Lighting for the Entertainment Industry OSRAM Photo-Optic



A Commitment to Innovation

The high performance of each OSRAM Photo-Optic lamp reflects the commitment to innovation that has earned OSRAM its reputation as the global leader in innovative lighting technology.

A History of Excellence

OSRAM has led the entertainment industry from the early days of carbon arc lighting right up through the development and introduction of such breakthrough technologies as XBO® xenon projection lamps and HMI® and HTI™ metal halide lamps.

Products for Every Application

With over 500 lamp configurations using the most innovative lighting technologies, there is an OSRAM lamp readily available for virtually every entertainment lighting application.

Highly Innovative Technology

To keep up with the rapidly changing entertainment industry, OSRAM has highly accelerated product innovation cycles. Constant product improvement ensures that our lamps utilize the latest and best design elements.

Specialized Manufacturing

Numerous specialized and precise manufacturing procedures are the key to the consistent high quality and performance of every OSRAM lamp.





Advanced Technology Means Better Lighting

The Latest Technology

The OSRAM name is your assurance that you are using lamps with the most technologically advanced features available today.

Reliable Performance

OSRAM Photo-Optic lamps give you exceptional performance, tight lamp-to-lamp consistency and rock solid reliability.

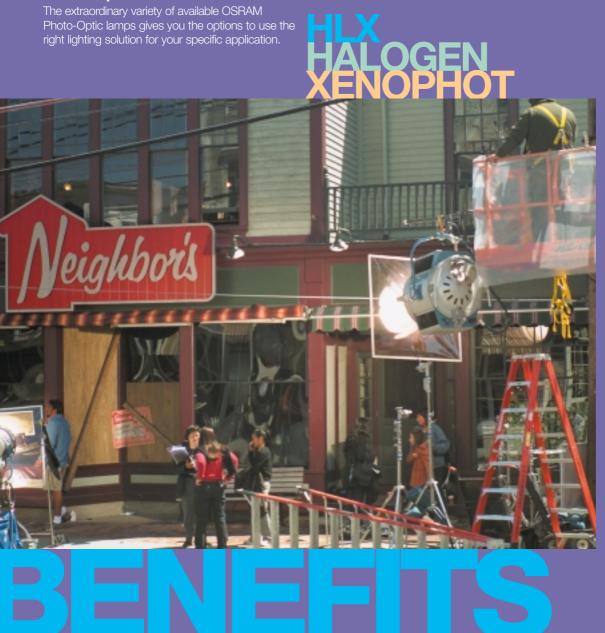
The Lamp You Need

Cutting-Edge Quality

You can specify OSRAM lamps with complete confidence that you will receive lighting products of the very highest quality in design and manufacture.

Customer-Focused Production

OSRAM Photo-Optic lamps are designed and manufactured to meet or exceed clearly defined customer requirements within highly specialized market segments.



Setting the Standard for Xenon Projection

MERQURY XBO<mark>VIPXBO</mark>VIPXBOVIP

Oscar®-Winning Xenon Technology

OSRAM XBO® xenon lamps are the industry standard for commercial film, slide, TV and video projection systems as well as high-power spotlights and follow spots. Recent lamp developments emphasizing on further enhanced luminance values and reduced arc gaps make certain wattages ideal for digital cinema applications. In XBO lamps, a pure xenon gas. Because the gap between the electrodes is only a few millimeters even in high wattage versions, XBO lamps come very close to being an ideal point source of light. XBO lamps offer extremely high light output and a color temperature of approximately 6000K, similar to that of daylight. They provide a continuous spectrum in the visible range and have a near perfect color rendering index. The exceptional lamp-to-lamp color consistency they exhibit when new is full lumen output and have hot restrike capability.

OSRAM VIP® Lamps for Multimedia Projection Applications

VIP® video projection metal halide and P-VIP super high pressure mercury light sources offer state-of-the-art technology optimized for video and data projectors using DLP, LCD or LCoS microdisplay technologies. P-VIP super high pressure mercury lamps achieve very high luminance values and consistent color temperatures due to their specific fill design and very short electrode gaps.

OSRAM XBO® Xenon Lamps at a Glance

Available Wattages

500W 1000W 3000W 5000W 8000W 550W 1600W 3600W 6000W 10000W 700W 2000W 4000W 6500W 2500W 4200W 7000W 900W

Typical Applications Primary Features

Cinema Film Projection High Luminance Daylight Color Temperature (approx. 6000K) Video and Data Projection Large Slide Projection **Continuous Spectrum** High CRI >95 **Skytracker Spotlights Follow Spots High Arc Stability**









Stage Lighting Solar Simulation

Discharge Lamps for Demanding Stage and Architectural Applications

HTI**HSR**HSD**HMD**HMP<mark>HTT</mark>HSF 1ETALHALI

Short Arc Technology for Maximum Precision

OSRAM HTI™, HSR®, HSD® and HMD® short arc metal halide lamps are ready to meet the demands of any stage, architectural or event lighting application. The lamps are available in various configurations, each of which offers high lumen output in combination with crisp daylight color temperatures in the range of 5600 to 7800K.

For entertainment and stage lighting applications such as those involving automated fixtures, HTI and HSR lamps offer an excellent balance of color performance, lumen output and service life. HTI lamp configurations include highly compact single-ended and focusing-reflector models. Single-ended HSR lamps feature an outer jacket for ease of handling and extended service life.

HSD and HMD lamps are ideal for large scale architectural lighting applications where both maximum output and long service life are important. HSD lamps are single-ended, with an outer jacket for ease of handling, and HMD lamps are double-ended.

OSRAM Short Arc Metal Halide Lamps at a Glance Available Wattages

150W 300W 200W 270W 400W

Typical Applications

TV, Theater and Musical Events **Large Venue Events and Concerts** Stage Lighting

Nightclubs

Advertising Projection

Exhibition Lighting

Architectural Spotlights

575W 700W 2500W 4000W 600W 1200W

Primary Features

High Brightness Compact Design

Long Service Life

Daylight Color Temperature





HIMPHOLIDE PHINIPPED HIMP





For film, TV and still photography, OSRAM metal halide HMI® lamps are the professional's choice for exterior and interior daylight lighting. Thanks to the special blend of mercury and metal halide in the arc tube, HMI lamps generate the 6000K color temperature required to match natural daylight, making them very effective for stage lighting and large screen projection applications. Advanced GS (Gap Shortened) technology in some models results in higher arc brilliance for improved fixture efficiency. Single-ended HMI lamps offer an extremely compact package and long service life. HMI lamps also offer extremely high luminous efficacy—up to 100 LPW in some cases—and a color rendering index of 90 or more. They have excellent hot restrike capabilities and are dimmable. For outdoor work, it is also important for the lamp to be mechanically robust. The support structure in HMI lamps with the outer jacket is designed to reduce the likelihood of premature failure if the spotlight fixture is moved during location filming.

HMP[®] Lamps—Dimming and Boosting for Special Applications

OSRAM HMP® lamps have been especially designed to maintain their photometric characteristics within a small tolerance field even when dimmed or boosted. This is especially important when both overhead transparencies and LCD displays are included in the same overhead projection presentation. Voltage can be increased to "boost" luminous output for the LCD portions of the presentation and reduced to balance the light output for the transparency portion. The special feature can easily be extended to any setting where dim'n'boost capabilities are desired without disturbing the photometric values.

OSRAM HMI® and HMP® Metal Halide Lamps at a Glance

Available Wattages

125W 270W 575W 2500W 6000W 18000W 200W 400W 1200W 4000W 12000W

Typical Applications

Film and TV Production Professional Photography Large Venue Events and Concerts TV, Show and Musical Events

Stage Lighting Nightclubs Exhibition Lighting Architectural Spotlights

Primary Features

Very High Efficacy (up to 100 LPW)
Daylight Color Temperature (approx. 6000K)
High CRI >95

High CRI >95
Hot Restrike Capability





The Academy of Motion Picture Arts and Sciences awarded OSRAM an Oscar® for the development and continued improvement of our HMI lamp family, proving that these high performance lamps are ideally suited to the rigorous demands of television and film lighting.

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Tungsten Halogen Lamps with OSRAM Quality

OSRAM makes a wide variety of halogen lamps for use in film, TV, stage, photography, concerts, nightclubs, exhibition and architectural lighting as well as in virtually all types of projection systems. Most OSRAM halogen lamps employ a biplane filament design for optimum light output, but special purpose lamps are available with u-shaped, bridge or axial filament designs. OSRAM gives entertainment professionals a choice of halogen color temperatures: 3400K for maximum light output, 3200K for film and TV work, and 3000K or 2900K for extended lamp life. Special OSRAM XENOPHOT™ lamps use xenon in place of krypton as a fill gas for increased light output. OSRAM halogen lamps are available in a range of wattages, voltages and configurations both with and without reflectors and most versions are completely dimmable.

OSRAM HPL* ULTRA PLUS (UCF) high performance ultra compact segmented filament lamps are designed for stage, studio and architectural applications. Lamps have been engineered for maximum efficacy in ETC "Source Four"** series spotlight fixtures and provide up to 40 percent more light output in ETC fixtures than traditional 1000W halogen sources. Long Life (X) types with up to 2000 hours average rated life reduce change-outs during continuous performances.

*HPL series lamps licensed by ETC, Inc. Patent No. 5,268,613 **Source Four manufactured by ETC, Inc.

OSRAM Tungsten Halogen Lamps at a GlanceAvailable Lamp Categories

Low Voltage without Reflector (10W-600W)
Low to Medium Voltage with Reflector
Medium to High Voltage with Quartz and Hard Glass
HPL High Performance Lamps for Ellipsoidal Spotlights

Typical Applications

Film/Video/Data Projection Slide/Overhead Projection TV/Film/Video Production Events and Concerts

Theater/Stage/Nightclub Lighting Professional Photography Exhibition Lighting

Primary Features

Bright, White Halogen Light Highest Color Rendering

Selected Lamps Optimized for Professional Film and TV

Many Choices for Maximum Versatility

OSRAM STUDIOLINE® The Fluorescent Studio Alternative

OSRAM even has fluorescent lamps that are optimized for use with film. Our STUDIOLINE high output fluorescent lamps have been specially designed and formulated to provide light that blends perfectly with halogen (3200K version) or metal halide (5600K version) studio lighting. The light output is soft and naturally diffused, and because STUDIOLINE lamps generate very little heat, they can be used in close proximity to actors and heat sensitive objects. OSRAM STUDIOLINE lamps combine a long service life with low power consumption and load requirements. They are suitable for 120V or 277V applications and can be dimmed to one percent of light output with SYLVANIA QUICKTRONIC® dimming ballasts.



OSRAM Photo-Optic Lighting for the Entertainment Industry

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For more complete and up-to-date information on these products visit our web site at www.sylvania.com. The following brochures are also

available:

Technology and Application Guide: Metal Halide Lamps/ Ordering Code:

Application Guide: Tungsten Halogen Low

Technology and Application Guide: XBO Theatre





