

**Data Sheet**  
**Discharge Lamps**

**MBF**  
**High Pressure Mercury**  
**Fluorescent lamp**  
**KOLORLUX**  
**50W, 80W, 125W, 250W,**  
**400W, 700W, 1000W**

**Description**

KOLORLUX lamps consist of a high pressure mercury discharge operating in a quartz arc tube which is mounted in an elliptical outer glass bulb. This bulb is coated internally with a fluorescent phosphor which improves the colour.

**Features**

KOLORLUX lamps are of well established design and offer the typical benefits to be expected from high intensity discharge lamps – high output, long life, and therefore low operating costs.

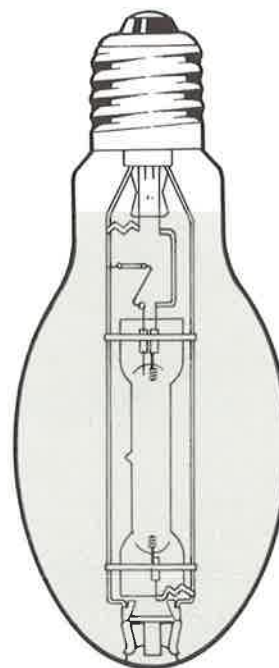
KOLORLUX lamps produce white light with reasonable colour rendering properties.

The lamps operate on a basic ballast circuit which means that the KOLORLUX package is not only simple but has low initial capital costs.

**Application**

Roadlighting, floodlighting, security and amenity lighting, industrial lighting.

The Super Deluxe version is recommended for commercial applications.



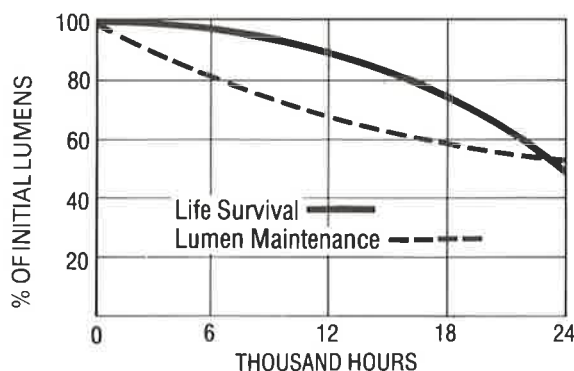
**Physical Data**

Dimensions	50W	80W	125W	250W	400W	700W	1000W
Overall length mm (max)	129	154	175	227	286	328	410
Bulb diam mm (max)	56	71	76	91	122	143	167
Cap	E27/27	E27/27	E27/27	E40/45	E40/45	E40/45	E40/45
Bulb glass	Soft	Soft	Soft	Hard	Hard	Hard	Hard
Weight of mercury per lamp mg (max)	12	14	19	38	60	107	97
Operating position – Universal							

**Lamp Survival and Lumen Maintenance**

The graph shows the survival of representative groups of lamps operated under controlled conditions at 10 hrs/start. Lamp life in service will be affected by a number of parameters such as mains voltage deviations, switching cycle, luminaire design and control gear. The information given is intended to be a practical guide in determining lamp replacement schedules.

**LIFE SURVIVAL AND LUMEN MAINTENANCE**



## Starting and Operating

Although these lamps start immediately they require a few minutes to warm up and achieve full output. If a lamp is switched off it requires a few minutes to cool before it will restart. The graph shows typical run up characteristics for a 400W lamp to 90% light output. Time will be affected by rating however, as shown in table below.

	50W	80W	125W	250W	400W	700W	1000W
Run up time (mins)	5	3	3	4	3	3	2

The starting voltage of mercury lamps is dependant on ambient temperature as shown on the graph.

	50W	80W	125W	250W	400W	700W	1000W
Lumens 100 hrs	2000	3850	6300	13500	23000	42000	62000
Lumens 2000 hrs	1900	3650	5800	12500	21500	38000	58000
Average Luminance cd/cm <sup>2</sup>	5	5	9	10	12	13	13

### Colour Appearance

Chromaticity Co-ordinates  
x 0.390  
y 0.385

Correlated colour temperature (K) 3800

Colour rendering

General Colour Rendering index (Ra) 45

### Spectral Distribution

See histogram

## Electrical Data

	50W	80W	125W	250W	500W	700W	1000W
Lamp Volts	95	115	125	130	135	140	145
Lamp current (amps)	0.60	0.80	1.15	2.15	3.25	5.4	7.5

## Supply Voltage

All lamps are suitable for 220V and 240V supplies with suitable control gear. Lamps will start and operate with a 10% reduction in rated supply voltage provided the correct control gear is used.

## Operating Circuits

See diagrams

## Fusing

For a very short period after switch-on, a discharge lamp may act as rectifier and as a result the ballast may allow several times the normal circuit current to flow. To avoid fuse failures the ratings shown below should be used. For further information refer to Data Sheet 4:90.2. To prevent rectification occurring at end of life continuous operation of discharge lamps should be avoided and a switch off introduced at least once every 24 hours.

## Recommended ratings for individual fusing of circuits

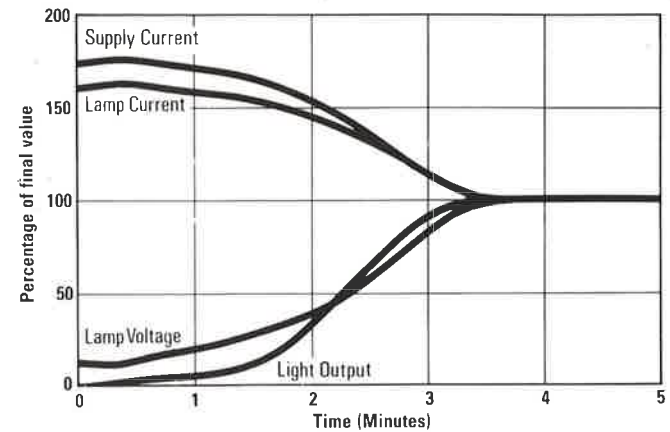
Lamp power (Watts)	50	80	125	250	400	700	1000
HBC and MCB fuse rating (Amps)	4	4	4	10	16	16	20
Rewireable fuse rating (amps)	5	5	5	5	10	10	15

## Guidance for Luminaire Manufacture

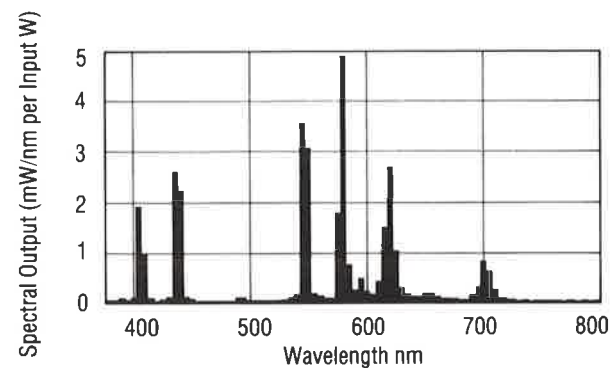
### Temperature Limits

	50W-125W	250W-1000W
Maximum permissible bulb Temperature	375°C	450°C
Maximum permissible cap temperature	210°C	250°C

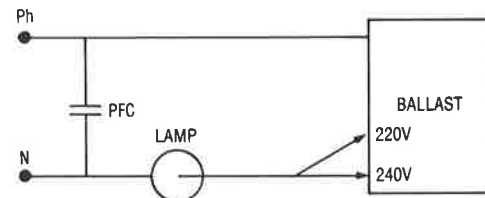
## LAMP RUN-UP CHARACTERISTICS FOR 400W MBF LAMP



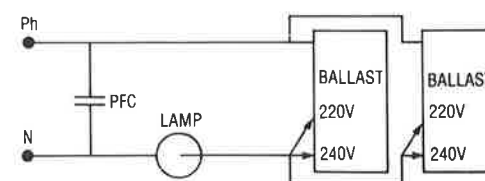
## SPECTRAL DISTRIBUTION



## OPERATING CIRCUIT FOR ALL RATINGS EXCEPT 700W



## OPERATING CIRCUIT FOR 700W RATING



## Packing

	50W	80W	125W	250W	400W	700W	1000W
Individual Carton	55x55	70x70	74x74	113x113	198x198	190x190	210x210
Dimensions mm	x145	x165	x177	x267	x330	x388	x460
Individual Weight kg	.053	.063	.083	.160	.230	0.625	0.830
Bulk Pack Dimensions mm	340x340	445x445	465x465	580x240	655x275	Individual packs only	490x490
No. in Outer Pack	50	36	36	10	10	1	4
Weight kg	3.90	3.24	4.12	3.10	4.22	0.625	4.5

## Operation and Maintenance

Guide for the Safe Installation, Operation and Disposal of High Pressure Mercury lamps.

### Before Use

Always isolate the equipment from the electricity supply before inserting or replacing a lamp.

Check that the replacement lamp is the correct type for the application. This includes checking that the lamp voltage (if applicable), wattage and cap are suitable for use in the circuit and with the control gear.

Ensure that the lamp is correctly located in the lampholder and the glass bulb is not scratched during insertion.

### During Use

For all lamps (unless indicated to the contrary) prevent rain, snow, condensation droplets or water splashing on the lamp as these may cause the bulb to shatter.

If the outer bulb is broken the lamp must not be operated.

Where mercury discharge lamps are used for prolonged periods in close proximity to eyes and skin there may be a slight possibility of a low level UV radiation hazard. Suitable protection should be employed.

### Disposal

These lamps should be broken in a container. Precautions must be taken against flying glass or other fragments. The operation should be carried out outdoors (or in a well ventilated area). With high pressure mercury lamps it is not necessary to break up the inner arc tube. The debris of large quantities of lamps must be disposed of in accordance with the rules of the Local Authority.

**Thorn Lighting reserve the right to alter the specification without prior notice or public announcement.**

**Made in the UK. Some components may originate from other countries.**

