GU24 Lamp / Ballast System Developments

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What is GU24?

- Standardized line voltage socket and pins
- Allows easy ballast replacement with simple “twist and lock”
- Pin-based alternative to medium base for self-ballasted CFLs
GU24 Evolution

Remote ballast with 4-pin lamp

GU24 Socket Ballast with 4-pin lamp

Self-ballasted GU24 lamps

Additional configurations not available in screw-based CFLs
1-piece versus 2-piece

1-piece advantages:
• reduces troubleshooting – more consumer-friendly
• lower cost
• reduced maximum overall length (MOL) – better fit
• solves replacement ballast availability

2-piece advantages:
• existing replacement 4-pin lamp market
• greater selection of color temperatures
• Preferred by some hospitality buyers
GU24 Versus Remote Ballast w/ 4-Pin Lamps

GU24 allows:

• consumer to change light levels
• easy ballast replacement
• self-ballasted lamps
• reduced troubleshooting
• replacement ballast availability
GU24 lamps:

• rated at or above 10,000 hours
• Come with maximum ballast case temperature rating to insure thermal ‘fit’ in E* fixtures
• Come with EOL circuitry for safety
• E* draft specs propose accelerated life testing (EPA), and PNNL or NEMA ‘heat’ testing (DOE)
• Available in squat configurations unlike screwbase.
Proposed DOE Versus EPA Specs for GU24

Scope:
• EPA Spec covers lamps for fixture qualification
• DOE Spec covers replacement lamps for labeling at retail

Harmonized, except:
• EPA requires ALT test, DOE requires PNNL or NEMA test. ALT is short, PNNL & NEMA are long.
• Minor efficacy differences
GU24 Replacement Lamp Availability

**DIY:**
- Lowe’s test stores
- Depot test stores (700)
- Menards

**E-tailers:**
- EFI.org
- Energyconservinglights.com
- Lightbulbemporium.com
- Bulbme.com
- Buylightfixtures.com
- Plumbingandlightingfixtures.com
- Buylighting.com

**Others:**
- Wolberg Electric
- Graybar
- Home Depot Supply
- LighTec

Sources: EPA, Google, Other
EPA Stats

• 115 GU24 platforms listed
• 20% of E* CFL fixture models now use GU24
• 1/3 of GU models use 1-piece, 2/3 use 2-piece
Whose GU24 Platforms Are in E* Fixtures Now?

1-Piece Lamp:
- MaxLite
- TCP
- Viva

2-Piece (lamp/ballast):
- Rhine-Rhine
- OSI-Rhine
- OSI-Sunpark
- Philips-Sunpark
- Viva-Viva

Source: EPA
Dave’s Crystal Ball

Where is GU24 Headed?

• Higher wattage and lower wattage
• Dimmable in 2007!
• 277V solutions
• Converting existing Edison sockets
• Color temperature options
• Downlight solutions
• Covered, reflector, bug lights
Other Fun Facts

• Washington State code change will require “high efficacy” fixtures outdoor for homes (effective 7/1/07)
• Proposed 2008 Title 24 in CA will block GU24 in recessed cans by requiring 30,000 hour at max case temp, BF > .9, THD <30%, and HPF > .9
• ANSI has not finalized GU24 proposed standard.
Free GU24 Newsletter Available

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