

# GE ConstantColor™ CMH StreetWise™

Naturally better, naturally safer.



GE imagination at work

StreetWise™

# CMH: the future-proof choice

## Street lighting

The European Union continues to apply pressure to eliminate outdated, inefficient lighting. Under ErP Regulations, operators will be required to phase-out a number of popular lighting types between 2012 and 2017. These include selected 'standard' high-pressure sodium (including retrofit), high-pressure mercury, and standard performance metal halide. CMH technology complies with all current and pending EU requirements and can therefore be specified with absolute confidence.

The reason for these changes is clear: lighting accounts for more than 20 percent of energy consumption around the world. Reduce consumption per luminaire, and everybody benefits.

This is where GE ConstantColor™ CMH StreetWise™ ceramic metal halide lamps make a major contribution. Because their output per system watt is better than competitive technologies, managers seeking to cut energy bills can now simply replace existing luminaires with lower-rated CMH on a 1/1 basis, or fit same-rated CMH and reduce the number of lamps. Either way, as well as reduced power costs, they also benefit from the higher reliability and lower relamping cycles of CMH technology.



# CMH: ultimate performance in the real world

GE ConstantColor™ CMH StreetWise™ ceramic metal halide lamps have been designed as the easy-fit replacement for outdated technologies. They are also the logical first choice for new installations.

The lamps are fitted with standard E27/E40 bases and can be dimmed, outperforming most standard HID systems. And with high reliability and sustained lumen output across a longer working life of 24,000 hours, they are supremely cost effective.

The lamps support electronic and electromagnetic ballasts and are compatible with the major street light ballasts, retrofitting existing HPS systems. Approved ballasts include Tridonic, Harvard, Zodion and SELC and the ballast testing process is on-going with other major manufacturers. For details regarding approved ignitors please refer to the StreetWise™ Data Sheet.

If you have any particular needs please contact your GE sales representative.

## Features:

- Excellent white light with efficiency: up to 111 lm/W
- Outstanding lumen maintenance: 80% at 12,000 hours
- Service life up to 16,000 hours, B50% 24,000 hours
- Wide range: 50/70/100/150W
- Direct retrofits HPS
- Standard robust E27/E40 bases for easy installation
- Dimmable (with the exception of 50W on electromagnetic ballast)
- System flexibility, operating on both electronic and electromagnetic ballasts
- Horizontal burning position (Universal expected in Q4 2013)
- Lowest cost new system: standard base, standard ballast, standard optics



## When to specify StreetWise™

In applications where lighting class reduction using lamps above Ra8 60 can be considered, StreetWise™ is a clear leader. Its excellent Ra8 value of 70 provides improved colour rendering over similar systems of comparable life and efficacy.

## The Range

Wattage	Colour	Length Nominal [mm]	Description	CCT [K]	CRI [Ra]	Initial Lumen on Electronic Gear [lm]	Cap	Rated Average Life (horizontal) [h]	Pack	Weighted Energy Consumption [kWh/1000 hrs]	EEC	Product Code
50	WDL	156	CMH50/TT/UVC/730/E27 STREETWISE ECG	3000	70	5000	E27	24,000	12	55.00	A+	64982
50	WDL	156	CMH50/TT/UVC/730/E27 STREETWISE EM	3400	67	4500	E27	24,000	12	57.20	A+	77400
70	WDL	156	CMH70/TT/UVC/730/E27 STREETWISE	3000	70	7640	E27	24,000	12	78.10	A+	77401
100	WDL	211	CMH100/TT/UVC/730/E40 STREETWISE	3000	70	10900	E40	24,000	12	107.80	A+	77399
150	WDL	211	CMH150/TT/UVC/730/E40 STREETWISE	3000	68	16300	E40	24,000	12	165.00	A+	77402



# CMH StreetWise™: dimming for further energy saving

CMH StreetWise™ lamps can be dimmed with negligible impact on performance, offering the potential for further energy savings.

Dimming is suggested to 65% of power (except 50W on electromagnetic ballast), since the lumen maintenance and colour appearance may be substantially affected when dimming down to 50% of rated power (for details see the Streetwise Dimming Statement).

The colour performance of lamps in the StreetWise™ range is such that CCT and CRI are similar when dimmed at similar powers: CRI is 70 at full power and 65 at 65% power; CCT increases by 400K when dimmed to 65% power. This means that lamps can be mixed in implementation and operated on the same dimming circuit with no effect on overall appearance.



## How ballasts and lamps operate when dimmed

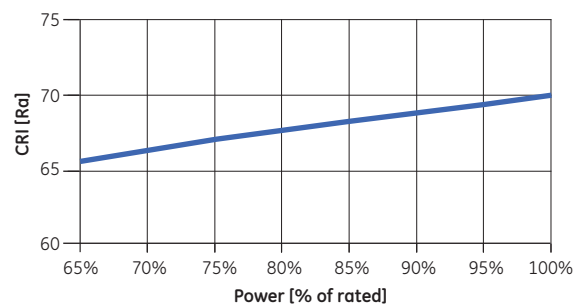
Dimming ballasts start at full power, remain there for 15 minutes, and then the lamps may be dimmed. For such systems, it is important to reduce the lamp power slowly to avoid premature lamp cycling, especially with older lamps that are already high in voltage and close to the normal dropout point. (for detailed requirements check the Streetwise Dimming Statement).

Dimming systems that reduce line voltage: down to 85% of line voltage is acceptable with StreetWise lamps on a typical reactor ballast. In this case the light output will be reduced by about 35%, with about 25% system energy savings.

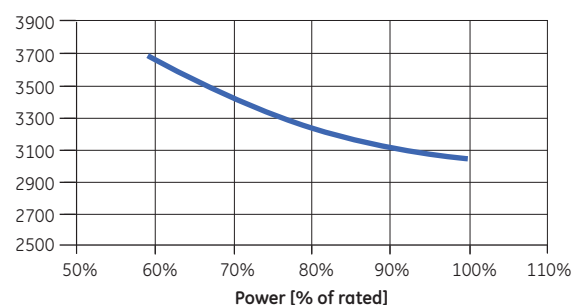
When a StreetWise™ lamp is dimmed:

- 90% power = 90% rated lumens
- 80% power = 75% rated lumens
- 70% power = 65% rated lumens
- 60% power = 50% rated lumens

StreetWise™ dimmed colour rendering



StreetWise™ dimmed colour





# Simple. Bright. Efficient. Effective.



## The logical choice for public lighting

### Application areas:

- **Specify in new installations**  
Achieve very high efficiency with standard bases and flexible ballast choices
- **Replace HPS or mercury applications**  
Dimmable CMH will achieve lowest cost and most efficient white light  
Lower Watt CMH will maintain white light at similar lumen and save the most energy
- **Choose to direct retrofit HPS**  
Benefits include white light and lower energy at similar lumen output for same wattage

## StreetWise™: a bright new name in public lighting

Visit our StreetWise™ microsite at [www.gelighting.com/eu](http://www.gelighting.com/eu) and see how you can improve the lighting of public spaces with our new generation of CMH lamps.



# CMH StreetWise™ : cut costs, save energy, improve light quality

CMH StreetWise™ lamps are ideal for street, residential, park, civic and other public lighting applications. The design of this innovative lighting system makes it suitable for retrofit to outdated technologies, as well as for new installations.

In a case study scenario, existing luminaires and lamps were replaced with a CMH StreetWise™ solution.

## Previous installation

The previous installation combined eleven luminaires with 250W HPS lamps. The total system consumption was 2,800W with lighting levels of 30 lux.

## StreetWise™ solution

The NEW CMH StreetWise™ solution comprised of ten GE Odyssey luminaires, fitted with StreetWise™ 70W lamps with dimmable electronic ballasts from Tridonic. The existing pole distribution was utilised.

## StreetWise™ results & benefits

- 68% energy savings, reducing the system consumption per luminaire from 280W to 81W
- Adapt the lighting levels to the current regulation
- Longer service life and lower maintenance costs
- A dimmable solution based in DALI protocol, reducing maintenance costs by including the electronic ballast
- Improved the quality of light by changing from the current HPS lamp with a CRI=25, to the a white light lamp source StreetWise™ up to Ra=70+
- Reduced light pollution with white light lamps
- Safer driving conditions: the human eye responds more quickly under white light
- Reduced CO<sub>2</sub> emissions



# CMH technology: the future of public lighting

Ceramic metal halide (CMH) lighting means an end to compromise. Until now, public authorities and other organisations have had to choose between high cost, high quality outdoor illumination or low cost alternatives which, even at peak efficiency, make streets and other areas look dingy and depressing.

CMH outdoor lighting offers the best of both worlds. Bright, white, 'natural' light and low costs for both running and maintenance. With CMH lighting, streets and other public spaces can feel safer for pedestrians. More than that, they can actually perform more safely. Their 'daylight' colour rendering improves the ability of drivers to recognise shapes and colours, especially in peripheral vision. It promotes quicker driver response times, too.\*

CMH lighting delivers competitive levels of light, of higher quality, with lower energy consumption. It combines the efficiency of HPS with the whiteness of metal halide, while delivering a broader spectrum than mercury.

As well as natural light with reduced running costs, the combination of CMH technology with a suitable electronic ballast ensures excellent and sustained rates of durability, while the compact nature of the light sources enables designers to ensure consistent light distribution in any application.

\*Compared with 'yellow' or 'orange' lighting.





# GE Luminaires for every application

## Okapi with StreetWise™ – the first choice for walkways



Reduce energy costs and improve the urban environment, thanks to Okapi. This striking contemporary luminaire is the perfect solution to safely light up walkways up to 4m high, parks and gardens so that pedestrians can feel secure and confident at night. Featuring both electromagnetic and electronic ballasts, Okapi offers outstanding energy efficiency and is the ideal replacement for outdated 'spheres'.

Okapi is available with two different reflectors of up to 100W: one is optimised for HPS lamps and the other for the new CMH StreetWise™ lamps with a high quality white light.

## Odyssey with StreetWise™ – the first choice for the street

Odyssey is an innovative lantern for demanding requirements. Featuring high photometric performance and double protection IP66, it delivers low maintenance costs and an extended working life for electrical gear and optics. This versatile luminaire can be post-top or side entry mounted, and it opens without tools for quick maintenance. Fitted with the StreetWise™ optic that leverages our StreetWise™ CMH lamps, Odyssey allows designers to increase pole spacing while maintaining even light distribution.



## Iberia with StreetWise™ – the architect's choice

Iberia has been designed to give exciting results in our cities. It offers multiple finishes and mounting options. Now available in configurations for the new StreetWise™ CMH lamps, it becomes the optimal solution for long-life, aesthetic white light in the urban environment.

The innovative Iberia family also offers three different LED versions, with energy consumption reduced by as much as 60 percent.



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