

High intensity discharge lamps

GE invented mercury lamps in 1931, high pressure sodium lamps in 1962 and metal halide in 1964.

High Intensity Discharge (HID) lamps are generally the most efficient light sources. Better energy efficiency helps to drive lower operating costs. Recent HID range falls into three main categories: metal halide, high pressure sodium and mercury vapour lamps.

High intensity discharge lamps are characterised by high reliability, low operating costs, and long life with various application possibilities from street to retail lighting. It offers a highly controllable point source of light and colour stability through life. Furthermore miniature Ceramic Metal Halide (CMH) lamps have opened new possibilities for lighting design with the introduction of 20W and 35W MR16 and SuperMini types especially for the retail sector.

High Pressure Sodium (HPS) lamps offer a great solution for street lighting application where energy efficiency, lumen output or lifetime are key. GE's HPS premium range : Lucalox XO with its robust design and its lifetime up to 32,000 hours and its efficacy level up to 150lm/w is currently the most efficient lamp type in the HID range. In terms of lifetime, HPS Standby -Superlife lamps can provide light up to 55,000 hours due to double arc tube applied.



Content

Metal Halide selection guide	102
ConstantColor™ CMH	110
Arcstream™	111
Kolorarc™	112
Multi-Vapor™	112
Multi-Vapor™ High Output	112
Sportlight™	113
Lucalox™ T	117
Lucalox™ E	117
Lucalox™ XO	117
Lucalox™ PSL	117
Lucalox™ TD	118
Lucalox™ RFL	118
Lucalox™ E-Z	118
Lucalox™ I Elliptical Clear & Diffuse	118
Lucalox™ Superlife/Standby	118
Kolorlux Standard (MBF)	119
Blended Light	119
General information	120



High intensity discharge lamps

Selecting the right product

While all HID lamps offer outstanding efficiency and long life, there are distinct differences in performance among the three basic types of HID lamps. The following two charts should help you to understand these differences so that you can select the right lamp for your application.

Key performance criteria

	Colour Temperature Options (K)	Colour Rendering (Ra)	Life (Hours)	Efficiency (LPW)
Metal Halide	3000 (WDL) 3500 (BDL) 4000 (NDL) 6000 (DL)	65-93	3,500-20,000	68-105
High Pressure Sodium	2 000	25-60	28,500-55,000	66-150
Mercury	3 500 4 000	42-52	12,000-24,000	19-63



Retail/Display



Sports/Floodlighting



High Bay/Industrial

Major applications

	Retail	Display	Commercial Interior	Sports Lighting	Stadium	High Bay	Industrial	Warehouses	Amenity	Pedestrian Areas	Floodlighting	Security	Street Lighting	Highways	Horticulture
Metal Halide	•	•	•	•	•	•	•	•	•	•	•	•	•		
High Pressure Sodium						•	•	•	•	•	•	•	•	•	•
Mercury								•	•	•	•	•	•	•	



Choose from a wide selection of GE metal halide lamps.

GE metal halide lamps with their bright, high quality white light and energy-efficiency are ideal for a wide range of applications.

GE makes it easy to choose the right metal halide. Select the right product family for your task and preferred ballast and you will pinpoint the correct lamp for perfect results.

GE's unique 3 part arc tube design provides higher durability that results in excellent reliability.



ConstantColor™ Ceramic Metal Halide

Lamps operate on high pressure sodium / metal halide ballasts incorporating thermal protection (to EN IEC 61167) with metal halide ignitors.



Arcstream™

Lamps operate on high pressure mercury ballasts with metal halide ignitor.



Kolorarc™

Lamps operate on Constant Wattage Gear (CWA).



Multi-Vapor™

Lamps with excellent light output and optical control.



Sportlight™

High quality metal halide light is ideal for illuminating colour critical public spaces such as shopping areas and walkways.

Applications:

- Retail display
- Decorative and
- Spotlighting of individual features.



The full line up of metal halide lamps

Lumen value table (CBCP for PAR/MR16)

Lamp Format	Operating Position	Colour:	20W 3000K	35W 3000K	4200K	70W 3000K	4200K	100W 3000K	150W 3000K	4000K	
ConstantColor CMH Ceramic Metal Halide lamps for superior colour control and operating efficiencies											
Super Mini			1615lm	3400lm	3400lm						
Single Ended Mini's	U		1650 lm	3400 lm	3200 lm	6200lm	6200lm				
Single Ended	U		1650 lm	3400 lm	4200 lm	6200lm	6300 lm		14000 lm	13000 lm	
Double Ended	HOR			3400 lm	7000 lm	7000 lm	6200 lm		14500 lm	12500 lm	
MR16 Spot	U		9000	16000	16000						
MR16 Flood	U		2900	5500	5500						
MR16 W Flood	U		1500	3000	3000						
PAR20 Spot	U		13000	22000	19450						
PAR20 Flood	U		3750	7500	6950						
PAR30 Spot	U		19800	39600	36700	43000					
PAR30 Flood	U		4900	11000	10200	10000					
Elliptical Clear	U				6300 lm			9200 lm			
Elliptical Diffuse	U				6000 lm			8700 lm		12300 lm	
Tubular Clear	U				6000 lm			9200 lm	14000 lm	14500 lm	
Arcstream™ Lamps operate on high pressure sodium/metal halide ballasts incorporating thermal protection with metal halide ignitor											
Single Ended	U				5200 lm	5200 lm		11500 lm		12000 lm	
Double Ended	HOR				5500 lm	5500 lm	5500 lm	12000 lm	12000 lm	12000 lm	11000 lm
Tubular Clear	HOR VBU										
Elliptical Clear	U HOR										
Elliptical Diffuse	U HOR VBU										
Kolorarc™ Lamps operate on high pressure mercury ballasts with metal halide ignitor											
Tubular Clear	HOR VBU										
Elliptical Clear	HOR VBU										
Elliptical Diffuse	HOR VBU										
Multi-Vapor™ Lamps operate on constant wattage gear (CWA)											
Elliptical Clear	U										
Elliptical Diffuse	U VBU										
Multi-Vapor™ High Output More light, longer life											
Elliptical Clear	HOR VBU										
Elliptical Diffuse	HOR VBU										
Sportlight™ For sports and floodlighting											
Linear	HOR										
Tubular Clear	HOR										
Hot Restrike Internal Ignitor											
Elliptical Clear	U										
Elliptical Diffuse	HOR U										
PAR 64	U										
PAR 64 Hot Restrike	U										

High intensity discharge lamps

Ceramic Metal Halide-Top performance from GE

With lighting accounting for 20% of the world's energy bill, the pressure is now even greater to minimise its impact on the environment. GE technology has always been at the forefront of CMH lighting, with products that deliver the best possible energy efficiency as well as excellent performance.

CMH offers many desirable lamp features:

- Highly comfortable point source of light
- Long life, and reliability. Excellent colour rendition and colour stability. High efficiency along with superb lumen maintenance
- Instant replacement for less eco-friendly products
- 20% more efficient than quartz metal halide and 4.5 times more efficient than halogen

Wide range of CMH lamps for all kinds of application needs.

- retail
- high & low bay
- commercial lighting
- street lighting, & city beautification
- architectural & floodlighting

Low watt CMH lamps 20-70W

Miniature CMH lamps 20-35W

GE's miniature CMH lamps have opened new possibilities for lighting design. Combining the power and light quality of far larger lamps from a tiny capsule, they have made it possible to achieve lighting design that could previously only be obtained with less efficient tungsten halogen.



Energy efficient lighting solutions

ConstantColor™ CMH 20W, 35W and 70W

- SuperMini
- Ultra
- Precise MR16
- Mini
- Single Ended G12
- Double Ended
- PAR lamps
- Compact Ballast



High intensity discharge lamps

CMH Ultra-The next generation

- Excellent color: 930 for G8.5/G12
- Products look more attractive, colors are more vibrant.
- Long life: 15,000 hours
Up to 6 times the life of halogen lamps, extending relamp cycles and save maintenance costs .
- Improved lumen maintenance: 87% extends service life
- Compatibility: direct replacement for existing 70 watt CMH systems



High Watt CMH lamps from 100-400 Watts

CMH TD Range

New 35W added to 70W and 150W range and 35W allows energy saving in wall-wash fixtures.



Single Ended-G12

Extended lamp life up to 60% on 20W, 35W and 70W 3000K lamps and 35W, 70W with 15,000 hours life.



HID Lamps for street lighting

From roads to parks, play it safe with adjustable outdoor lighting just where you need it. GE's dimmable CMH offers high quality white light that increases safety for both drivers and pedestrians whilst offering the opportunity for dimming during off peak hours.



Dimmable CMH for street lighting

- Lamp is dimmable to 70% without significant impact to lamp colour
- Lamp is dimmable to 50% without significant impact to lamp reliability and lifetime
- White light standard CRI>65 maintained when 50% dimmed
- Available in 150W 4000K



CMH 250W

- A leading combination of quality and efficient light versus other HID lamps
- Lamp life – 20,000 hours
- Colour consistency and 80+ CRI



CMH 400W

- Highest wattage CMH available
- Lamp life – 20,000 hours
- Colour consistency and 80 CRI



High intensity discharge lamps

ConstantColor™

Choose ConstantColor™ with metal halide ballasts and ignitors for retail display lighting, high quality exterior floodlighting to obtain crisp, white light.

- Perfect optical control delivering a highly accurate, quality light precisely where you want it
- Long life up to 20,000 hours
- Excellent colour reproduction making it ideal for display lighting
- Good colour consistency throughout life, so your display maintains its features



Single Ended

Kolorarc™

Choose Kolorarc™ with mercury ballasts and metal halide ignitors for commercial and industrial interiors, shopping malls and floodlighting.

- High brightness – providing high illumination levels even when installed in high ceiling areas
- High energy efficiency – offering maximum energy cost savings
- Excellent colour reproduction providing more attractive lighting environments compared to high pressure sodium and mercury arc lamps



Tubular Clear

Multi-Vapor™

Choose high output Multi-Vapor™ lamps with constant wattage auto-transformer (CWA) ballasts for large scale commercial and industrial interiors, shopping malls and floodlighting.

- Extra long life – of up to 20,000 hours on CWA gear
- Warm, rich colour – gives merchandise, furnishings and decor added appeal
- High colour temperatures – to blend exceptionally well in mixed applications with incandescent, halogen and warm white fluorescent sources



Elliptical Diffuse

Sportlight™

Choose Sportlight™ high wattage lamps for sports and floodlighting. The excellent colour rendering and appearance of these lamps makes them especially suitable where television cameras are used.

- Excellent optical control – with minimal beam spread even at long focal lengths
- High output – providing high illumination levels even from high towers
- Excellent colour performance – accurately reproducing colours to create more authentic and attractive floodlit environments



Tubular Clear
Hot Restrike
Internal Ignitor



Metal Halide identification

The following glossary of terms and descriptions can help you when checking metal halide lamp specifications and how to use the order codes when ordering products. Within each product line, lamps are divided into families – within families, lamps are listed by wattage.

Watts: Energy used. To find actual energy used (kWh) multiply power (watts shown) x hours of use divided by 1000

CRI Ra: Colour rendering index, the higher the number (1–100) the more natural the lit subject appears

Product Code: It is important to use this code when ordering to ensure that you receive the exact product you require

Sportlight™

Watts **Operating position** **Length mm** **Order Code** **Cap** **CCT K** **CRI Ra** **Initial lumens** **Rated Average Life Hours** **Pack Qty** **Product Code**

Hot Restrike 2000	HOR±60°	430	SPL2000/HR/T/H/960/E40	E40	6000	93	170000	5000	4	30104
Internal Ignitor 2000	HOR±60°	430	SPL2000/I/T/H/640/E40	E40	4000	65	190000	2000	4	33148

Lamp: Lamp type and product features

Operating position: Orientation of lamp

CCT K: Colour temperature – Kelvin. The visual warmth or coolness of the light. The higher the number the whiter or cooler the light appears

Energy Efficiency Class: Energy saving code

Rated Average Life: The point in time when 50% of installed lamps are still burning

SPL 2000 / I / T / H / 640 / E40

Family or Feature:
ARC: Arcstream™
CMH: ConstantColor CMH™
KRC: Kolorarc™
MPR/MVR: Multi-Vapor™
MXR: 100W – Arcstream™
175W – Multi-Vapor™
SPL: Sportlight™

Wattage

Feature:
Missing: no feature
UVC: UV Control
I: Internal Ignitor
E: Enclosed Fixture
O: Open Fixture
HR: Hot Restrike

Lamp Format:
TD: Double Ended
E: Elliptical Clear
D: Elliptical Diffused
L: Linear
PARxx: PAR (+size)
T: Clear Tubular

Colour Rendering:
6: Ra 58 to 67 (Group 2B)
7: Ra 68 to 77 (Group 2A)
8: Ra 78 to 87 (Group 1B)
9: Ra 88 to 97 (Group 1A)

Operating Position:
Missing: TD – Horizontal;
PAR – Universal

U: Universal
H: Horizontal
VBU: Vertical Base Up
BU: Base Up

Colour Temperature:
XX: First 2 digits of temperature in Kelvin: xx00k.
Example: 43 is 4,300 K CCT

Cap:
E27: Fc2
E40: G38
RX7s: E39p
RX7sm: Modified RX7s
Spec: Special base

High intensity discharge lamps

ConstantColor™

Watts	Operating position	Length mm	Order Code	Cap	Colour	Initial lumens/ Candela for PARs, MR16	Rated Average Life V	Rated Avr Life H	Pack Qty	Volts (nominal)	I(A)	Diameter max	Product Code
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Single Ended SuperMini



20	U	52	CMH20/TC/UVC/830/GU6.5	GU6.5	830	1615	12000	12000	12	90	0.210	13	40399
35	U	52	CMH35/T/UVC/930/GU6.5	GU6.5	930	3400	10000*	10000*	12	90	0.420	13	88656
35	U	52	CMH35/T/UVC/942/GU6.5	GU6.5	942	3400	12000*	12000*	12	95	0.420	13	88657

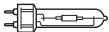
*Initial life claim at launch. Testing continues to final design.

Single Ended 'Mini's'



20	U	85	CMH20/TC/UVC/U/830/G8.5 PLUS	G8.5	830	1650	12000	12000	12	90	0.225	14.5	39858
35	U	85	CMH35/TC/UVC/U/830/G8.5 PLUS	G8.5	830	3400	15000	15000	12	90	0.5	14.5	43273
35	U	85	CMH35/TC/UVC/U/942/G8.5	G8.5	842	3200	12000	12000*	12	90	0.5	14.5	26348
70	U	85	CMH70/TC/UVC/U/830/G8.5 PLUS	G8.5	830	6200	15000	15000	12	90	0.98	14.5	43274
70	U	85	CMH70/TC/UVC/U/942/G8.5	G8.5	942	6200	15000	15000	12	90	0.98	14.5	26349
70	U	85	CMH70/TC/UVC/U/930/G8.5 ULTRA	G8.5	930	6200	15000	15000	12	95	0.93	14.5	96751

Single Ended



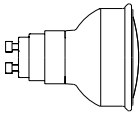
20	U	88	CMH20/T/UVC/U/830/G12 PLUS	G12	830	1650	12000	12000	12	90	0.225	14.5	42708
35	U	88	CMH35/T/UVC/U/830/G12 PLUS	G12	830	3400	15000	15000	12	90	0.5	14.5	43272
35	U	88	CMH35/T/UVC/U/842/G12	G12	842	3200	12000*	12000	12	90	0.5	14.5	92141
70	U	88	CMH70/T/UVC/U/830/G12	G12	830	6200	15000	15000	12	90	0.98	19	20005
70	U	88	CMH70/T/UVC/U/942/G12	G12	942	6300	15000	15000	12	90	0.98	19	20013
70	U	88	CMH70/T/UVC/U/930/G12 ULTRA	G12	930	6400	15000	15000	12	95	0.93	19	96752
150	U	98	CMH150/T/UVC/U/830/G12	G12	830	14000	12000	12000	12	93	1.85	19	20012
150	U	98	CMH150/T/UVC/U/942/G12	G12	942	13000	12000	12000	12	93	1.85	19	20014

Double Ended



35	HOR±45°	118	CMH35/TD/UVC/830/RX7s	RX7s	830	3400	N/A	10000*	12	90	0.53	21	43278
70	HOR±45°	118	CMH70/TD/UVC/830/RX7s	RX7s	830	6900	N/A	15000	12	90	0.98	21	36910
70	HOR±45°	118	CMH70/TD/UVC/942/RX7s	RX7s	942	6200	N/A	15000	12	90	0.98	21	38698
150	HOR±45°	135	CMH150/TD/UVC/830/RX7s-24	RX7s-24	830	14500	N/A	15000	12	96	1.8	27	36912
150	HOR±45°	135	CMH150/TD/UVC/942/RX7s-24	RX7s-24	942	12500	N/A	15000	12	96	1.8	27	38692

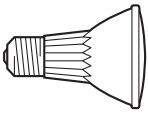
MR16 Precise



20	U	54.5	CMH20/MR16/UVC/830/GX10/SP	GX10	830	9000	12000	12000	12	95	0.210	51	40400
20	U	54.5	CMH20/MR16/UVC/830/GX10/FL	GX10	830	2900	12000	12000	12	95	0.210	51	40401
20	U	54.5	CMH20/MR16/UVC/830/GX10/WFL	GX10	830	1500	12000	12000	12	95	0.210	51	42691
35	U	54.5	CMH35/MR16/UVC/930/GX10/SP	GX10	930	16000	10000*	10000*	12	90	0.420	51	88658
35	U	54.5	CMH35/MR16/UVC/930/GX10/FL	GX10	930	5500	10000*	10000*	12	90	0.420	51	88659
35	U	54.5	CMH35/MR16/UVC/930/GX10/WFL	GX10	930	3000	10000*	10000*	12	90	0.420	51	88660
35	U	54.5	CMH35/MR16/UVC/942/GX10/SP	GX10	942	16000	12000*	12000*	12	90	0.420	51	88661
35	U	54.5	CMH35/MR16/UVC/942/GX10/FL	GX10	942	5500	12000*	12000*	12	90	0.420	51	88662
35	U	54.5	CMH35/MR16/UVC/942/GX10/WFL	GX10	942	3000	12000*	12000*	12	90	0.420	51	88663

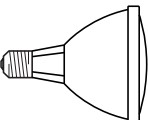
*Initial life claim at launch. Testing continues to final design.

PAR 20



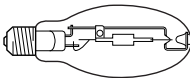
20	U	81.2	CMH20PAR20/UVC/830/E27/SP	E27	830	13000	12000*	12000*	15	90	0.225	63	26478
20	U	81.2	CMH20PAR20/UVC/830/E27/FL	E27	830	3750	12000*	12000*	15	90	0.225	63	26481
35	U	81.2	CMH35/PAR20/UVC/830/E27/SP	E27	830	22000	10000	10000	15	90	0.5	67	21684
35	U	81.2	CMH35/PAR20/UVC/830/E27/FL	E27	830	7500	10000	10000	15	90	0.5	67	21685
35	U	81.2	CMH35/PAR20/UVC/942/E27/SP10	E27	830	19450	10000	10000	15	90	0.5	67	44890
35	U	81.2	CMH35/PAR20/UVC/942/E27/FL25	E27	830	6950	10000	10000	15	90	0.5	67	44919

PAR 30



20	U	120	CMH20PAR30/UVC/830/E27/SP10	E27	830	19800	12000*	12000*	6	90	0.5	97	26497
20	U	120	CMH20PAR30/UVC/830/E27/FL25	E27	830	4900	12000*	12000*	6	90	0.5	97	26518
35	U	120	CMH35/PAR30/UVC/830/E27/SP	E27	830	39600	10000	10000	6	90	0.5	97	21689
35	U	120	CMH35/PAR30/UVC/830/E27/FL	E27	830	11000	10000	10000	6	90	0.5	97	21690
35	U	120	CMH35/PAR30/UVC/830/E27/SP	E27	942	36700	10000	10000	6	90	0.5	97	44939
35	U	120	CMH35/PAR30/UVC/830/E27/FL	E27	942	10200	10000	10000	6	90	0.5	97	44942
70	U	120	CMH70/PAR30/UVC/830/E27/SP	E27	830	43000	13000	13000	6	90	0.98	97	21683
70	U	120	CMH70/PAR30/UVC/830/E27/FL	E27	830	10000	13000	13000	6	90	0.98	97	21682

Elliptical Clear



70	U	138	CMH70/E/UVC/U/830/E27/C	E27	830	6300	15000	15000	6	90	0.98	54	46189
100	U	138	CMH100/E/UVC/U/830/E27/C	E27	830	9200	15000	15000	6	100	1.1	54	46191
150	U	138	CMH150/UVC/O/U/942/E27/C	E27	942	13200	15000	15000	6	111	1.8	55	43285

Elliptical Diffuse



70	U	138	CMH70/E/UVC/U/830/E27/D	E27	830	6000	15000	15000	6	90	0.98	54	46187
70	U	138	CMH70/UVC/O/U/940/E27/D	E27	940	5300	15000	15000	6	90	0.98	54	43282
100	U	138	CMH100/E/UVC/U/830/E27/D	E27	830	8700	10000	15000	6	100	1.1	54	46194
150	U	138	CMH150/UVC/O/U/940/E27/D	E27	940	12300	15000	15000	6	111	1.8	55	43286
250	U	251	CMH250/E/UVC/U/830/E40/D	E40	830	23500	20000	20000	12	125	2.7	90	10591
400	U	282	CMH400/E/UVC/U/830/E40	E40	830/836**	39000	20000	20000	6	110	4.2	120	13087

** 3000K in horizontal burning position, 3600K in vertical burning position

* Initial life claim at launch, testings are ongoing to final design life.



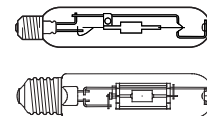
High intensity discharge lamps

Watts	Operating position	Length mm	Order Code	Cap	Colour	Initial lumens	Rated Average Life V	Rated Avr Life H	Pack Qty	Volts (nominal)	I (A)	Diameter max	Product Code
Tubular Clear													
70	U	156	CMH70/TT/UVC/830/E27	E27	830	6400	15000	15000	12	105	0.96	37	38752
100	U	209	CMH100/TT/UVC/830/E40	E40	830	9200	10000	15000	12	115	1.14	48	92478
150	U	209	CMH150/TT/UVC/830/E40	E40	830	14000	12000	12000	12	110	1.85	48	38749
150	U	209	CMH150/UVC/T/U/842/E40	E40	842	14500		15000*	12	115	1.8	48	21514
150	U	209	CMH150/UVC/O/T/U/830/E40	E40	830	14000	12000	12000	6	115	1.8	48	21516
150	U	209	CMH150/UVC/O/T/U/942/E40	E40	942	14000	12000	12000	6	110	1.8	48	21517
250	HOR	260	KRC250/CMH/830/T/H/E40	E40	830	20000		20000	12	120	2.3	48	20302
250	U	260	CMH250/TT/UVC/U/830/E40	E40	830	25000	20000	20000	12	125	2.7	48	10589
400	U	278	CMH400/TT/UVC/U/830/E40	E40	830/836**	39000	20000	20000	12	130	4.2	60	13067

* Initial life claim at launch. Testing continues to final design life.

** 3000K in horizontal burning position, 3600K in vertical burning position

ConstantColor™ CMH lamps operate on high pressure sodium ballast and metal halide ignitor, with the exception of KRC250/CMH/830/T/H/E40 type that operates on mercury or metal halide ballast and metal halide ignitor.

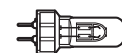


CMH Ballasts

Watts	Volts	Description	Mounting	Weight	Pack Qty	Product Code
20	120	BLS/E/20W/CMHSMP	Integral - Miniature	110	12	44879
20	220-240	BLS/E/20W/CMHSMP/R	Remote - Miniature	120	12	96804
20	220-240	BLS/E/20W/CMHSMP	Integral	110 g	12	42387
20	220-240	BLS/E/20W/CMH	Integral	190 g	12	13032
20	220-240	BLS/E/20W/CMH/R	Remote	230 g	12	13034
35	220-240	BLS/E/35W/CMH	Integral	215 g	12	13035
35	220-240	BLS/E/35W/CMH/R	Remote	230 g	12	13036
70	220-240	BLS/E/70W/CMH	Integral	300 g	12	13040
70	220-240	BLS/E/70W/CMH/R	Remote	310 g	12	13047
150	220-240	BLS/E/150W/CMH	Integral	430 g	12	13050
150	220-240	BLS/E/150W/CMH/R	Remote	445 g	12	13053

Arcstream™

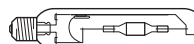
Watts	Operating position	Length mm	Order Code	Cap	CCT K	CRI Ra	Initial lumens	Rated Average Life H	Pack Qty	Volts	I (A)	Diameter	Product Code
Single Ended													
70	U	90	ARC70/T/U/730/G12	G12	3000	75	5200	6000	10	N/A	N/A	N/A	35794
70	U	90	ARC70/T/U/842/G12	G12	4200	72	5200	6000	10	N/A	N/A	N/A	35795
150	U	76	ARC150/830/G12	G12	3000	80	11500	6000	10	N/A	N/A	19	88654
150	U	76	ARC150/842/G12	G12	4200	80	12000	6000	10	N/A	N/A	19	88655
Double Ended - UV Control													
70	HOR±45°	117.6	ARC70/UVC/TD/730/Rx7s	Rx7s	3000	75	5500	6000	12	95	0.95	22	34530
70	HOR±45°	117.6	ARC70/UVC/TD/742/Rx7s	Rx7s	4200	75	5500	6000	12	95	0.95	22	34536
150	HOR±45°	135.4	ARC150/UVC/TD/732/Rx7s-24	Rx7s-24	3200	75	12000	6000	12	95	1.8	25	34527
150	HOR±45°	135.4	ARC150/UVC/TD/742/Rx7s-24	Rx7s-24	4200	75	12000	6000	12	95	1.8	25	34535
Double Ended													
150	HOR±45°	135.4	ARC150/TD/952/Rx7s-24	Rx7s-24	5200	90	11000	6000	12	110	1.8	22	93772
150	HOR±45°	135.4	ARC150/UVC/AQUA/TD/865/Rx7s-24	Rx7s-24	6500	85	11000	6000	12	95	1.8	25	35284
250	HOR±45°	163	ARC250/TD/832/Fc2	Fc2	3200	80	20000	6000	12	114	3	25	30099
250	HOR±45°	163	ARC250/TD/842/Fc2	Fc2	4200	80	20000	6000	12	115	3	25	30101



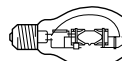
Watts	Operating position	Length mm	Order Code	Cap	CCT K	CRI Ra	Initial lumens	Rated Average Life H	Pack Qty	Volts	I (A)	Diameter	Product Code
Double Ended Coloured													
150	HOR±45°	132	ARC150/UVC/TD/GREEN/RX7S-24	RX7S-24	Green	N/A	N/A	6000	12	95	1.8	25	12181
150	HOR±45°	132	ARC150/UVC/TD/BLUE/RX7S-24	RX7S-24	Blue	N/A	N/A	6000	12	95	1.8	25	12182
150	HOR±45°	132	ARC150/UVC/TD/ORANGE/RX7S-24	RX7S-24	Orange	N/A	N/A	6000	12	95	1.8	25	12183
150	HOR±45°	132	ARC150/UVC/TD/MAGENTA/RX7S-24	RX7S-24	Magenta	N/A	N/A	6000	12	95	1.8	25	12184



Tubular Clear													
250	BU±45°	219	ARC250/T/VBU/960/E40	E40	6000	90	19000	10000	12	100	3	47	32665
250	HOR±45°	219	ARC250/T/H/960/E40	E40	6000	90	19000	10000	12	100	3	47	32664
400	HOR±15°	260	ARC400/T/H/742/E40	E40	4200	70	35000	10000	10	105	4.35	46	42369



Elliptical Clear													
250	NDL	227	ARC250/E/H/645/E40	E40	4500	65	22500	14000	10	100	2.9	91	16869



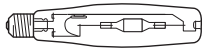
Elliptical Diffuse													
250	HOR±15°	227	ARC250/D/H/740/E40	E40	4000	70	19500	14000	10	100	2.9	91	16870
250	HOR±45°	227	ARC250/D/H/960/E40	E40	6000	90	17000	10000	12	100	3	90	30047
250	BU±45°	227	ARC250/D/VBU/960/E40	E40	6000	90	17000	10000	12	100	3	90	32666



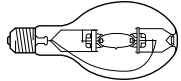
Operating from suitable metal halide / high pressure sodium (HPS) ballast and metal halide ignitor. Arcstream™ lamps are only suitable for operation in fully enclosed fixtures where lens/diffuser material must be able to contain fragments of hot quartz or glass (up to 1100 °C)

High intensity discharge lamps

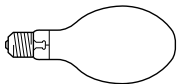
Kolorarc™



Watts	Operating position	Length mm	Order Code	Cap	CCT K	CRI Ra	Initial lumens	Rated Average Life H	Pack Qty	Volts	I (A)	Diameter	Product Code
400	HOR±45°	270	KRC400/T/H/960/E40	E40	6000	90	25000	10000	12	130	3.5	59	30052
400	BU±45°	270	KRC400/T/VBU/960/E40	E40	6000	90	28000	10000	12	130	3.5	59	30704



400	BU±30°	286	KRC400/E/VBU/645/E40	E40	4500	65	32000*	14000	10	135	3.5	122	16871
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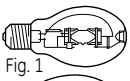


Elliptical Diffuse													
400	BU±30°	286	KRC400/D/VBU/740/E40	E40	4000	70	30500*	14000	10	135	3.5	122	16872
400	HOR±15°	286	KRC400/D/H/740/E40	E40	4000	70	34000	14000	10	135	3.5	122	16875
400	BU±45°	282	KRC400/D/VBU/960/E40	E40	6000	90	26000	10000	4	130	3.5	121	10837
400	HOR±45°	281	KRC400/D/H/960/E40	E40	6000	90	24000	10000	4	130	3.5	121	10834

Operating from suitable mercury or metal halide ballast rated 3.5A and metal halide ignitor. Low loss ballast recommended for 400W 6000K (960) products – see lamp data sheet for details.

* Enhanced lumen performance operating from special "High Output" ballast rated 3.8A – see lamp data sheet for details. Kolorarc™ lamps are only suitable for operation in fully enclosed fixtures where lens/diffuser material must be able to contain fragments of hot quartz or glass (up to 1100 °C)

Multi-Vapor™



Watts	Operating position	Length mm	Order Code	Cap	CCT K	CRI Ra	Initial lumens	Rated Average Life Hours	Rated Average V	Pack Qty	Volts	I (A)	Diameter Code	Product Fig No.
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Elliptical Clear														
250	U	216	MVR250/U/40	E40	4200	65	20800	10000	10000	12	135	2.1	89	44542 1
400*	U	295	MVR400/U/40	E40	4000	65	36000	20000	20000	6	135	3.2	117	43907 2
1000*	U	385	MVR1000/U/40	E40	4000	65	105000	12000	12000	6	V250 H245	4.3	178	41828 3

Elliptical Diffuse														
250	U	216	MVR250/C/U/40	E40	3900	70	19800	10000	10000	12	133	2.1	89	44543 4
400*	U	295	MVR400/C/U/40	E40	3700	70	35000	20000	20000	6	135	3.2	117	43908 5
1000*	U	385	MVR1000/C/U/40	E40	3400	70	99800	12000	12000	6	V250 H245	4.3	178	41829 6

Operating from CWA control gear

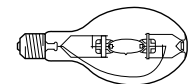
Initial lumen values and Rated Average Life based on vertical orientation for Universal types. Multi-Vapor™ lamps must operated in fully enclosed fixtures except those marked *when used VBU or VBD +/-15°.

For lamps requiring enclosed fixtures, lens/diffuser material must be able to contain fragments of hot quartz or glass (up to 1100 °C)

Lamps operated in the vertical position that are not designated "Enclosed Fixtures only" lamp may be used in an open or enclosed lighting fixture depending upon the application and operating environment.

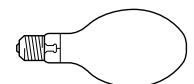
For example, if the lamp is located near combustible material or in an area which is unoccupied for extended periods, an enclosed fixture which can contain fragments of hot quartz or glass is recommended. For more information contact your fixture manufacturer.

Multi-Vapor™ High Output



Watts	Operating position	Length mm	Order Code	Cap	CCT K	CRI Ra	Initial lumens	Rated Average Life H	Pack Qty	Volts	I (A)	Diameter	Product Code
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Elliptical Clear													
400	VBU±15°	295	MVR400/VBU/40	E40	4000	65	40000	20000	6	135	3.2	117	49860
400*	VBU±15°	292	MPR400/VBU/0/40	E40	3400	65	38000	20000	6	-	-	-	18709



Elliptical Diffuse													
400		295	MVR400/C/VBU/40	E40		70	37600	20000	6	-	-	-	49857
400*	VBU±15°	292	MPR400/C/VBU/0/40	E40	3000	70	37600	20000	6	-	-	-	27738

Operating from CWA control gear

Initial lumen values and Rated Average Life based on vertical orientation for Universal types. Multi-Vapor™ lamps must operated in fully enclosed fixtures except those marked *when used VBU or VBD +/-15°.

For lamps requiring enclosed fixtures, lens/diffuser material must be able to contain fragments of hot quartz or glass (up to 1100 °C)

Lamps operated in the vertical position that are not designated "Enclosed Fixtures only" lamp may be used in an open or enclosed lighting fixture depending upon the application and operating environment.

For example, if the lamp is located near combustible material or in an area which is unoccupied for extended periods, an enclosed fixture which can contain fragments of hot quartz or glass is recommended.

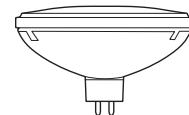
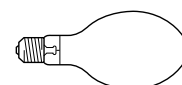
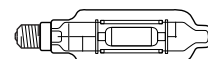
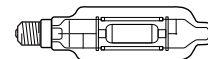
For more information contact your fixture manufacturer.



Sportlight™

Watts	Operating position	Length mm	Order Code	Cap	CCT K	CRI Ra	Initial lumens	Rated Average Life H	Pack Qty	Volts	I (A)	Diameter	Product Code
Linear													
1500	HOR±15°	256	SPL1500/L/H/652/Rx7SM	Rx7SM	5200	65	120000	6000	1	270	6.8	24.3	16920
2000	HOR±15°	311	SPL2000/L/H/654/spec	spec.	5200	65	200000	6000	1	250	10.3	26	16922
Tubular Clear													
1000	HOR±60°	340	SPL1000/T/H/960/E40	E40	6000	90	80000	8000	4	130	9.5	81	20106
2000	HOR±60°	430	SPL2000/T/H/960/E40	E40	6000	93	170000	5000	4	250	10.3	101.5	30102
2000	HOR±75°	430	SPL2000/220/T/H/640/E40	E40	4000	65	180000	2000	-	135	16.5	101.5	178554
Tubular Clear Coloured													
2000	HOR±75°	430	HgMI 2000W/220V Ga	E40	Blue	N/A	N/A	2000	-	135	16.5	101.5	178554
Internal Ignitor													
2000	HOR±75°	430	SPL2000/I/T/H/640/E40	E40	4000	65	190000	2000	4	250	8.8	101.5	33148
2000	HOR±60°	430	SPL2000/I/T/H/960/E40	E40	6000	93	170000	5000	4	250	10.3	101.5	30103
strictly for use without starting device													
Elliptical Diffuse													
2000		430	MBI2000/T	E40	-	90	210000	3000	4	-	-	-	32104
PAR 64													
1000	HOR±90°	175	CSI/PAR64/G38	G38	4000	80	76000	3500	1	77.5	14.7	205	29333
1000	HOR±90°	175	CSI/PAR64/HR/G38	G38	4000	80	76000	3500	1	77.5	14.7	205	29336

Please refer to technical catalogue/data sheet for appropriate ballast and ignitors. Sportlight™ lamps are only suitable in fully enclosed fixtures, where fixture lens/diffuser material must be able to contain fragments of hot quartz or glass (up to 1100 °C)



High intensity discharge lamps

Lucalox™ Standard

The highly efficient, long life lamp

- Ideal for streetlighting, commercial and industrial use
- Wide range of wattages and sizes
- Up to 28,500 hours life
- Highly efficient, producing 130 lumens per watt

Lucalox™ XO, PSL

The extra high output and long life lamp

- Extra light – up to 20% more lumens
- Long life of up to 32,000 hours
- Highly efficient, producing 150 lumens per watt
- PSL is ideal for Horticulture Lighting

Lucalox™ Internal Ignitor

The efficient compact solution with built in ignitor

- Simple – luminaires only need regular HPS ballast, simpler luminaire designs can be used
- Efficiency and long life from a simple and versatile retrofit lamp
- Compact – enables use of small fixture lighting systems

Lucalox™ TD (Double-ended)

Lucalox™ efficiency in an ultra compact size

- Compact size – small size fits ultra compact fixtures
- Excellent optical control – delivers a concentrated beam of light exactly where needed
- High efficiency - up to 137 lumens per watt
- Long life - 20,000 hours

Lucalox™ E-Z Lux™

Converts mercury sockets to highly efficient high pressure sodium lighting

- Direct replacement for mercury lamps – operates on mercury ballasts
- More efficient, higher lumens than mercury
- 14% energy cost savings
- 40%+ more light

Lucalox™ Superlife

Extra arc tube provides light instantly after power interruption

- “Superlife” arc tube provides light instantly after momentary power interruption, and will increase to full output in 1–2 minutes
- Longest life – dual arc tubes provide up to 55,000 hour rated life



High Pressure Sodium identification

The following glossary of terms and descriptions can help you when checking high pressure sodium lamp specifications and explains how to use the order codes when ordering products. Within each product line, lamps are divided into families – within families, lamps are listed by wattage.

Watts: Energy used. To find actual energy used (kWh) multiply power (watts shown) x hours of use divided by 1000

Length: Lamp length in mm

Cap: The type of cap fitted

CRI Ra: Colour rendering index, the higher the number (1-100) the more natural the lit subject appears

Product Code: It is important to use this code when ordering to ensure that you receive the exact product you require

Initial Lumens: Light output at 100 hours

Product Description/Order code: The lamp's identification code

Lucalox™

Watt	Operating position	Length mm	Order Code	Cap	CRI Ra	Initial lumens	Rated Average Life Hours	Pack Qty	Product Code
Lucalox™ T – Tubular Clear. 2000K – E									
50	U	156	LU50/85/T/27	E27	25	3400	28500	25	22445
70	U	156	LU70/90/T12/27	E27	25	6000	28500	25	22452

Lamp: Lamp type and product features

Operating position: Orientation of lamp

Product Family: LU – Lucalox™

Wattage

Feature: Identifies product feature or operating voltage

Bulb Format: TD: Double Ended
E: Elliptical
D: Elliptical Diffuse
T: Single Ended Tubular
RFL: Reflector

Cap Description: E27 E40 RX7s-24

Rated Average Life: The point in time when 50% of installed lamps are still burning

Pack Quantity: The number of lamps in one box



Donghai Bridge in Shanghai installed with Standby 250W HPS lamps

High intensity discharge lamps

Lucalox™ XO Photosynthesis Light Lamp (PSL)

Low operating costs, long useful life, energy-efficient performance



Lucalox™ T



Lucalox™ E

- High efficiency – up to 150 lumens per watt – converting more energy into light, cutting energy and operating costs
- Outstanding life – up to 55,000 hours substantially reducing lamp maintenance and replacement costs
- Lamps that start bright and stay that way, offering high maintained lumens over life

Lighting for Horticulture

Specially developed for greenhouses, the Lucalox™ PSL offers the twin benefits of stable lumen maintenance and a full spectrum content that promotes photosynthesis.

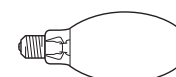


Lucalox™

Watt	Operating position	Length mm	Order Code	Cap	CRI Ra*	Initial lumens	Rated Average Life H	Pack Qty	Volts	I (A)	Diameter	Product Code
Lucalox™ T – Tubular Clear. 2000K												
50	U	156	LU50/85/MO/T/E27 1/25	E27	25	3400	28500	25	85	0.76	38.5	88553
70	U	156	LU 70/90/MO/T/E27 1/25	E27	25	6000	28500	25	90	0.98	38.5	46221
100	U	211	LU100/100/MO/T/40	E40	25	9600	28500	12	100	1.2	48	93767
150	U	211	LU150/100/40	E40	25	15000	28500	12	100	1.8	48	44244
250	U	260	LU250/T/40	E40	25	27500	28500	12	100	3	48	22453
400	U	283	LU400/T/40	E40	25	48000	28500	12	100	4.6	48	11678
1000	U	372	LU1000/110/T/40 4pk	E40	25	130000	24000	4	110	10.6	67	45751



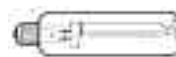
Watt	Operating position	Length mm	Order Code	Cap	CRI Ra*	Initial lumens	Rated Average Life H	Pack Qty	Volts	I (A)	Diameter	Product Code
Lucalox™ E – Elliptical Diffuse. 2000K												
50	U	156	LU50/85/MO/D/E27 1/25	E27	25	3300	28500	12	85	0.76	72	88554
70	U	156	LU 70/90/MO/D/E27 1/12	E27	25	5800	28500	12	90	0.98	72	46217
100	U	211	LU100/100/MO/D/40	E40	25	9200	28500	12	100	1.2	76	93766
150	U	227	LU150/100/D/40	E40	25	14500	28500	12	100	1.8	91	44245
250	U	227	LU250/D/40	E40	25	26000	28500	12	100	3	91	44052
400	U	282	LU400/D/40	E40	25	48000	28500	6	100	4.45	122	44057
1000	U	372	LU1000/110/D/40	E40	25	120000	24000	1	110	10.3	161	30228



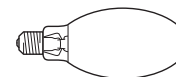
I – Internal Starter; E – External Starter
*Nominal, reference only

Watt	Operating position	Length mm	Order Code	Cap	CCT K	CRI Ra*	PAR mmol/sec	Initial lumens	Rated Average Life H	Pack Qty	Volts	I (A)	Diameter	Product Code
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Lucalox™ XO – (Xtra Output) Tubular Clear														
50	U	156	LU50/85/XO/T/27	E27	2100	25	-	4400	28500	25	85	0.76	38.5	93373
70	U	156	LU70/90/XO/T/27	E27	2100	25	-	6600	28500	25	90	0.98	38.5	93375
100	U	211	LU100/100/XO/T/40	E40	2100	25	-	10700	28500	12	100	1.2	48	93376
150	U	211	LU150/150/XO/T/40	E40	2100	25	-	17500	32000	12	100	1.8	48	93377
250	U	260	LU250/XO/T/40	E40	2100	25	-	33000	32000	12	100	2.95	48	93378
400	U	283	LU400/XO/T/40	E40	2100	25	-	56500	32000	12	100	4.5	48	93269
600	U	283	LU600/XO/T/40	E40	2100	25	-	90000	32000	12	115	6	48	93270



Lucalox™ XO – (Xtra Output) Elliptical Diffuse														
50	U	156	LU50/85/XO/D/27	E27	2100	25	-	3600	28500	12	85	0.76	72	45696
70	U	156	LU70/90/XO/D/27	E27	2100	25	-	6000	28500	12	90	0.98	72	45697
100	U	186	LU100/100/XO/D/40	E40	2100	25	-	10000	28500	12	100	1.2	76	93379
150	U	227	LU150/100/XO/D/40	E40	2100	25	-	16900	32000	12	100	1.8	91	93380
250	U	227	LU250/XO/D/40	E40	2100	25	-	31200	32000	12	100	2.95	91	93381
400	U	282	LU400/XO/D/40	E40	2100	20	-	54000	32000	12	105	4.4	122	93296



Lighting For Horticulture

Lucalox™ PSL – (PhotoSynthesis Light) Tubular Clear														
400	U	283	LU400 PSL/T/E40	E40/45	2100	22	725	56500	10000	12	110	4.3	48	17106
600	U	283	LU600 PSL/T/E40	E40/45	2100	22	1100	90000	10000	12	115	6	48	17107
750	U	293	LU750 PSL/T/E40	E40/45	2100	25	1350	112000	10000	12	115	7	51	17108
600	U	283	LU400V/600W/PSL/T/E40	E40/45	2100	22	1150	85000	10000	12	200	3.6	48	23440
750	U	293	LU400V/750W/PSL/T/E40	E40/45	2100	25	1415	104000	10000	12	205	4.4	51	23433

New Improved 400V lamps available with Bulk pack option.

LU400V/750W/PSL/T/2/E40 Bulk 1/45	43437
LU400V/750W/PSL/T/2/E40 1/12	43438
LU400V/600W/PSL/T/2/E40 Bulk 1/45	43439
LU400V/600W/PSL/T/2/E40 1/12	43440

Internal Starter; E – External Starter
High pressure sodium lamps operating from HPS ballast and HPS ignitor
*Nominal, reference only

⚡ *External ignitor

⚡ Internal ignitor

GE Lucalox™ XO Lamp

The new Zirconium in the lamp ensures a higher quality of vacuum in the outer bulb than with other getter systems.

The new GE Reliable Starting Technology, GRS, improves the starting characteristics by permanently bonding an electrically conductive ceramic to the arc tube surface.

Higher transparency ceramic for improved light output!

Monolithic construction: a totally new arc tube concept for higher reliability. The body and the end plug is now a single unit. GE "XO" lamps always retain the sodium amalgam at the monolithic end. This feature reduces the undesirable chemical reactions and end blackening.

High intensity discharge lamps

Lucalox™ continued

Watt	Operating position	Length mm	Order Code	Cap	CRI Ra	Initial lumens	Rated Average Life H	Pack Qty	Volts	I (A)	Diameter	Product Code
Lucalox™ TD - Double Ended												
250	HOR±20°	191	LU250/TD	Rx7s-24	25	23000	20000	10	100	2.95	22.4	30241
400	HOR±20°	256	LU400/TD	Rx7s-24	25	43000	20000	10	100	4.4	22.4	30244
1000	HOR±20°	334	LU1000/TD	Rx7s-24	25	137000	20000	10	250	4.7	22.4	30246
Lucalox™ E-Z Lux™ - Direct replacement for mercury lamps - Operates from mercury ballasts												
Elliptical Diffuse												
110	U	175	LUH110/D/27-SHx	E27	25	8800	16000	40	-	-	75	39512
Lucalox™ I - Elliptical Clear												
70	U	156	LU 70/90/MO/I/E27 1/12	E27	25	6000	12000	12	90	0.98	72	46209
Lucalox™ I - Elliptical Diffuse												
50	U	156	LU50/85/MO/D/I/E27 1/12	E27	25	3300	12000	12	85	0.76	72	88556
70	U	156	LU70/90/MO/D/I/E27 1/12	E27	25	5800	12000	12	90	0.98	72	46186
Lucalox™ Superlife/Standby - Tubular Clear												
50	U	156	LU50/85/MO/SBY/T/E27 1/25	E27	25	3400	40000	25	85	0.76	38.5	88558
70	U	156	LU70/90/MO/SBY/T/E27 GE 1/25	E27	25	6000	40000	25	90	0.98	38.5	88268
70	U	156	LU 70/XO/SBY/T/E27	E27	25	6600	40000	25	90	0.98	71	88258
100	U	211	LU 100/XO/SBY/T/E40	E40	25	10500	55000	12	100	1.2	75	88256
100	U	211	LU100/100/MO/SBY/T/40	E40	25	9600	50000	12	100	1.2	48	17899
150	U	211	LU150/100/SBY/T/40	E40	25	15000	50000	12	100	1.8	48	35594
250	U	260	LU250/SBY/T/40	E40	25	27500	55000	12	100	3	48	35586
400	U	283	LU400/SBY/T/40	E40	25	50000	55000	12	100	4.6	48	35582
Lucalox™ Superlife/Standby - Elliptical Diffuse												
50	U	156	LU50/85/MO/SBY/D/E27 1/25	E27	25	3300	40000	12	85	0.76	72	88557
70	U	156	LU70/90/MO/SBY/D/E27 GE 1/12	E27	25	5800	40000	12	90	0.98	72	88269
70	U	156	LU 70/XO/SBY/D/E27	E27	25	6000	40000	25	90	0.98	71	88257
100	U	186	LU 100/XO/SBY/D/E40	E40	25	10000	55000	12	100	1.2	75	88255
100	U	211	LU100/100/MO/SBY/D/E40 GE 1/12	E40	25	10000	55000	12	115	1.2	75	88255
150	U	227	LU150/100/SBY/D/40	E40	25	14500	50000	12	100	1.8	91	35589
250	U	227	LU250/SBY/D/40	E40	25	26000	55000	12	100	3	91	35590
400	U	282	LU400/SBY/D/40	E40	25	47500	55000	6	105	4.45	122	35591

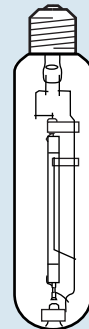
I - Internal Starter, E - External Starter

External Ignitor required

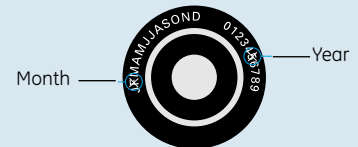
Internal Ignitor

GE Lucalox™ Lamp

- **Nickel Alloy Cap**
Corrosion free, good electrical contact throughout life and moisture damage is eliminated
- **High maintained light output**
- **Shorter re-strike time**
Than either metal halide or mercury lamps
- **Starts and operates at temperatures as low as -40°C**
- **Provides a warm golden light**
- **Average rated life of up to 28,500Hrs**
Increased to 55,000 for Superlife versions. Offering lower replacement costs



- **Lamp Cap Identification**
Helps measure the lamp's performance over time



- **Clean Arc Tube**
- **Highest efficiency/lowest operating costs among the High Intensity Discharge (HID) product range with acceptable colour rendering**



Mercury

High quality colour from a versatile range of lamps

- Ideal for commercial, industrial and outdoor applications with a wide choice of lamp types and ratings
- Good colour rendering
- Modest installation and running costs



Kolorlux™

Mercury lamp types:

Kolorlux Standard – Traffic and industrial lamps.

Blended Light – An alternative to incandescent requiring no control gear and giving warm white light with good energy efficiency.

Mercury identification

The following glossary of terms and descriptions can help you when checking mercury lamp specifications and explains how to use the order codes when ordering products. Within each product line, lamps are divided into families – within families, lamps are listed by wattage.

Watts:
Energy used. To find actual energy used (kWh) multiply power (watts shown) x hours of use divided by 1000

Length:
Lamp length in mm

Product Description/Order code:
The lamp's identification code

CRI Ra:
Colour rendering index, the higher the number (1–100) the more natural the lit subject appears

Cap:
The type of cap fitted

Initial Lumens:
Light output at 100 hours

Product Code:
It is important to use this code when ordering to ensure that you receive the exact product you require

Mercury – Operating on mercury ballast

Watt	Operating position	Length mm	Order Code	Cap	CRI Ra	Initial lumens	Rated Average Life H	Pack Qty	Volts	I (A)	Diameter	Product Code
Kolorlux Standard (MBF)												
80	U	166	H80/27 START 1/24	E27	40	3600	12000	24	130	0.80	71	44182
125	U	178	H125/E27/GE/START	E27	40	5800	12000	24	140	1.15	76	44180
250	U	228	H250/E40/GE/START 1/12	E40	40	12000	12000	12	145	2.15	91	42713

Lamp: Lamp type and product features

Operating position: Orientation of lamp

Lamp Type: H: Mercury lamp

Wattage: 125

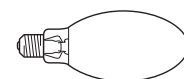
Cap Description: E27 E40 BV22d B22d-3

Pack Quantity: The number of lamps in one box

Rated Average Life: The point in time when 50% of installed lamps are still burning

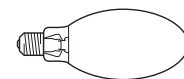
Mercury – Operating on mercury ballast

Watt	Operating position	Length mm	Order Code	Cap	CRI Ra	Initial lumens	Rated Average Life H	Pack Qty	Volts	I (A)	Diameter	Product Code
Kolorlux Standard (MBF)												
80	U	166	H80/27 START	E27	40	3600	12000	24	130	0.80	71	44182
125	U	178	H125/E27/GE/START	E27	40	5800	12000	24	140	1.15	76	44180
125	U	170	H125/27 1/24 MIC	E27	40	6300	20000	24	140	1.15	76	73736
250	U	228	H250/E40/GE/START	E40	40	12000	12000	12	145	2.15	91	42713
250	U	227	H250/40 1/12	E40	40	13000	20000	12	145	2.15	91	73737
400	U	292	H400/40 START	E40	40	20000	12000	12	150	3.25	122	44185
400	U	292	H400/40 START1	E40	40	20000	12000	12	150	3.25	122	45170



Blended Light (MBTF)

160	VER±30°	170	ML 160/ 230–240V, E27	E27	52	3100	8000	40	230–240	0.73	76	85954
160	VER±30°	170	ML 160/ 230–240V, B22	B22	52	3100	8000	40	230–240	0.7	76	85954
160	VER±30°	170	ML 160/ 240–250V, E27	E27	52	3100	8000	40	230–240	0.7	76	85965
250	VER±30°	227	ML 250/ 230–240V, E40	E40	52	5600	8000	12	230–240	1.17	90	85948
250	VER±30°	227	ML 250/ 230–240V, E27	E27	52	5600	8000	12	230–240	1.17	90	85955
250	U*	227	ML 250/ 240–250V, E40	E40	52	5600	8000	12	230–240	1.08	90	85962
500	U*	292	ML 500/ 230–240V, E40	E40	52	14000	8000	10	230–240	2.35	120	85904



*Operating position universal but optimum orientation VER ± 45°.

High intensity discharge lamps

Discharge lamps

Run-up and re-strike time

When a discharge lamp is switched-on, current flows through gas in the arc tube and the power dissipated generates heat vaporising the mercury, sodium or halide filling until stable electrical operating conditions are achieved. This is known as the run-up or warm-up period. The run-up period can be several minutes until the lamp stabilises and achieves published lumen output and colour performance. Run-up value shown in the table is the time taken for the lamp to reach 90% of final light output.

Re-strike time is based on lamps that have fully run-up and then a momentary break in the supply voltage occurs causing extinction.

Actual run-up time and re-strike time will vary according to application, type of fitting used, factors affecting warm-up/cooling rate of the lamp and the ambient temperature.

Most discharge lamps other than high pressure mercury and Multi-Vapor™ are started by a high voltage pulse generated by a separate ignitor, which automatically switches-off after the lamp has started. Use of an external electronic starting device simplifies lamp construction and provides reliable starting performance.

Lamp	Rating (watts)	Run-up time (minutes)	Re-strike time (minutes)	Lamp	Rating (watts)	Run-up time (minutes)	Re-strike time (minutes)	
Arcstream™ Single Ended	70	1.5	3-5	Lucalox™	50	4	less than 1	
	150	1	3-5		70	4	less than 1	
Double Ended	70	3	5-10		100	4	less than 1	
	150	3	5-10		150	4	less than 1	
Elliptical	250	4	5-10		250	5	less than 1	
	100	3	5-10		400	3	less than 1	
Tubular	250	4	5-10	1000	6	less than 1		
	400	2.5	5-10	Kolorlux	50	6	4-7	
Kolorarc™ Elliptical	400	3-4	5-10		80	5	4-7	
	400	4	5-10		125	5	4-7	
Multi-Vapor™	175	3	10-15		250	5	4-7	
	250	3	10-15		400	5	4-7	
	400	3	10-15		700	5	4-7	
	1000	3	10-15	1000	5	4-7		
Sportlight™ Elliptical	1000	2-4	5-15					
	750	2	15-20					
	1000	2	15-20					
	1500	2	15-20					
	2000	2	15-20					
	Tubular	1000	4	5-15				
		2000	4	5-15				Note 2
PAR	1000	1	10				Notes 1 & 2	

Notes:
1 In Floodlight
2 Hot Re-strike version also available



General information

Life of HID lamps

All life ratings for GE high intensity discharge lamps are expressed in terms of 'Rated Average Life', quoted in hours, where average is the 'median' value. This means the number of burning hours until 50% of lamps in an installation (of at least 30 lamps) are expected to have failed or not be operating to the published performance specification. Life ratings are based on lamps operating from suitable control gear for at least ten hours per switching. Lamps operating less than ten hours per start will have a reduced Rated Average Life (typically 25% reduction for each burning cycle reduction of 50%).

Ambient operating temperature

GE Lighting discharge lamps will start reliably at an ambient temperature down to -40°C for Lucalox™ high pressure sodium, -30°C for metal halide and -20°C for high pressure mercury.

Supply Voltage

Discharge lamps in this catalogue are suitable for supplies in the range 220V to 250V 50/60Hz (or 380V to 440V for some Sportlight™ products) when using suitably rated electromagnetic or electronic control gear. Supplies outside this range require a transformer (conventional, high reactance or CWA) or an electronic ballast to ensure correct lamp operation.

Lamps start and operate at 10% below rated supply voltage when the correct control gear is used. However, in order to maximise lamp survival, lumen maintenance and colour uniformity the actual supply voltage and ballast design voltage should be within $\pm 3\%$. Supply variations up to $\pm 5\%$ are acceptable for short periods only; otherwise lamp life and/or performance will be adversely affected.

Measuring mean supply voltage at the installation and selecting the appropriate ballast setting/tapping is the recommended method of matching multi-voltage rated ballasts to actual supply voltage.

Regular switching of lamps

Continuous operation of mercury and metal halide lamps can increase the slight risk that lamps may shatter, particularly if run beyond rated-life. It is recommended, particularly towards rated end-of-life, that lamps are switched-off for 15 minutes at least once in every 24 hour period to minimise the risk of such failure.

Most metal halide lamps must be fully enclosed within a luminaire to ensure retention of any fragments in the event of a shattering failure mode - see lamp data sheets for details.

Circuit Fusing

Recommended HBC fuse and MCB ratings for discharge lamps are given in lamp technical data sheets and publication 'Fuse Ratings for Discharge Lamps', available from GE Lighting.

Further information

Technical data sheets provide more detailed technical information for the products listed. Contact GE Lighting Customer Service or local sales office to obtain copies.