STD·NEMA LL 7-ENGL 1999 6470247 0527758 250

NEMA STANDARDS PUBLICATION

LL 7

GENERIC DESIGNATION SYSTEM FOR PIN-BASED COMPACT FLUORESCENT AND T5 TWIN FLUORESCENT LAMPS

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION

Copyright National Electrical Manufacturers Association
Provided by IHS under license with NEMA
No reproduction or networking permitted without license from IHS

Not for Resale

NEMA Standards Publication LL 7-1999

Generic Designation System for Pin-Based Compact Fluorescent and T5 Twin Fluorescent Lamps

Published by

National Electrical Manufacturers Association
1300 North 17th Street
Rosslyn, Virginia 22209

© Copyright 1999 by the National Electrical Manufacturers Association. All rights including translation into other languages, reserved under the Universal Copyright Convention, the Berne Convention for the Protection of Literary and Artistic Works, and the International and Pan American Copyright Conventions.

Copyright National Electrical Manufacturers Association
Provided by IHS under license with NEMA
No reproduction or networking permitted without license from IHS

Not for Resale

Contents

		Page
	Foreword	ii
Section 1	General	1
	1.1 Scope	1
	1.2 Definitions	1
Section 2	Designation System	3
	2.1 Pin-based Compact Fluorescent Lamps	3
	2.2 T5 Twin Fluorescent Lamps	4
Section 3	Terminology and Designation System Usage	5

Copyright National Electrical Manufacturers Association
Provided by IHS under license with NEMA
No reproduction or networking permitted without license from IHS

Not for Resale

Foreword

The number of different lamp types and the varying terminology used by lamp manufacturers to describe pin-based compact and T5 twin fluorescent lamps can cause confusion in the market place. In 1992, the NEMA lamp manufacturers developed a short generic designation system to identify the various lamps, which simplified specification and re-ordering. Since that time the system has been expanded to include recently introduced lamps. It is not applicable to screw-based, self-ballasted compact fluorescent lamps.

In the preparation of this Standards Publication, input of users and other interested parties has been sought and evaluated. Inquiries, comments, and proposed or recommended revisions should be submitted to the concerned NEMA product Subdivision by contacting:

Vice President, Engineering
National Electrical Manufacturers Association
1300 North 17th Street, Suite 1847
Rosslyn, Virginia 22209

This standard was developed at the request of the NEMA Lamp Section by its Technical Committee. Section approval of the standard does not necessarily imply that all section members voted for its approval or participated in its development. At the time it was approved, the Lamp Section was composed of the following members:

Durolite, Incorporated—Fairfield, NJ
EYE Lighting International of North America—Mentor, OH
GE Lighting—Cleveland, OH
OSRAM SYLVANIA—Danvers, MA
Philips Lighting Company—Somerset, NJ
Supreme Corporation—Mullins, SC
Venture Lighting International, Incorporated—Solon, OH

Copyright National Electrical Manufacturers Association
Provided by IHS under license with NEMA
No reproduction or networking permitted without license from IHS
Not for Resale

Section 1
GENERAL

1.1 SCOPE

Given below is a generic designation system for pin-based compact fluorescent lamps and T5 twin fluorescent lamps. This system is not applicable to screw-based, self-ballasted compact fluorescent lamps, also known as integral compact fluorescent lamps.

1.2 DEFINITIONS

integral compact fluorescent lamp: A lamp and ballast combined in a single sealed assembly with an Edison screw base, having no replaceable parts. These lamps are also known as screw-based, self-ballasted compact fluorescent lamps.

pin-based compact fluorescent lamp: A small fluorescent lamp with a pinned (rather than screw type) base that performs the entire mechanical supporting function.

T5 twin fluorescent lamp*: A long single-based lamp with a T5 diameter bulb requiring an additional support to hold the lamp in place. These lamps are not self-supporting by the base alone, which differentiates them from compact fluorescent lamps.

* Typical trade names are BIAX™, DULUX™, or PL-L.

Copyright National Electrical Manufacturers Association
Provided by IHS under license with NEMA
No reproduction or networking permitted without license from IHS

Not for Resale

Section 2
DESIGNATION SYSTEM

2.1 PIN-BASED COMPACT FLUORESCENT LAMPS

The generic designation system for compact fluorescent lamps shall consist of at least four parts:

CF + Shape + Wattage / Abbreviated Base Designation

2.1.1 The prefix "CF" is used for all types of compact fluorescent lamps that comply with the American National Standards Institute definition of a self-supporting lamp with a single base.

2.1.2 The "Shape" designator is chosen from the following:

T – twin, the bulb is formed into two parallel legs
Q – quad, the bulb is formed into four parallel legs, two each in planes parallel to each other
TR – triple, three twin tubes in a delta formation or three tubes in an arch

Note—TR is a new shape designator to address the increased use of this lamp type. Some publications may refer to triple tube using their former "M" designator.

S – square shaped
M – multiple parallel tubes not covered by any of the above shape designators

2.1.3 The "Wattage" is the nominal wattage, followed by a "W."

2.1.4 The "Abbreviated Base Designation," after the "/" separator, is the IEC/ANSI designation which includes the number of pins, but excludes any keyway information. The base designation is essential in order to differentiate between lamps of the same wattage, but which have different pin configurations.

2.1.5 Additional information, such as color, may be added after a further "/" separator.

2.1.6 Examples include:

• 9 watt twin tube with G23 base	CFT9W/G23
• 9 watt quad tube with G23-2 base	CFQ9W/G23
• 26 watt quad tube with 2-pin G24 base	CFQ26W/G24d
• 26 watt quad tube with 4-pin G24 base	CFQ26W/G24q
• 32 watt triple tube with 4-pin G24 base, > 80 CRI, 3500K	CFTR32W/G24q/835

Copyright National Electrical Manufacturers Association
Provided by IHS under license with NEMA
No reproduction or networking permitted without license from IHS

Not for Resale

2.2 T5 TWIN FLUORESCENT LAMPS

For T5 twin lamps, the prefix "FT" (fluorescent twin) is used. The generic designation system does not require a shape designator and shall consist of at least three parts.

FT + Wattage / Base Designation

2.2.1 If the lamp is designed to operate on a specific type of ballast circuit, that information is given after an additional "/" separator, using ANSI accepted abbreviations, such as RS (rapid start).

2.2.2 Additional information, such as color, may be added after a further "/" separator.

2.2.3 Examples include:

- 18 watt twin tube with 2G11 base — FT18W/2G11
- 18 watt twin tube with 2G11 base, rapid start, > 80 CRI, 4100K — FT18W/2G11/RS/841

Copyright National Electrical Manufacturers Association
Provided by IHS under license with NEMA
No reproduction or networking permitted without license from IHS
Not for Resale

Section 3
TERMINOLOGY AND DESIGNATION SYSTEM USAGE

3.1 NEMA lamp manufacturers have adopted this terminology in lamp publications. It has also been adopted in the IESNA (Illuminating Engineering Society of North America) *Lighting Handbook*, in the California Energy Commission *Advanced Lighting Guidelines*, by Lighting Research Center publications, and in federal government specifications. Luminaire and ballast manufacturers are encouraged to use this generic terminology in catalogs, on products, and on re-lamping labels. Specifiers are encouraged to use the generic designations in bid documents.

3.2 All manufacturers are invited to adopt the above designation principles since the system is intuitive and requires no central administration.

Copyright National Electrical Manufacturers Association
Provided by IHS under license with NEMA
No reproduction or networking permitted without license from IHS

Not for Resale



NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION • 1300 NORTH 17TH STREET • SUITE 1847 • ROSSLYN, VA 22209

Copyright National Electrical Manufacturers Association
Provided by IHS under license with NEMA
No reproduction or networking permitted without license from IHS
Not for Resale