

# High-Intensity Fluorescent Lighting: An Alternative to HID

## fact sheet

Improvements in fluorescent lamps, electronic ballasts and reflective fixtures make it possible to use fluorescent lighting in high ceiling applications that have been dominated by high-intensity discharge (HID) lighting systems. Improved phosphors have led to higher light output, better color, and longer life for fluorescent lamps. New electronic ballasts allow the lamps to start at lower temperatures and to be switched on and off more frequently without reducing lamp life. Dimming, "instant-on," and multi-lamp switching capability allow for many of energy saving control options, while developments in designs have improved fixture efficiency to more than 95 percent. Fixtures are available for T5 linear and biaxial lamps. High-intensity lamps are available from most major lighting manufacturers. Lamp and fixture manufacturers can provide information and help with this technology.

### REPORTED BENEFITS

- Require less energy than many HID lamps
- Have a lower rate of light loss
- Can be efficiently dimmed
- Have instant-on and instant-restrike
- Provide good color definition (75 - 98 CRI)
- Reduce glare
- Can be wired for instant switching between light levels

### Barriers to Market Acceptance

1. price
2. risk of failure
- ➔ 3. benefits not understood
4. priorities not on benefits of new technology
- ➔ 5. lack of technology awareness

### Development Stage

1. need for the technology identified
2. technology concept developed
3. initial research findings reported
4. research on concept completed
5. commercial pilot completed
6. introduction to commercial market
- ➔ 7. immature market demand
8. mature market demand
9. market saturation

### WISCONSIN APPLICATIONS

Indoor spaces with high ceilings, such as warehouses, factories, retail stores and athletic facilities.

### TYPICAL PAYBACK

About four years, based on energy savings in continuous 2-shift operation from retrofitting typical high-bay metal halide HID fixtures with high-intensity fluorescent fixtures.

### MORE INFORMATION

- "New High-Intensity Fluorescent Lights Outshine Their HID Competitors," Report Number ER-00-1, E SOURCE, Inc., 303.440.8500  
<http://www.esource.com>
- "T5FT Lamps and Ballasts," Lighting Answers, April 1996, National Lighting Products Information Program  
<http://www.lrc.rpi.edu/NLPIP/Online/pubs.html>
- "Holophane fluorescent system helps Sonnax win praise as 'Most energy efficient building in Vermont,'" Holophane Corporation  
<http://www.holophane.com/Product/Case/Sonnax.htm>
- "Comparing Fluorescent and HID," Energy User News, September 1998

High-intensity fluorescent fixtures manufacturers:

- Intrepid Lighting, 2950 Veterans Memorial Highway, Bohemia, NY 11716, 888.629.5483  
<http://www.intrepidlighting.com>
- 1st Source Lighting, 1730 Industrial Drive, Auburn, CA 95603, 530.887.1110  
<http://www.1stsourcelight.com>
- MetalOptics, 2011-T W. Rundberg Lane, Austin, TX 78750, 512.832.0025  
<http://www.holophane.com>



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