

Commercial Lighting

Market Transformation of specific technologies

How are we doing

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Pulse Start vs. Probe Start

- ◆ How they work

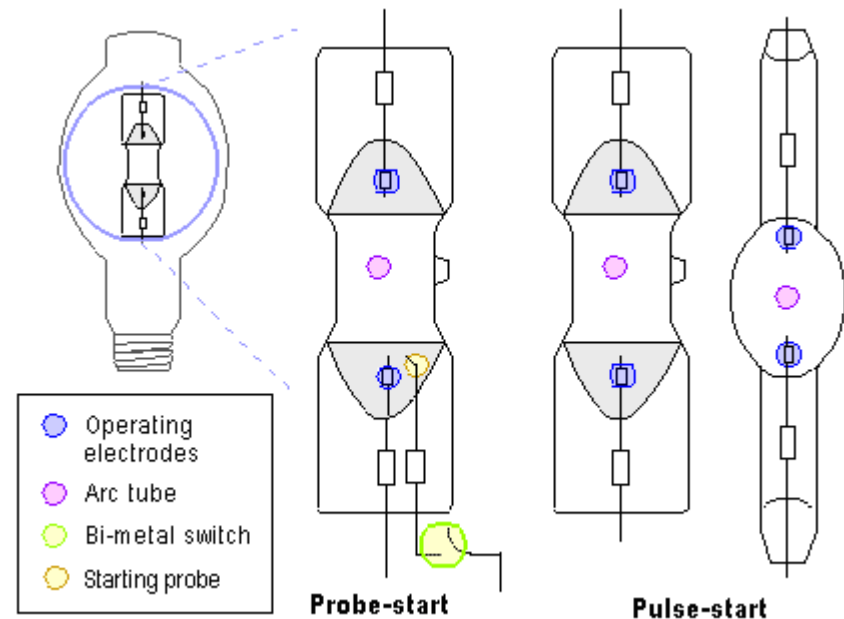


Illustration From LRC / NLPIP "Lighting Answers" Vol., 7 Issue 1, dated Jan 2003 as revised March 2005

Pulse Start Metal Halide

- ◆ Advantages over “Probe Start”
 - ◆ Lower wattage
 - ◆ Higher Efficacy
 - ◆ Longer lamp life/less lamp depreciation
 - ◆ Faster strike time
 - ◆ Better cold weather performance



Pulse Start Metal Halide – How are we doing

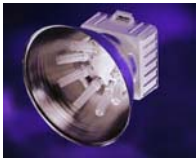
- ◆ History – Started with retro kits to fixtures to standard practice
- ◆ Mercury Vapor and probe start lamps and ballasts now becoming outlawed in some states
- ◆ Fluorescent replacing PSMH? - still viable in very high and hard to reach areas as well as outdoors
- ◆ Electronic ballasts hold promise for continued focus in energy efficiency programs (Steve will talk about that)



High Intensity Fluorescent Lighting

- ◆ Better Color Rendering
- ◆ More efficient alternative to HID
- ◆ Instant on/off
- ◆ More control opportunities (occupancy and daylighting)
- ◆ Better optics – Linear lighting in rectangular spaces

HIF – How are we doing?



- ◆ *Progress*

- ◆ *PA's in the Northeast have been offering rebates since 2000*
- ◆ *Has dominated retrofit activity –warehouse, manufacturing, athletic facilities*
- ◆ *Still very costly alternative.*
- ◆ *New laws making Pulse Start MH standard has close the gap on incremental costs*
- ◆ *Advanced state energy codes will help.*
- ◆ *In some cases, PSMH may be a better choice*

Lighting Controls

- ◆ Occupancy controls – much more acceptance in the marketplace - better pricing – energy codes have helped
- ◆ Daylight control – more acceptance but more work is needed – not for everyone.
- ◆ Whole building lighting automation – still a long way to go – difficult for retrofit.



**Indoor Ceiling-Mounted 360°
Motion Sensor**



High Performance T-8'



Would you like to
SUPER SIZE
that?

High Performance T-8's

- ◆ The CEE Commercial Lighting working group has made great strides since 2003.
- ◆ What it is – a lamp and ballast system that is 10 to 15 percent more efficient than comparable T-8
- ◆ National Grid's experience: retrofit vendors get it but a lot of work still needed for new construction
- ◆ NYSERDA – NEEP DesignLights™ Consortium effort in the NE is helping
- ◆ CEE effort working with industry to “label” ballasts NEMA efficient.
- ◆ ASAP effort to guide federal standards will help
- ◆ Still some confusion in the market between HP T8 and low power T8 – maybe this isn't a problem

THANK-YOU

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