



Document Title:

Oval Eyenut

Document Type:

Specification

Engineering Type

Material Specification

Document No.:

4350.070

Department

Distribution

Version:

05

Effective Date:

Jul 24, 2024

Shared document with: Transmission & Distribution

**Select the Departments impacted by the document*

For others, specify here

Author

Miguel J. Rios López, PE (Lic. 16636)
General Engineer, Distribution Standards & Materials

Signature and Date

Jul 22, 2024

Reviewer

Rodolfo A. Flores Ortiz, PE (Lic. 27131)
General Engineer, Distribution Standards & Materials

Signature and Date

Jul 22, 2024

Reviewer

Oscar E. Venegas, PE (Lic. 23125)
Supervisor, Line Engineering Standards

Signature and Date

Oscar Venegas (Jul 24, 2024 09:21 EDT)

Jul 24, 2024

Approver

Ricardo Castro Gómez, PE (Lic. 12135)
Manager, Distribution Standards & Materials

Signature and Date

Jul 24, 2024

Management Approval (If apply)

Approver

Name
Position

Signature and Date

N/A

Related/Referenced Documents

N/A

Version History

Version	Date	Revision Comments
1	Feb. 02, 2022	PREPA to LUMA format.
2	Apr. 13, 2022	General format modifications and Table of Compliance (TOC) added.
3	Aug. 11, 2023	General format and TOC modifications. Document changed as shared between T&D for item 002-04495.
4	Dec. 08, 2023	General format modifications, document name changed, and new item created (002-85566).
5	Jul. 22, 2024	General format modifications, TOC updated, Section 4 modified, and sections order rearranged. New Items created (002-86267 & 002-86268). Item 002-86267 will be shared between T&D.



Item Version History

Warehouse Catalog #	Asset Suite #	Version	Date
002-04495	55433	10	7/22/2024
002-85566	85566	2	7/22/2024
002-86267	86267	1	7/22/2024
002-86268	86268	1	7/22/2024



1. Introduction

This is a general specification that covers the minimum requirements for oval eye nuts to be used in the distribution and transmission system in Puerto Rico. Further information will be provided by LUMA Energy at the time of order placement and will provide information on site specific conditions, quantity, and other requirements. This document includes the general electrical and mechanical characteristics of the equipment/material.

2. Special Requirements

Samples shall be furnished as requested by LUMA Energy. Vendors that have supplied this equipment/material to LUMA on previous orders will not have to furnish samples at bid opening. The equipment/material will be received at the LUMA's general warehouse (011) at Palo Seco, Puerto Rico. Shipping will include transportation and unloading at the indicated warehouse.

3. Literature

Descriptive and technical literature must be supplied by the vendor at time of bidding. This literature may include, but is not limited to details of material, drawings, documented testing, and instructions for use and installation. Failure to submit documents on time will cause bidder disqualification. If required by LUMA, final drawings shall be submitted by the vendor before the manufacturing and shipping process for approval.

4. Compatible with

For compatible manufacturers and models, see Table 1. These models are examples of the equipment/materials described in this document and do not represent a preference. LUMA will evaluate equally any models not listed here during any acquisition event.

5. Markings

- 5.1. Containers shall be marked outside with LUMA Energy's purchase order and item number.
- 5.2. Packaging labels and tags shall be waterproof.

6. Packaging

All equipment/material shall be packaged and marked in such a way as to facilitate handling and protection from damage and that the receiving warehouse can readily identify it and send it, in one complete unit, to a field location without opening crates or boxes to sort items and/or parts.

7. Number Per Package (Logistics)

Fifty (50) units per box or as requested by LUMA.

8. Acceptance Criteria

- 8.1. Test required: certified by external laboratories.
- 8.2. Product shall be manufactured in accordance with the latest issue below (section 8.3). When conflicts occur between purchaser's specifications and the latest issue below, the purchaser's specification shall prevail.
- 8.3. Latest applicable codes, standards, and other regulations:
 - a. ASTM A153: for hardware products to remove excess zinc.
 - b. ANSI/IEEE C135.5: for zinc-coated ferrous eye nuts and eye bolts.
 - c. Latest applicable for stainless steel 316.
- 8.4. If any other standard different from the ones indicated in this document are used, the supplier must provide information showing compatibility with the required ones.

9. Description

- 9.1. The oval eye nut is used on machined bolts for attachment on guys, clevises, and strain insulators, or on either end of double arming bolts permitting attachment of back guys.
- 9.2. There will be two types of materials, hot dip galvanized (HDG) steel as per ASTM A153 and stainless steel (SS) 316. See Table 1 for details.
- 9.3. Shall be in accordance with EEI TD-5 specification.
- 9.4. Nut Diameter & TPI
 - a. 5/8" - 11 TPI
 - b. 3/4" - 10 TPI
- 9.5. Approximate Dimensions
 - a. Eye: 1.5" x 1.75" (3.8 x 4.4 cm)
 - b. Length: 3" (7.6 cm)
 - c. Width: 2.5" (6.4 cm)
 - d. Thickness: 0.5" (1.3 cm)
- 9.6. Minimum Tensile Strength
 - a. 5/8": 12,400 lbf (55.2 kN)
 - b. 3/4": 18,350 lbf (81.6 kN)

9.7. Minimum Working Load Limit (WLL) on SS units

- a. 5/8": 3,600 lbs. (1,633 kg)
- b. 3/4": 5,000 lbs. (2,268 kg)

10. Inspection

The acceptance of any equipment/material shall in no way relieve the vendor from his responsibility to meet all the requirements of this specification, and it would not prevent subsequent rejection if such equipment/materials were found later to be defective.

11. Proposal Information

11.1. Submitted proposals must include:

- a. Technical information, tests, and drawings.
- b. Table of Compliance completed by the bidder with reference (see Appendix 1).

12. Table 1: Warehouse and Asset Suite Identification Number

Warehouse Catalog #	Asset Suite #	Nut Diameter	Material	Compatible Supplier & Model
* 002-04495	55433	5/8" (1.6 cm)	HDG Steel	Hubbell (6502) MacLean (J1092)
002-85566	85566	3/4" (1.9 cm)	HDG Steel	Hubbell (6503) MacLean (J1093)
* 002-86267	86267	5/8" (1.6 cm)	Stainless Steel 316	CLP (60310062) Grainger (EN-7-316SS)
002-86268	86268	3/4" (1.9 cm)	Stainless Steel 316	CLP (60310075) Grainger (EN-8-316SS)

* Items 002-04495 and 002-86267 are also used in the 38kV transmission system.

— End of Specification —

Appendix

Appendix 1: Table of Compliance

Line	Description	Pass/Fail (P / F)	Comments
1	The Proponent complies with the corresponding specification document (4350.070).		
2	The Proponent complies with the industry standards established in the specification document (ANSI/ASTM).		
3	Tech. info., tests, and drawings provided.		
4	Oval Eye Nut		
5	Material: as per Table 1.		
6	Min. Tensile Strength	5/8": 12,400 lbf.	
		3/4": 18,350 lbf.	
7	Min. WLL on SS units	5/8": 3,600 lbs.	
		3/4": 5,000 lbs.	
8	Dimensions	Overall Length: 3"	
		Steel diameter: 1/2"	
		Width: 2-1/2"	
		Eye: 1-1/2" X 1-3/4"	

NOTE: This table is only a checklist for reference. The compliance shall be with the complete document. Marking a PASS in the table won't be accepted as a compliance without the technical information required to certify it.











4350.070 Oval Eyenut (7-22-24)


Final Audit Report

2024-07-24

Created:	2024-07-22
By:	Miguel Rios (miguel.rioslopez@lumapr.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAjffFCuHaF-KMCM87aXSYe2zssLOx5Wsl

"4350.070 Oval Eyenut (7-22-24)" History

-  Document created by Miguel Rios (miguel.rioslopez@lumapr.com)
2024-07-22 - 3:38:38 PM GMT
-  Document emailed to Miguel Rios (miguel.rioslopez@lumapr.com) for signature
2024-07-22 - 3:38:44 PM GMT
-  Document e-signed by Miguel Rios (miguel.rioslopez@lumapr.com)
E-signature obtained using URL retrieved through the Adobe Acrobat Sign API
Signature Date: 2024-07-22 - 3:38:58 PM GMT - Time Source: server
-  Document emailed to Rodolfo Flores (rodolfo.floresortiz@lumapr.com) for signature
2024-07-22 - 3:39:00 PM GMT
-  Email viewed by Rodolfo Flores (rodolfo.floresortiz@lumapr.com)
2024-07-22 - 3:55:31 PM GMT
-  Document e-signed by Rodolfo Flores (rodolfo.floresortiz@lumapr.com)
Signature Date: 2024-07-22 - 3:56:09 PM GMT - Time Source: server
-  Document emailed to Oscar Venegas (oscar.venegas@lumapr.com) for signature
2024-07-22 - 3:56:12 PM GMT
-  Email viewed by Oscar Venegas (oscar.venegas@lumapr.com)
2024-07-24 - 1:21:23 PM GMT
-  Document e-signed by Oscar Venegas (oscar.venegas@lumapr.com)
Signature Date: 2024-07-24 - 1:21:53 PM GMT - Time Source: server
-  Document emailed to Ricardo Castro (ricardo.castro@lumapr.com) for signature
2024-07-24 - 1:21:54 PM GMT

 Email viewed by Ricardo Castro (ricardo.castro@lumapr.com)

2024-07-24 - 4:01:45 PM GMT

 Document e-signed by Ricardo Castro (ricardo.castro@lumapr.com)

Signature Date: 2024-07-24 - 4:02:32 PM GMT - Time Source: server

 Agreement completed.

2024-07-24 - 4:02:32 PM GMT