

# Venture's Technical Center - HID

## The Metal Halide Advantage

### Metal Halide Technology



#### CHARACTERISTICS

The unique characteristics of metal halide lighting provide high performance such as:

##### **Long Life**

Metal halide lamps have an average life of 15,000-20,000+ hours, more than ten times that of incandescent.

##### **Better Light Quality**

The output of metal halide lamps is closer to natural sunlight than most other light sources. People prefer white light because of better visual acuity, even at lower light levels.

##### **Designable Color**

Metal halide lamps can be designed to produce almost any color temperature desired, from 2700K to 20,000K. Specialty colors, including blue, green, aqua and pink, can also be produced.

##### **Excellent Color Rendering**

Metal halide offers excellent color rendering, with a 65-90 CRI (color rendering index).

##### **Compact Size**

Metal halide generates high light levels from a compact light source. This allows for smaller, more controllable luminaires.

##### **Versatility**

Metal halide lamps are relatively unaffected by ambient temperature, equally suited for indoor or outdoor use. Extensive style and wattage options allow for many applications.

##### **High Efficiency**

Metal halide lamps generate 65-115 lumens per watt, more than incandescent, fluorescent or mercury vapor lamps.

##### **Positive Environmental Impact**

Since metal halide lamps deliver light more efficiently than incandescent, widespread acceptance of the technology has a positive effect on air quality and the environmental waste stream. Lower electrical power generating requirements means less air pollution. Efficient long-life systems mean less landfill waste.

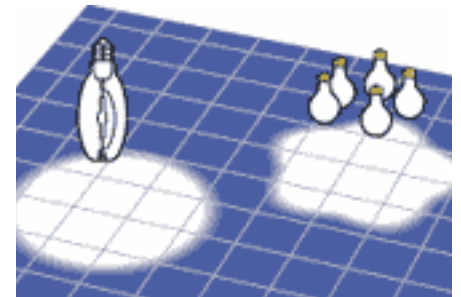


*A more efficient light source also means less waste.*

#### TECHNOLOGY GOES HEAD-TO-HEAD

##### **MH vs. Incandescent**

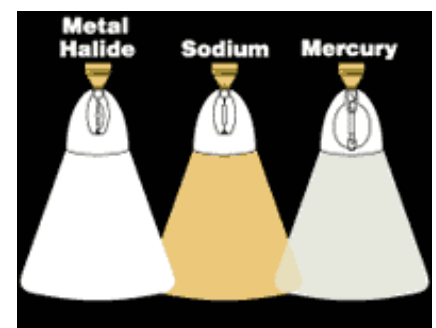
A 100 watt metal halide lamp provides five times the lumen output of a 100 watt incandescent lamp, and will last 20 times longer. Although incandescent has a low initial lamp cost, metal halide has lower total operating cost over life.



*Five times more efficient than incandescent*

##### **MH vs. Mercury**

Vapor Mercury lamps have long life, but are not as energy efficient as metal halide, producing only 35-58 lumens per watt. Their limited blue-green light spectrum has a lower CRI than metal halide.



*Metal halide generates light closer to sunlight than any other HID light source.*

## MH VS. HPS

While hps lamps offer long life, they do not deliver the same light quality as metal halide. Because of their dominant sodium content, hps lamps yield strong yellow light (2200k) and have a very poor cri of 20-25. The full spectrum light of metal halide has a much higher cri. Designable color

## MH vs. Fluorescent

Fluorescent lamps are harder to direct because of their larger size. One 100 watt metal halide lamp produces the same light as three 48" high output T8 fluorescent lamps. Metal halide lamps also tolerate a wider operating temperature range. Fluorescents are often limited to temperature-controlled indoor applications. T8 fluorescent lamps perform optimally at approximately 77°F (25°C), degrading measurably as temperature varies. T5 lamps perform similarly, but peak at 95°F (35°C).

## Wider Range of Applications

Specifiers can now select from a broad variety of lamp types and wattages to suit almost any application. Metal halide lighting is used today indoors and out, for industrial, commercial, retail and municipal spaces. Popular for sports facilities, and site lighting, it is increasingly found in supermarkets, big box retail, offices and lobbies.

## THE MOST ADVANCED TECHNOLOGY

A major advancement in metal halide lighting was the introduction of Venture's revolutionary Uni-Form® pulse start system. This second generation technology holds the future for metal halide. Uni-Form pulse start systems offer up to 50% more lumens per system watt than do traditional metal halide lamps and ballasts. Its capabilities continue to improve. Recently, Venture became the only manufacturer to offer Uni-Form pulse start lamps optimized for horizontal-only operation. Our high wattage e-Lamp, designed to operate on high frequency electronic ballasts with built-in dimming down to 35% power, is another unique new high performance product. New developments will soon bring better lumen maintenance and even more wattage options for specifiers.

