

To: Universal Lighting Customers

Subject: Department of Energy Ballast Efficiency Regulations

New Department of Energy Ballast regulations will begin taking effect in 2005. The fluorescent lighting systems for (1) or (2) F40T12 rapid start lamps and for (2) F96T12 slimline lamps will no longer incorporate today's electromagnetic ballasts for these lamps. Ballasts for (2) F96T12HO lamps may still incorporate electromagnetic technology but must now meet specific efficiency requirements, even for cold temperatures.

The minimum efficiency requirements are based upon each ballast's Ballast Efficacy Factor (BEF) when operating the full wattage F40T12, F96T12, or F96T12/HO lamp(s) even though the ballast will operate energy savings version of these same lamps with different BEF's.

Key Dates:

April 1, 2005 – Ballast manufacturers can no longer *produce* ballast that do not meet the minimum efficiency requirements that are intended for sale to OEM's. Production of these products for replacement use is still allowed but the products must be marked for replacement use only and incorporate short lead wires.

July 1, 2005 – Ballast manufacturers can no longer *sell* ballasts that do not meet the minimum efficiency requirements to OEM's for installation into new luminaires.

April 1, 2006 – Luminaire manufacturers can no longer incorporate ballasts that do not meet the minimum efficiency requirements into new luminaires.

July 1, 2010 – Ballast manufacturers can no longer *sell* ballasts that do not meet the minimum efficiency requirements for replacement.

| Current Universal ballasts that will be outlawed by the new energy efficiency requirements | T12 Replacement Ballasts | Suggested Replacement System |
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| <p>(1) F40T12 or (1) F40T12/U Rapid Start 410-L-TC-P, 412-L-SLH-TC-P, 417-L-TC-P, 458-L-SLH-TC-P, W-650-L-TC-P, W-659-TC-P,</p> <p>(2) F40T12 or (2) F40T12/U Rapid Start 443-L-SLH-TC-P, 446-L-SLH-TC-P, 439-L-TC-P, W-589-D-TC-P, W-590-D-TC-P, 730-LR-SLH-TC-P, 737-LR-SLH-TC-P, 420-L-TC-P, 427-L-TC-P, 530-L-TC-P, 537-L-TC-P</p> | <p>No magnetic T12 rapid start or instant start ballasts comply. Electronic ballasts are the only option for using existing T12 lamps.</p> | <p>Electronic Ballasts with F32T8 Lamps</p> |
| <p>(2) F96T12 Slimline (Instant Start) 806-SLH-TC-P, 827-SLH-TC-P</p> | | <p>Electronic Ballasts with F96T8 Lamps</p> |
| <p>(2) F96T12/HO High Output (HO) 480-XLH-TC-P, 487-XLH-TC-P, WPR-480-XLH-R</p> | | <p>480-SLH-TC-P 487-SLH-TC-P</p> |

Exemptions:

- * Ballasts for F32T8 Lamps
- * Ballasts for residential use with:
 - Power factor less than .90 and are labeled for Residential Use Only
- * Ballasts for F96T12HO Lamps that operate at < -20°F and are for use in an outdoor sign
- * Ballasts that dim to less than 50% of their full light output

Contact your Universal Lighting representative to identify which electronic ballast system best meets your requirements.