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FEDERAL SPECIFICATION

PACKING AND PACKAGING, FLUORESCENT LIGHT FIXTURES

This specification was approved by the Commissioner, Federal Supply Service, General Services Administration, for the use of all Federal agencies.

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers the detailed requirements for packing, packaging, and marking of fluorescent light fixtures.

2. APPLICABLE DOCUMENTS

2.1 The following documents, of the issues in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein:

Federal Specifications:

PPP-T-97 - Tape, Pressure-Sensitive Adhesive, Filament Reinforced.
PPP-B-566 - Boxes, Folding, Paperboard.
PPP-B-636 - Boxes, Shipping, Fiberboard.
PPP-B-665 - Boxes, Paperboard, Metal-Stayed.
PPP-B-676 - Boxes, Setup.
PPP-P-1660 - Pallet, Expendable.
PPP-S-760 - Strapping, Nonmetallic. (And Connectors)
QQ-S-781 - Strapping, Steel, Flat and Seals.

Federal Standards:

Fed. Test Method Std. No. 101 - Preservation, Packaging and Packing Materials.
Fed. Std. No. 123 - Marking for Domestic Shipment (Civil Agencies).

(Activities outside the Federal Government may obtain copies of Federal Specifications, Standards, and Handbooks as outlined under General information in the Index of Federal Specifications and Standards and at the prices indicated in the index. The Index, which includes cumulative monthly supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

(Single copies of this specification and other Federal Specifications required by activities outside the Federal Government for bidding purposes are available without charge from Business Service Centers at the General Services Administration Regional Offices in Boston, New York, Washington, DC, Atlanta, Chicago, Kansas City, MO, Fort Worth, Denver, San Francisco, Los Angeles, and Seattle, WA.

(Federal Government activities may obtain copies of Federal Specifications, Standards, and Handbooks and the Index of Federal Specifications and Standards from established distribution points in their agencies.)

Military Standard:

MIL-STD-105 - Marking for Shipment and Storage.

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(Copies of Military Specifications and Standards required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

2. APPLICABLE DOCUMENTS

2.1 The following documents, of the issues in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein.

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless a specific issue is identified, the issue in effect on date of invitation for bids or request for proposal shall apply.

National Motor Freight Traffic Association, Inc., Agent:

National Motor Freight Classification.

(Application for copies should be addressed to the American Trucking Associations, Inc., Tariff Order Section, 1616 P Street, N.W., Washington, DC 20036.)

Uniform Freight Classification.

(Application for copies should be addressed to the Uniform Classification Committee, Room 1106, 222 South Riverside Plaza., Chicago, IL 60606.)

3. REQUIREMENTS

3.1 Packaging. Packaging shall be level A, B, or C as specified (see 6.2).

3.1.1 Level A & B.

3.1.1.1 Diffuser: (Plastic lens or louver type). When applicable, the diffuser shall be placed in the unit and secured in such a manner as to prevent damage to the diffuser during shipment and storage.

3.1.1.2 Installation hardware. All hardware required for installation shall be wrapped in flexible corrugated fiberboard or in macerated paper pads or inserted in a padded shipping box. The openings shall be securely taped or stapled to prevent loss of contents. Alternately, the hardware may be placed in a 3-mil polyethylene bag that is heat sealed or stapled and then secured to the fixture with tape.

3.1.1.3 Stems (when furnished separately). Ten stems with nuts assembled on each stem shall be tightly taped together two inches from each end with pressure-sensitive adhesive tape. The stems shall be packaged in a box conforming to PPP-B-566, PPP-B-665, PPP-B-676, or to PPP-B-636 and closed in a manner to prevent accidental opening. Alternatively, the taped stems shall be wrapped in kraft paper and securely wrapped with reinforced tape conforming PPP-T-97 two inches from each end. The openings shall be securely taped or stapled to prevent loss of contents.

3.1.1.4 Blocking and bracing. Each fixture shall be individually packaged utilizing necessary blocking, bracing, and taping to prevent functional and structural damage to the fixture and its parts when tested in accordance with 4.3.2.

3.1.2 Level C. Each fixture, its mounting hardware, and stems if packed separately, shall be packaged in accordance with the manufacturer's standard practice, providing this insures protection for each unit during shipping, handling, and storage.

3.2 Packing. Packing shall be level A, B or C as specified (see 6.2).

3.2.1 Level A.

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3.2.1.1 Complete fixtures with installation hardware. Each complete fixture with installation hardware, packaged as specified in 3.1, shall be packed in a close-fitting box conforming to PPP-B-636 class weather resistant, style FTC or FPF, grade W5c minimum. The box shall be long enough to permit a double face corrugated spring pad at each end to center the fixture in the container. Waterproof closure and sealing of the boxes shall conform to the appendix to the applicable box specification.

3.2.1.2 Stems (when furnished separately). The stems packaged as specified in 3.1, shall be packed in the quantities indicated in table I, in a close-fitting box conforming to PPP-B-636 class weather resistant, style RSC-L. Waterproof closure and sealing of the boxes shall conform to the appendix in PPP-B-636.

TABLE I. Packing of stems when furnished separately

Size	Stems per unit package	Unit packages per shipper
Inch		
4	10	20 (200)
7	10	20 (200)
30	10	6 (60)
24	10	6 (60)
18	10	6 (60)
12	10	20 (200)
48	10	4 (40)

3.2.2 Level B.

3.2.2.1 Complete fixtures with installation hardware. The packing of fixtures with installation hardware shall be as specified in 3.2.1.1, except the box shall conform to PPP-P-636 class domestic, style FTC, grade 275 minimum and that the closure of the box shall be in accordance with method II of the appendix to PPP-B-636.

3.2.2.2 Stems (when furnished separately). The packing of the stems shall be the same as described in 3.2.1.2 except the box shall conform to PPP-B-636 class domestic, style-RSC-L and that the closure of the box shall be in accordance with Method II of the appendix to PPP-B-636.

3.2.3 Level C. Each fixture, with mounting hardware, and stems if packaged separately, packaged as specified in 3.1, shall be packed in containers that will assure carrier acceptance and safe arrival at destination in compliance with the Uniform Freight Classification Rules or the National Motor Freight Classification Rules.

3.3 Palletization.

3.3.1 Level A and B. Unless otherwise specified (see 6.2), the packed fixtures shall be arranged on pallets in quantities at the option of the supplier, providing that the overall dimensions of the palletized load do not exceed six feet in length, five feet in width, and five feet in height, and is within the weight limitations of the pallet specification. Each succeeding tier of packed fixtures shall be quarter-turned on the layer beneath. The packed fixtures shall be secured to the pallet with a minimum of two straps running perpendicular to the width of the pallet. The pallet shall conform to PPP-P-1660 style optional (except style 1) and the strapping shall conform to QQ-S-781, type I, class A, size 3/4 x .015 inches or to PPP-S-760 type II or III of equal strength. The top outer packs shall be provided with edge protectors under the straps to prevent crushing of the container edges.

3.3.2 Level C. Suppliers option provided they comply with the Uniform Freight Classification or National Motor Freight Classification and use a minimum of two straps running perpendicular to the width of the pallet.

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3.4 Marking. In addition to any special markings required by the contract of order, all marking shall be as specified in 3.4.1 or 3.4.2 (see 6.2).

3.4.1 Civil agencies. Marking shall be in accordance with Fed. Std. No. 123.

3.4.2 Military agencies. Marking shall be in accordance with MIL-STD-129.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the supplier may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure that supplies and services conform to prescribed requirements.

4.2 Sampling for inspection. Sampling for inspection shall be performed in accordance with MIL-STD-105, except where otherwise indicated herein. The Inspection Level shall be level S-2 and the Acceptable Quality Level (AQL) shall be 2.5 percent for major defects and 6.5 percent for minor defects, expressed in terms of percent defective.

4.2.1 Examination of packaging, packing, and marking (see table II). The sample unit for this examination shall be one shipping container. The lot size shall be the number of shipping containers of identical style in the inspection lot.

TABLE II. Examination for packaging, packing, and marking (con.)

Examine	Defect	Major	Minor
Packaging	Inadequate blocking and bracing.	X	
	Diffuser not secured.	X	
	Stems not taped.		X
Packing	Closure incorrect.	X	
	Lack of spring pad.	X	
Marking	Omitted, incomplete, incorrect, illegible, of improper size, location, sequence or method of application.	X	

4.2.2 Examination of shipping components if pallets are supplied (see table III). The sample unit for this examination shall be one pallet. The lot size shall be the number of pallet loads of identical style in the inspection lot.

TABLE III. Examination of shipping components

Examine	Defect	Major	Minor
Fiberboard box	Not type specified	X	
Strapping	Not type or size specified.	X	
	Edge protectors not supplied.		X
Pallet	Arrangement of unit load on pallet not as specified.		X
	Dimensions not as specified.		X
	Weight exceeds pallet limitations.	X	

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4.3 Inspection and testing for preparation for delivery requirements.

4.3.1 Test report. A test report, indicating no damage to the test item and no functional damage to the container and packing, will be acceptable as proof of compliance for the level of packing specified in the contract or order when made available to the inspection service. The test results shall be obtained from tests conducted on an item of the identical model specified in the contract order. Test reports, obtained as a result of tests conducted within 12 months prior to the contract or order, shall be made available for identification by the Government representative and remain at the contractor's plant until the last shipment on the contract is made. This unit shall be used as a guide in determining that the packed items furnished on the contract conform to the sample unit tested and accepted. At the option of the Government, the Tests shall be witnessed by, or conducted under, the supervision of a Government inspector.

4.3.1.1 Testing costs. All products or containers damaged in making these tests shall be at the expense of the contractor or manufacturer.

4.3.2 Tests. The following tests are required for the applicable levels of packed units to assure that adequate blocking and bracing is supplied. Five fixtures fully packaged and packed for shipment shall be subjected to the tests described below. Failure of any test will be cause for rejection. At the end of each test specified, the contents and packaging shall be examined. After the examination, the packages shall be resealed and the next test run. Any damage to the contents, either functional or structural, shall be cause for rejection. All tests shall be performed in accordance with the guidelines outlined in Fed. Std. No. 101 for each specified test.

4.3.2.1 Drop test. Free Fall Method 5007, procedure A.

4.3.2.2 Vibration test. A packed fixture shall be tested in accordance with Method 5019. Vibration dwell time shall be 1 hour for a single package. In addition, a stack of five packages shall be tested at 2 and 4 Hz for 15 minutes at each level for a total of 30 minutes.

5. PREPARATION FOR DELIVERY

5.1 Not applicable.

6. NOTES

6.1 Intended use. It is intended that this specification be used for reference in Section 5 of the commodity specifications for which this specification was prepared and for direct reference in procurement documents.

6.2 Ordering data. Purchasers should select the preferred options permitted herein and include the following information in procurement documents:

(a) Title, number, and date of this specification.
(b) Selection of applicable levels of packaging and packing (see 3.1 and 3.2).
(c) Whether civil or military marking is required (see 3.4).
(d) When supplier is not responsible for inspection (see 4.1).
(e) When palletization is not required (see 3.3).

Custodian	Preparing Activity
ARMY - SM	GSA - FSS

Review Activity:

ARMY - ME

Orders for this publication are to be placed with General Services Administration, acting as an agent for the Superintendent of Documents. See section 2 of this specification to obtain copies and other documents referenced herein. Price 30 cents each.

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