

B



22000



3800K



20 000h

General Data

Article No.	32209001
Code	HRL 400W/230/E40
Product EAN	4008597090011
Box quantity (pcs.)	6
EAN Box	4008597590016
Gross weight of box in kg	2.397
Length of box in m	0.38
Width of box in m	0.26
Height of box in m	0.34
Product weight	248 g
Product status	● Inactive

Electric Parameters

Wattage	386.4 W
Lamp nominal wattage	400 W
Mains voltage	230 V
Nominal current (A)	3.25 A
Nominal choke current	3.25 A

High pressure mercury lamp

HRL 400W/230/E40 EX

Radium

Electric Parameters

Compensation capacitor for 50Hz operation	25 µF
Running up current max.	140%
Fuse	Delay-action; min. double nominal current
dimmable	No
Controllable (in suitable circuit)	up to 50% (run-up at nominal power)

Light Application Parameters

Luminous flux	22000 lm
Rated lamp luminous flux	22000 lm
Efficacy	56.94 lm/W
Total mains efficacy	57 lm/W
Colour temperature	3900 K
Color rendering index	39
Lumen maintenance at 2000h	0.93
Lumen maintenance at 4000h	0.90
Lumen maintenance at 6000h	0.88
Lumen maintenance at 8000h	0.85
Lumen maintenance at 12000h	0.79
Lumen maintenance at 16000h	0.75
Lumen maintenance at 20000h	0.70

Service Life

Average life	20000 h
Mean service life	20000 h
Lamp survival factor at 2000h	0.99
Lamp survival factor at 4000h	0.97
Lamp survival factor at 6000h	0.95
Lamp survival factor at 8000h	0.90
Lamp survival factor at 12000h	0.75
Lamp survival factor at 16000h	0.68
Lamp survival factor at 20000h	0.60

Specification

Energylabel (E -> A++)	B
Diameter	122 mm
Length	285 mm

High pressure mercury lamp

HRL 400W/230/E40 EX

Radium

Specification

Total length max.	285 mm
Burning position	hs30
Mercury content	63.2 mg
Lamp shape	Ellipsoid
Base	E40

Notes on Operation

Burning position	hs30
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Miscellaneous

EU-date of phase-out	13.04.2015
EU Directive	TIM

Notes

High pressure mercury vapour lamp with elliptical bulb, coated, base E40. Operation with ballast, no ignitor required. Sale outside EU without CE.

Please, refer to www.radium.de/recycling for notes on disposal of burned-out lamps as well as lamp breakage.

The "lifespan L70" described for LED lamps indicates the number of hours when the luminous flux has decreased to 70% of its initial value.

The optimal field 'info about service life' contains the frame conditions according to standards based on which the specific service life has been determined. So, for example, "12B50, 50Hz" means that the mean service life (B50) has been determined with a 12h switching cycle at mains (frequency 50Hz), "3B50, HF" is based on a 3h switching cycle at electronic control gear (high frequency).

Base



E40
IEC/EN 60061-1
sheet 7004-24-6

Spectrum

Natural daylight is a mixture of direct sunlight and the light of the sky. Therefore, its spectral composition changes permanently due to the changing time of day. The standardised light classification D65 corresponds to a daylight with a colour temperature of approximately 6500 K.

Every discharge lamp type has got an individual spectral power distribution according to its chemical filling. From this result important properties light colour or colour rendering.

Should the spectral lines be very close together the lamp presumably has got a very good colour rendering index, so, Ra might be near 100. Does the spectrum rather look like single lines or frayed out the colour rendering of the lamp will probably be not as good.

If number and height of the spectral lines within the blue range (around 400 nm) prevails it might be a lamp with a rather cold light colour like for example daylight. On the other hand, should the red (around 700 nm) or the red and yellow (around 600 nm) range be dominant one can assume that the lamp will be a rather warm light colour like WDL.

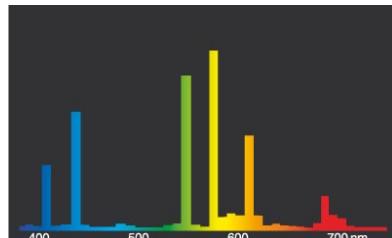
After the lamp start a mercury vapour lamp needs about 5 minutes time to reach its full luminous flux.

Visible region from 380 to 780 nm; height of graph corresponding with relative spectral emission (400mW/klm) per 10nm.

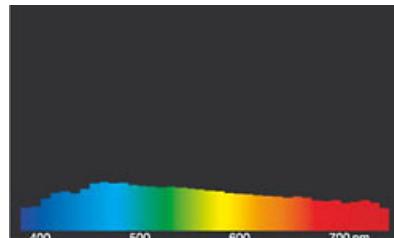
High pressure mercury lamp

HRL 400W/230/E40 EX

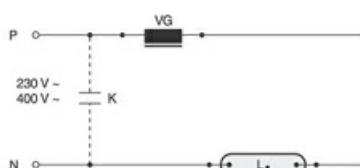
Radium



HRL (4200K)



Circuit diagram(s)



Standard circuit HID with internal ignitor

Key:

L. = lamp

VG = ballast electromagnetic (KVG/VVG)

P = phase

N = zero potential

K = p. f. correction capacitor

The required control gear (here ballast only) for the lamps operation is usually mounted in the suitable luminaire in an appropriate electric circuit. Changes of any kind are to be conducted by qualified and specialised staff, only. Thus, this circuit example is to be understood merely as a technical background information for interested users.

Special features



General notes

The technical design data in accordance with DIN and IEC. The producer does not take any responsibility for damage to persons or property in case of unsuitable operation or handling of the product. Operating data and dimensions are valid within the usual tolerances. Related lamp types (different bases, mains voltages) may be available on request. Sale and delivery are effected in accordance with the Radium Terms of Delivery and Payment valid on the day of conclusion of contract. Packing units offer economical advantages to the purchase and logistic department. Please match your quantity volume accordingly. For orders of a minimum quantity (clefts) with a lamp model the amount lower than the volume of each packaging unit, we will invoice 10 % additional charge per lamp type. Technical changes and terms of delivery are reserved. Manipulation of any kind to packaging or product is not permissible as this will violate Radium brand rights. Furthermore, technical properties of the product can change to its disadvantage or even destruction. Therefore, Radium cannot be responsible for consequential damages.

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