3. Housing Finish: [As scheduled]

[OR]

4. Housing Finish:
 - a) Aluminum: [anodized] [brushed] [polished] [painted].
 - b) Steel: [polyester powder coated] [painted].
 - c) Plated: [brass] [chrome].
 - d) Painted: [[oak] [walnut] wood] [____] color.
5. Mounting: [Screws] [Anchor bolt] [Pendant Hung] [Chain Hung] [Pole mount] [Knuckle mount] [Pre-punched keyhole mounting slots,] [Crossbar with center nipple mounting] [Knurled finial nut] [Threaded] [Screw-in].
6. Accessories: [Grounded convenience outlet,] [lettering,] [joiner band,] [trims,] [accents,] [_____].
7. Control: [Manual switch] [Three-way control switch] [Photo control switch, [internal] [external with directional sensor] [Pull chain] [Pin switch] [As indicated in schedule].

C. Recessed Lighting Fixtures: Provide trim type and accessories required for installation in ceiling system installed. Maximum depth, including yokes and bridges: [150] [____] mm ([6] [____] inch).

D. Lighting Poles: [1.4] [1.8] mm ([.055] [.072] inch) thick aluminum, 75 mm (3 inch) diameter, [smooth] [ribbed] surface, [pier] [ground stake] [aluminum base] mounted, [[____] long] [length as scheduled].

E. Exterior Lighting Fixtures: Provide enclosures to form weatherproof and bug-proof assembly.

2.3 SCONCES

Following is a sample paragraph identifying specific project selections. Copy the paragraph for each selection, or each type of fixture, depending on the scope of the project. Specify only materials and quality in this article, and show individual fixture selections in the Schedule.

- A. Lighting Sconces (Tag [____]):
1. Housing: [steel] [aluminum] [polycarbonate] [acrylic] construction, [vented for ballast heat dissipation].
 2. Housing Finish: [As scheduled]
- [OR]
3. Housing Finish:
 - a) Aluminum: [[anodized] [brushed] [polished] [painted].
 - b) Steel: [polyester powder coated] [painted].
 - c) Plated: [brass] [chrome].
 - d) Painted: [oak] [walnut] wood [____] color.
 4. Mounting: [Screws] [Finial nuts] [Backplate] [Crossbar with center nipple mounting] [Pre-punched mounting holes].
 5. Accessories: [_____]

2.4 LAMPS

The following paragraph lists manufacturers of quality lamps included in ASL fixtures.

- A. Acceptable Manufacturers:
1. ASL
 2. General Electric
 3. Osram Sylvania
 4. Phillips
 5. SLI
 6. Venture
- B. Provide all lamps from same manufacturer for each fixture type.
- C. Incandescent Lamps: [Clear] [Inside frosted] type, rated [125] [130] volts.

The following paragraph indicates common configurations; contact ASL catalog for capacities and color temperatures.

- D. Fluorescent Lamps:
 - 1. Color: [Cool white] [Warm white] [27] [30] [35] [41] [50] Kelvin color temperature.
 - 2. Type: [Twin tube] [Spiral] [Quad] [Triple] [2D] [Circline T9] [Circline T5HO] [Linear T8] [Linear T5HO].
 - 3. Capacity: [__] watts.
- E. Metal Halide HID Lamps: [Clear,] [Coated,] suitable for all burning positions.
 - 1. [[50] [70] [100] [150] watts, clear medium base].
 - 2. [[175] [250] [400] watts, mogul base, clear].
- F. High Pressure Sodium HID Lamps: [Clear,] [Coated,] suitable for all burning positions.
 - 1. [35] [50] [70] [100] [150] watts, medium base..
 - 2. [250] [400] watts, mogul base.

2.5 LENSES

- A. Acrylic: [Clear prismatic] [Frosted] [White] [[Faux alabaster], [_____] color] [As scheduled].
- B. Polycarbonate: [clear prismatic] [white] color [, as scheduled].
- C. Glass: [clear] [frosted] [alabaster] [as scheduled].

To further ensure screws and nuts are painted to match fixture housing, accent or trim, include code in schedule options.

- D. Lens Mounting: [Clips] [Thumbscrew(s)] [Decorative finial] [Torx tamper-proof screws] [Latch] [End cap] [Weatherproof snap-in] [Screw-in] [Twist-lock], screws and acorn nuts painted to match housing.

2.6 ELECTRICAL SERVICE AND BALLASTS

Standard ASL fixtures are 120 volts, 60 Hz, electronic, normal power factor. Other voltages and power factor are available if required.

- A. Electrical Requirements: [120] [208] [230] [240] [277] volt, [50] [60] Hz, [[_____] watts,] [wattage as scheduled,] [thermally protected,] [fused,] UL listed components, [indoor] [outdoor] use.
- B. Fluorescent Ballasts:

Specify GU-24 for installation simplicity or electronic dimmable for greater efficiency in applications where lower light levels may be acceptable.

1. Type:[Electronic] [Electronic dimmable] [Electronic GU-24], [Normal] [High] power factor.
 2. [Emergency Battery Backup: Minimum 90 minutes normal operation after power loss, minimum [1] [2] [___] lamps operating, [dry] [damp] location.]
- C. HID Ballasts: ANSI C82.4; [suitable for 50 C ambient,] [selected by fixture manufacturer,] magnetic, [normal] [high] power factor, [quartz restrike].

3 EXECUTION

3.1 EXAMINATION

- A. Verify that surfaces are ready to receive work.
- B. Beginning of installation means acceptance of existing surfaces.

3.2 INSTALLATION

- A. Install plumb and level unless indicated otherwise.
- B. Install fixture housings and lenses securely with mounting hardware when supplied, in accordance with manufacturer's instructions [and in compliance with ADA guidelines].
- C. Ground all fixtures, as required.

Review mounting methods with ceiling or substrate design to determine support requirements.

- D. Support surface-mounted fixtures [from electrical box] [directly from building structure] [from ceiling grid tee structure,] [provide auxiliary support laid across top of ceiling tees,] [fasten to tee using bolts, screws, rivets or approved ceiling framing member clips,] [conduit entry backbox,] [_____].
- E. Install recessed lamps to permit removal from below. [Use plaster frames.] [Install grid clips.]
- F. Suspended HID Luminaires: Use [power hook] hangers rated <225 kg> <<500 lb>> minimum or provide safety chain between ballast and structure. [Provide safety chain between reflector and ballast.]
- G. Install lamps in luminaires and lampholders.
- H. Exterior Lighting Fixtures: Provide silicone bead around fixture at point of contact with wall or as required to ensure weatherproof installation.

3.3

3.4 RELAMPING

- A. Relamp fixtures which have failed lamps at completion of work.

3.5 ADJUSTING AND CLEANING

- A. Align fixtures and clean lenses (diffusers) at completion of work. Clean paint splatters, dirt and debris from installed fixtures.
- B. Touch up fixture finish at completion of work.

3.6 SCHEDULE

The following information may be shown on the Drawings or may be scheduled below. Luminaire identification, description, manufacture, and catalog data, voltage, lamps, mounting height and method, options and accessories.

If Energy Star labeling is required, indicate option code "ES". Do not specify Energy Star compliance unless specifically required, since it may adversely affect pricing.

A quality column has been added to ensure that model numbers require that fixtures are made in USA.

An example ASL model # has been shown below. Refer to the ASL catalogs for specification and special option codes and the order in which they are to be listed.

- A. Lighting equipment, lamps and accessories by ASL (American Scientific Lighting Corporation). Model numbers capacities and accessories as scheduled.

Tag	Fixture Style	Lamp Qty.	Lamp Type	Lamp Capacity (Wattage)	Lamp Color (Kelvin)	Ballast	Specification & Special Option Codes	Quality
L-1	HDR	2	Q	26	27K	EB	GU24 / NPF / 120V / FSC / FA / EMG /22" / IB / ES	USA
L-2								USA
L-3								USA
								USA

END OF SECTION



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