

August 28, 2017

To: Universal Lighting Technologies Customers

Subject: Energy Conservation Standards for Metal Halide Lamp Fixtures (MHLFs)

Legislation Overview

1. United States, DOE

On February 10, 2014 the Department of Energy published the final rule on *Energy Policy and Conservation Act: Energy Conservation Standards for Metal Halide Lamp Fixtures (10 CFR Part 431)* and set a compliance date of February 10, 2017.

According to the updated rule, all metal halide fixtures manufactured in, or imported into, the United States on or after February 10, 2017 must meet the new energy efficiency standards. The Department of Energy defines the efficiency of metal halide fixture as the efficiency of the metal halide ballast inside that fixture.

The scope of this rulemaking affects all new MHLFs in the wattage range from 50W to 1000W. Ballasts sold with new fixtures after the compliance date must meet or exceed the standards promulgated by this rulemaking. Any metal halide ballasts sold in the replacement market are not required to comply with these standards.

The new standards specify the minimum allowable ballast efficiencies based on fixture location, ballast type, and rated lamp wattage. The specifics can be found online in Electronic Code of Federal Regulations, Subpart S, §431-321 ... §431.326 at the following link: <http://www.ecfr.gov/cgi-bin/text-idx?SID=23fb4f73755b58a62f45dac28f9f3dc5&mc=true&node=pt10.3.431&rgn=div5>.

2. Canada, Ontario Ministry of Energy

Updated efficiency requirements are being implemented in Ontario, Canada. These efficiency requirements are virtually the same as the DOE requirements for MHLFs in the United States. The requirements apply for MHLFs with the date of manufacture on or after September 1, 2017 and can be found at the following link: <https://www.ontario.ca/laws/regulation/120404> (Schedule 5, §9)

3. Canada, NRCan

Canadian Energy Efficiency Regulations Amendment 14 will align Canadian efficiency requirements for MHLFs with those of DOE. NRCan plans to pre-publish the regulation in fall of 2017 with 75-day comment period following the pre-publication. The dates for final publication will depend on the number and nature of comments received during the 75-day comment period after pre-publication.

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Universal Lighting Technologies Offering

Universal has developed a full line of compliant magnetic metal halide ballasts to meet the new efficiency requirements for both American and Canadian markets.

All electronic metal halide ballasts offered by Universal already meet or exceed the new efficiency requirements.

Universal will continue to offer legacy metal halide ballasts to Distribution customers and OEM customers who sell into the Export market.

Please refer to the cross reference sheet for current metal halide and pulse-start metal halide model availability and recommended compliant replacement.

1. Electronic HID ballasts

All Universal electronic HID ballasts comply with DOE-2017 efficiency requirements

2. Magnetic MH and PSMH ballasts, QUAD and 480 V models

Current Model	High efficiency replacement model	Current Model	High efficiency replacement model
M50MLTLC3M	Meets requirements	P25048TAC4L	Meets requirements
M7048TLC3M	M7048TLC3E	P250MLTAC4L	P250MLTAC4E
M70MLTLC3M	M70MLTLC3E	P32048TAC4L	Meets requirements
M10048TLC3M	Meets requirements	P320MLTAC40	P320MLTAC4E
M100MLTLC30	M100MLTLC3E	P35048TAC40	P35048TAC4E
M15048TLC3M	M15048TLC3E	P350MLTAC40	P350MLTAC4E
M150MLTLC3M	M150MLTLC3E	P40048TAC4L	P40048TAC4E
M150MLTAC3M	M150MLTAC3E	P400MLTAC4L	P400MLTAC4E
P17548TAC3L	Meets requirements	P45048TAC4L	P45048TAC4E
P175MLTAC3L	Meets requirements	P450MLTAC4L	P450MLTAC4E
P17548TAC4L	P17548TAC4E	P75048TAC5M	Meets requirements
P175MLTAC40	Meets requirements	P750MLTAC5M	Meets requirements
P175MLTAC4L	Meets requirements	P875MLTAC5M	Meets requirements
P20048TAC3L	Meets requirements	P100048TAC5M	Meets requirements
P200MLTAC3L	Meets requirements	P1000MLTAC5M	P1000MLTAC5E

3. Magnetic MH and PSMH ballasts, Multi-5 models

Current Model	High efficiency replacement model	Current Model	High efficiency replacement model
-	P175ML5AC4E	P400ML5AC4L	P400ML5AC4E
P250ML5AC4L	P250ML5AC4E	P750ML5AC5M	Meets requirements
P320ML5AC4L	P320ML5AC4E	P1000ML5AC5M	P1000ML5AC5E

4. Magnetic MH and PSMH ballasts, 347 V models for Canadian market

Current Model	High efficiency replacement model	Current Model	High efficiency replacement model
M50TRILC3M	Meets requirements	P250TRIAC4M	P250TRIAC4E
M70TRILC3M	M70TRILC3E	P320TRIAC4M	P320TRIAC4E
M100TRILC3M	M100TRILC3E	P350TRIAC4M	P350TRIAC4E
M150TRILC3M	M150TRILC3E	P400TRIAC4M	P400TRIAC4E
P175TRIAC3M	P175TRIAC3E	P750TRIAC5M	Meets requirements
P200TRIAC3M	P200TRIAC3E	-	P1000483AC5E

Important notes:

1. High efficiency replacement models utilize same capacitors and ignitors as their current counterparts.
2. High efficiency replacement models have same dimensions as their current counterparts.
3. The UL temperature code of high efficiency models is same or lower comparing to current models.
4. Spec sheets are posted on the web at <http://unvlt.com/products/hid-ballasts/#metal-halide>.

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