



# GU24 Lamp / Ballast System Developments

David Shiller

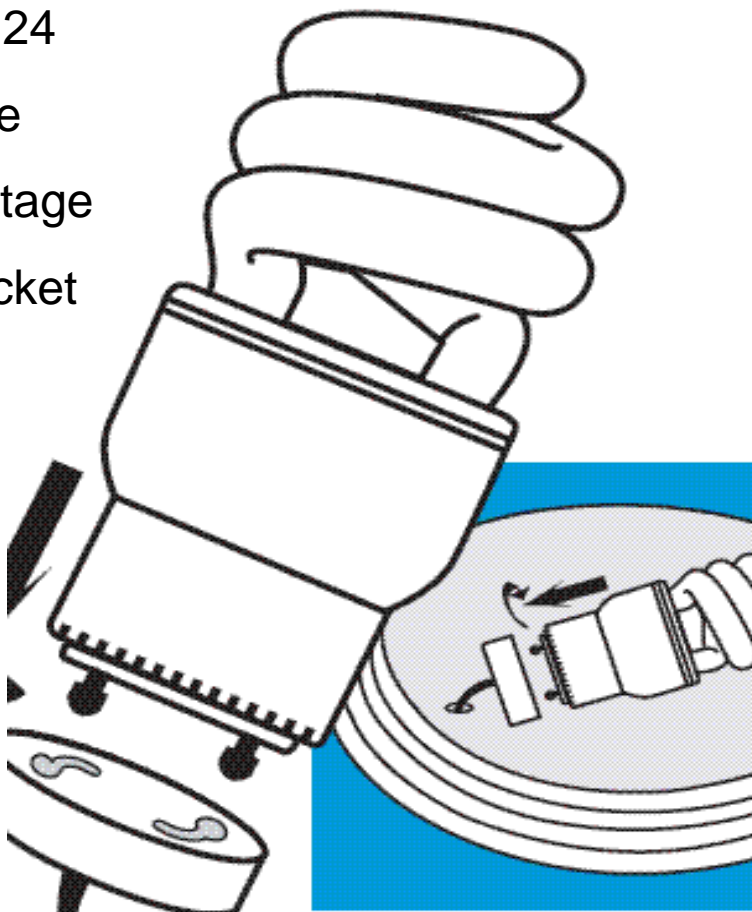
V.P. of Sales, New Business Development

MaxLite



# What is GU24?

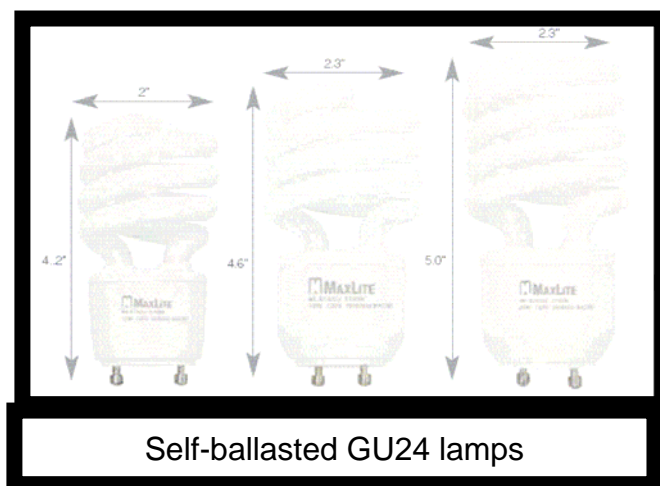
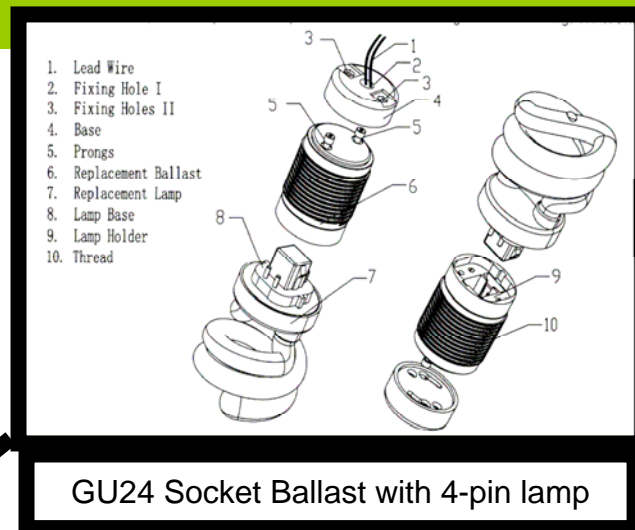
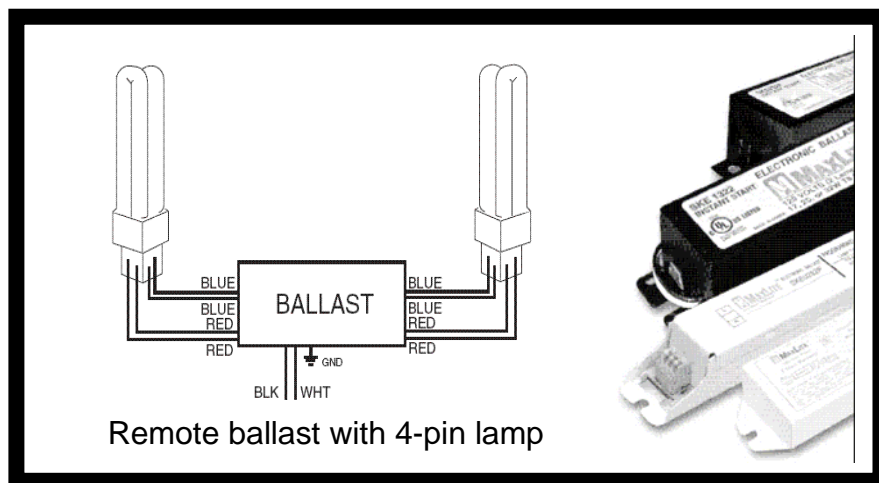
GU24  
Line  
Voltage  
Socket



- 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





# 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 Versus Screw-based CFLs

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:

- EFl.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

Request “Dave’s GU24 Update!”

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