

**IFDR.E489945****Low-voltage Lighting Systems, Power Units, Luminaires and Fittings**[Page Bottom](#)

Low-voltage Lighting Systems, Power Units, Luminaires and Fittings[See General Information for Low-voltage Lighting Systems, Power Units, Luminaires and Fittings](#)

HAFELE AMERICA CO
3901 CHEYENNE DR
PO BOX 4000
ARCHDALE, NC 27263 USA

E489945

Low Voltage Luminaires, Model(s) LOOX LED 2029, LOOX LED 2037, LOOX LED 3015

[Last Updated](#) on 2016-12-30

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Low-voltage Lighting Systems, Power Units, Luminaires and Fittings Certified for Canada

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Low-voltage Lighting Systems, Power Units, Luminaires and Fittings Certified for Canada

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IFDR.GuideInfo

Low-voltage Lighting Systems, Power Units, Luminaires and Fittings

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[Luminaires and Fittings] (Special-purpose Luminaires) Low-voltage Lighting Systems, Power Units, Luminaires and Fittings

[See General Information for Special-purpose Luminaires](#)

USE

This category covers low-voltage lighting systems, together with the principal components that make up such systems: low-voltage luminaires, power units, fittings, controls and subassemblies intended for use with these systems.

These luminaires, fittings, controls and subassemblies are rated no more than 30 V ac or 60 V dc. Power units have isolation between primary and secondary, total output no more than 25 A, and each output limited to no more than 30 V ac or 60 V dc.

This category also covers low-voltage bare conductor lighting systems incorporating luminaires which may be repositionable along the bare supply conductors that also mechanically support the luminaire. The power unit for these systems is provided with integral protection that de-energizes the output upon overloading or inadvertent shorting of exposed uninsulated live parts of the system.

This category also covers low-voltage linear track conductor-type lighting systems with remote low-voltage power supplies. Also included are low-voltage "mono-point," "dual-point" and "multi-point" low-voltage track-type systems with removable luminaires, where the power supply may be remote or may be in a canopy integral with the track.

This category also covers Power Over Ethernet (PoE) luminaires, along with power supplies (LED drivers with Ethernet output ports) and fittings used to comprise a digital lighting system.

All lighting systems and components covered under this category may also incorporate wireless capability for control purposes.

INSTALLATION INSTRUCTIONS

The products covered under this category are intended for installation in accordance with Article 411 of ANSI/NFPA 70, "National Electrical Code" (NEC). Installation instructions accompanying the product describe the wiring method intended to be used to supply the luminaires and power units.

Certain lighting systems are designed and investigated for the luminaire to be supplied and supported by an exposed conductor, cord, rail or track. The wiring method intended for all other luminaires is in accordance with Chapter 3 wiring methods of the NEC, or when the circuit is supplied by a Class 2 power unit, in accordance with Article 725 of the NEC (including PoE).

Power units intended to supply Class 2 luminaire circuits or an exposed conductor, cord, rail or track that supports the luminaires are intended to be connected to the branch circuit either with a factory-connected power-supply cord or by fixed wiring. These power units are intended to be connected to the output circuit by (a) wiring means consistent with that involved with the supplied luminaire, or (b) fixed wiring. All other power units are designed for connection to the branch circuit and the output circuit with a fixed wiring means.

Luminaires intended for recessed or undershelf installation into a cabinet are provided with installation instructions depicting the intended use.

Some lighting systems include track or rail types of sections that (a) support and provide power to low-voltage luminaires, and (b) are intended to be bent by the installer as needed for the installation. Care should be taken to bend these system parts following the method identified in the installation instructions and so that no part damage occurs. The radii of bends should be no less than specified by the manufacturer.

Air-leakage-rate Requirements

Some recessed luminaires covered under this category have additionally been investigated to comply with the air-leakage-rate requirements of the "International Energy Conservation Code," and the California Code of Regulations, Title 24, Part 6, "California Building Standards Code; California Energy Code," for recessed luminaires installed in the building thermal envelope of residential buildings. These codes and regulations require Type IC-rated recessed luminaires intended for installation in residential buildings to have an air-leakage rate of not more than 2.0 cfm when tested in accordance with ASTM E283, "Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen," at a 1.57 psf pressure differential.

PRODUCT MARKINGS

Luminaires and fittings restricted for connection to a Class 2 source of supply are identified by product markings.

These luminaires and fittings are intended for surface mounting, or suspended or recessed installation and are marked for either dry, damp or wet locations. A luminaire or fitting marked for wet locations is rated no more than 15 V ac or 30 V dc unless live parts are made inaccessible to contact during normal use. See Luminaires and Fittings ([HYXT](#)) for additional installation markings.

Low-voltage luminaires that have been investigated for use within the storage area of a clothes closet are so identified on their installation instructions.

Recessed units (luminaires and power units) marked "Type IC" or "Inherently Protected" may be installed in accordance with Section 410.66 of the NEC, such that insulation and other combustible materials are in contact with and over the top of the unit.

All recessed units not marked "Type IC" or "Inherently Protected" are intended to be installed such that insulation is not placed over the top or within 3 inches of the sides of the unit, and other combustible materials are spaced, except at the points of support, at least 1/2 inch from the unit.

Power units shipped separately from the bare conductor lighting system are marked to identify the associated bare conductor system series number and manufacturer.

PRODUCT IDENTITY

One of the following product identities appears on the product:

Low-voltage Cabinet Fixture
 Low-voltage Cabinet Luminaire
 Low-voltage Fixture
 Low-voltage Fixture Fitting
 Low-voltage Fixture Power Supply
 Low-voltage Fixture System
 Low-voltage Lighting System
 Low-voltage Luminaire
 Low-voltage Luminaire Fitting
 Low-voltage Luminaire Power Supply
 Low-voltage Luminaire System
 Low-voltage Recessed Fixture
 Low-voltage Recessed Luminaire
 Low-voltage Track Lighting
 PoE Fitting
 PoE Luminaire
 PoE Power Supply

Other product identities may be used as shown in the individual certifications.

RELATED PRODUCTS

Low-voltage landscape lighting systems consisting of a remote power supply source, flexible cord, interconnecting means and relocatable outdoor use lighting assemblies are covered under Landscape Lighting Systems, Low Voltage ([IFDH](#)).

Low-voltage luminaires intended for connection only to 24 V or less source of supply in recreational vehicles are covered under Low-voltage Luminaires for Recreational Vehicle Use ([IFDQ](#)).

Low-voltage flexible lighting products are covered under Flexible Lighting Products ([ILGJ](#)).

ADDITIONAL INFORMATION

For additional information, see Luminaires and Fittings ([HYXT](#)) and Electrical Equipment for Use in Ordinary Locations ([AALZ](#)).

REQUIREMENTS

The basic standard used to investigate products in this category is [ANSI/UL 2108](#), "Low Voltage Lighting Systems."

Some products covered under this category have additionally been investigated for air leakage to ASTM E283, "Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen," as noted under **INSTALLATION INSTRUCTIONS** above.

UL MARK

The Certification Mark of UL on the product is the only method provided by UL to identify products manufactured under its Certification and Follow-Up Service. The [Certification Mark](#) for these products includes the UL symbol, the words "CERTIFIED" and "SAFETY," the geographic identifier(s), and a file number.

For those products which are also certified by UL to ASTM E283, the Certification Mark includes the word "PERFORMANCE."

Additional Certification Markings

Products which are also certified by UL to ASTM E283 are additionally marked with the following information:

ALSO CERTIFIED TO ASTM E283

Alternate UL Mark

The Listing Mark of UL on the product is the only method provided by UL to identify products manufactured under its Listing and Follow-Up Service. The Listing Mark for these products includes the UL symbol (as illustrated in the Introduction of this Directory) together with the word "LISTED," a control number, and one of the following product names: "Low Voltage Luminaire," "Low Voltage Recessed Luminaire," "Low Voltage Cabinet Luminaire," "Low Voltage Luminaire Power Supply," "Low Voltage Lighting System," "Low Voltage Luminaire System," "Low Voltage Luminaire Fitting," "Low Voltage Track Lighting," "PoE Fitting," "PoE Luminaire," "PoE Power Supply," or other appropriate product name as shown in the individual Listings.

The term "Fixture" may be used in lieu of "Luminaire" in the product name.

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