DR. FISCHER
Europe S.A.S.
A company of DR. FISCHER Group

UV LAMP solutions in Print, Paint, Glue, Curing, Sun Simulation and Strobe Lighting

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The DR. FISCHER Group – Competence, Innovation, Service

The DR. FISCHER Group is one of the leading providers of lamps and lights. The various companies of the Group complement each other with their individual specializations and together form a competent, innovative and fair partner for customers and suppliers.

It is especially our structure as a group of specialized, traditional companies which enables us to satisfy the needs and requirements of our customers and provide precise and immediate solutions. Among our greatest strengths are competent advice, customer proximity, professional service and the creation of customized, user-related special applications.

With our constellation of highly competent special lamp manufacturers, our comprehensive portfolio within this sector and the attractive product range of KANDEM Leuchten GmbH for lights and lighting solutions, we offer a broad of spectrum of products for the professional and general use of light.

The DR. FISCHER Group started about 20 years ago as the result of three family companies growing together: DR. FISCHER Speziallampenfabrik GmbH, Kegler Lichttechnik GmbH and Kandem Leuchten GmbH. Each individual company, with their specialist fields, is a perfect complement to each other. This makes it possible to fulfill customer's wishes and requirements precisely, quickly and in a solution orientated manner. The greatest strengths of the group are tailor-made special applications and specific all-round solutions.

With sales offices in Europe and Asia, the group is active worldwide. The product portfolio includes signal lamps for streets, railways, air and waterways; special lamps for medicine and research; household lamps for ovens, cooker hoods and refrigerators; lights infrared halogen lamps luminaries, solutions and now growing range of ultra violet (UV) lamps.

DR. FISCHER Speziallampenfabrik GmbH

DR. FISCHER Speziallampen Vertriebs GmbH

DR. FISCHER Europe S.A.S.

DR. FISCHER Italy s.r.l.

KEGLER Lichttechnik GmbH

KANDEM Leuchten GmbH

DR. FISCHER LED GmbH

DR. FISCHER Asia Pacific Ltd.


Certificate

ISO 14001:2004


Certificate

ISO 14001:2004

The ISO certificates shows the Quality

DR FISCHER Italy s.r.l. produces special lamps for the domestic field at the Alpignano (Italy) location

The location at Diez is the main production centre for low-voltage lamps.

Pont à Mousson (France) is the headquarters of DR FISCHER Europe S.A.S., the production center of infrared halogen lamps, UV lamps, high-voltage lamps, halogen and incandescent lamps.

The Pont à Mousson factory: a wealth of experience in lamp production

The production of lamps started in 1886 in Pagny sur Moselle, France with Mr. Fabius Henrion starting the first production of incandescent lamps.
Later on, in 1931, the factory joined the FRLE, a group of French lamp factories, owned 50 % by Philips and 50 % by the Mazda group.
In 1981, the factory moved to Pont à Mousson (10 km away) and became "Philips Eclairage" in 1985.
In 1989, the production of infrared halogen lamps started in Pont à Mousson with a dedicated area for this new activity. From this time, Philips Eclairage started developing innovative products like our famous HeLeN range.

On January 1st, 2008 the DR. FISCHER Group took over the incandescent activities of Philips in Pont à Mousson and founded DR. FISCHER Europe S.A.S. Here special lamps with high voltage technology are produced by using technically highly developed machines.

In 2010, DR. FISCHER Europe S.A.S took over the whole site of Philips Pont à Mousson. By this acquisition, we strengthened our halogen production with high speed machines, and we now offer an infrared portfolio with marketing/sales and distribution services. This means that one of the biggest centres of competence and production for infrared lamps and solutions is located between Metz and Nancy.

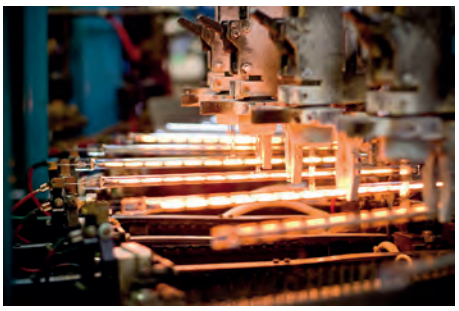
In 2011 DR. FISCHER Europe S.A.S took over the medium pressure discharge lamp production equipment from Philips and installed it into the Pont à Mousson production center.

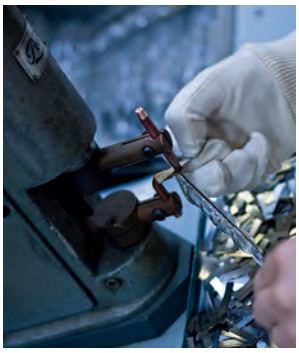
The integration of Philips' entire production activities in UV and of all its employees means that DR. FISCHER Group in Pont à Mousson now has comprehensive competences for special UV solutions – from research over development, quality and production to marketing and sales. This unique synergy of the latest technology, experienced and motivated employees, tried and trusted procedures, flexibility and many years of experience in creating specific solutions together with the customer make us the ideal partner in seeking future applications and solutions.

UV lamps are used for copying with UV sensitive materials, curing lacquers/paint/ink, curing glue/resin, Diazo Copying, polymerization of polyester, printed circuit boards exposure, Platemaking (offset printing), Copy board lighting/copying, Material durability testing.

Innovative UV applications will become increasingly important in many industrial processes: Polymer curing, photosensitive materials exposure and many others.

Our experience and know-how means that we can be competent, thinking partners for our customers in the development and realisation of such innovative UV solutions.





Competence and partnership for your ideas

DR. FISCHER Europe S.A.S is more than just a manufacturer of high-quality UV lamps. We see ourselves as a full-service partner for our customers – whether you are manufacturers of UV units or lights, wholesalers or system integrators. Our aim is always to maximize the benefit for the end customer.
For that purpose, our UV Lamps Business Line has an integrated team that is ready to meet your needs: from innovation and development through production, logistics, marketing and sales right up to continuing customer support.
The basis is the convincing quality of our UV lamps. We also offer all the technical and application support and customer service you need to integrate these products into your own applications. Our experience, product and application knowledge and various customer services are available to you, our partner, to enable you to maximize your competitive strength. Excellent quality combined with our service based approach is what our customers and partners appreciate about us.

Understanding

We believe that working in strong partnership with our selected OEM partners and close collaboration is the best way for us to understand your products, service and innovation needs.
This is why our approach is based on a close working relationship to enable us to meet your needs most effectively.

Expertise

Our expertise in UV applications can support your innovations in helping you design UV solutions.
Our UV application system support tool was created to give you the best possible UV lamp solutions and technical support in designing your UV solution.

Testing

When designing an UV system, it is highly important to check that its performance matches the requirements of the application. To help our OEM partners to access and optimize the quality level of their UV system, our application team proposes specific measurements.

Quality

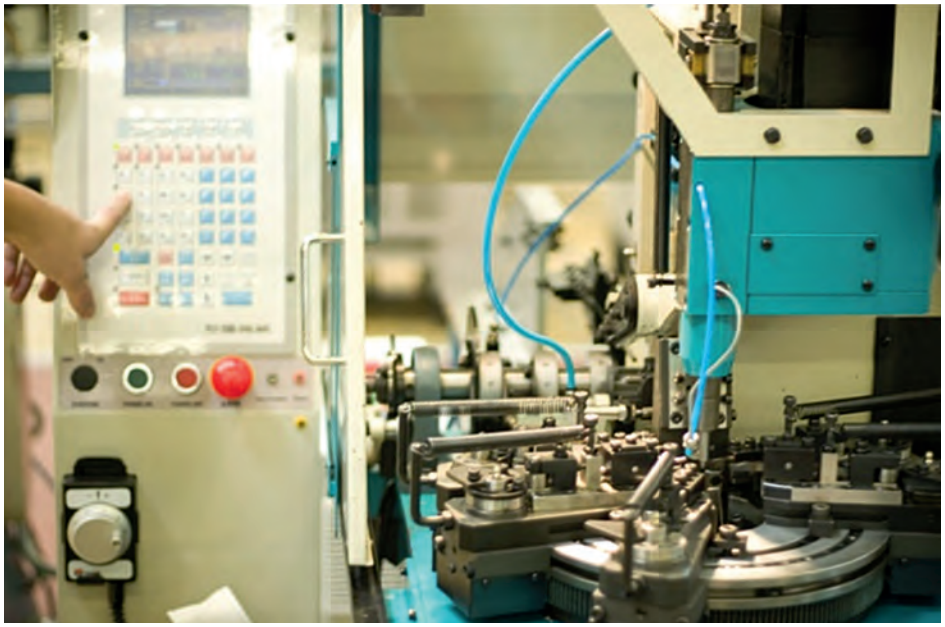
Our quality department closely monitors technological developments in UV halogen lamp integration during product design and manufacturing to enable us to provide you with optimal support in continuous product improvement.

Contacts

Our worldwide presence and resources make us the ideal partner in the global marketplace. This means we are in a position to support you wherever your location is.

What we can bring to our customers:

- High-quality products and services
- Competence and experience in innovative research and development
- Willingness and ability to cooperate with our customers
- State of the art equipments and resources
- Professional after-sales service close to our customers



Our technical support: open to the future

We, DR. FISCHER Europe S.A.S., want to be more to our customers than just a provider of high-quality UV lamps. We believe that working together in close collaboration is the best way for us to understand your products, service and needs for innovation. This is why our approach is based on a close working relationship to enable us to meet your needs more effectively.
Our aim is to increase the added value that helps you as a specialist supplier, fixtures manufacturer or complete system integrator, to move forward.
We are committed to offering you a world class service in every aspect of our business. That includes not only the best UV lamp solutions, but also the matching technical and application support as well as service. That combination of products, support and service is what makes us your potential closest partner today.
For more than 20 years, the DR. FISCHER Group has been a major player on the very special lighting market, applying its expertise and advanced technology to the creation of innovative UV solutions for all kinds of curing, copying, polymerization solutions.
Our expertise in UV applications can support your innovations in helping you design UV solutions.

When designing an UV system, it is vitally important to evaluate its performance against the application requirements.

- DR. FISCHER in Pont a Mousson, France, is equipped with a unique Spatial Irradiance Measurement bench (XY bench). This enables us to evaluate and qualify the irradiance (UV output) of lamps, heaters and industrial UV Systems.

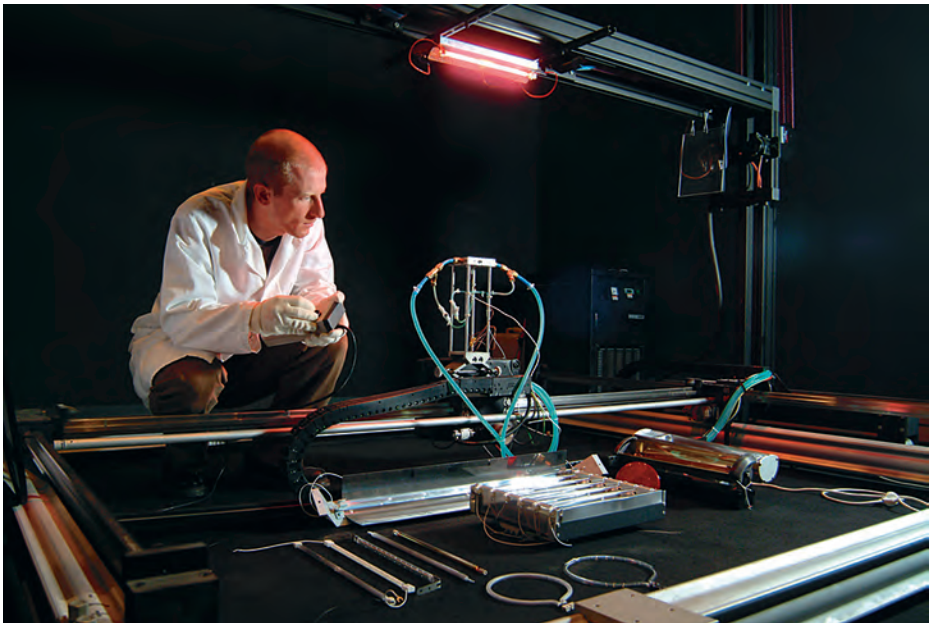
- Based on the needs of our customers, we are able to provide advice on specific matters such as reflector geometric optimization. The accuracy of the results is ensured by the use of a specific measurement control system.

- Measurements are conducted in a black chamber to eliminate any disturbances. The lamp voltage and fluxmeter temperature are under constant control during measurements.

- Reducing time to market in the development of new systems is essential. The specific PH3D optical modeling software, based on an efficient 3D ray tracing method, is used to optimize our customers' high-performance UV systems and solutions

Using these tools, our UV modeling support activities can address three main topics:
- Improvement or upgrading of existing reflectors or systems
- System configuration issues, such as lamp specifications and arrangement, installed power, sizing etc.
- Design of new reflectors to reach the defined UV irradiance specifications.

Our DR. FISCHER UV modeling support allows our customers to predict system irradiance (UV output) by simulation without the need for any tooling or prototyping. This enables predictive, quantitative results to be achieved at a reasonable cost. The validity of modeling outputs is assured by a regular calibration. Our R&D team always provides accurate quotation for each project you have.

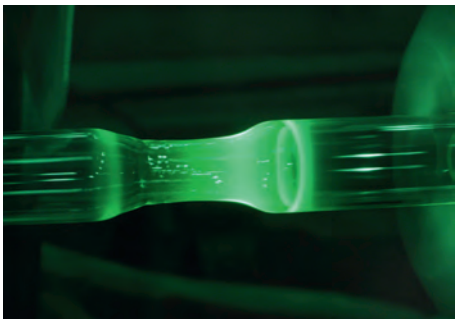


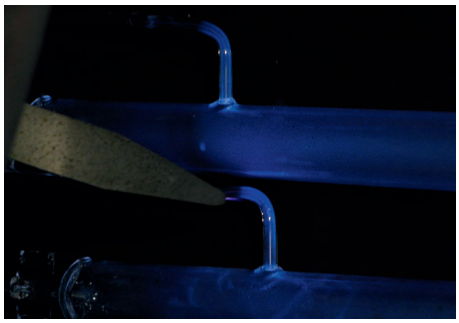
DR. FISCHER ultraviolet solutions

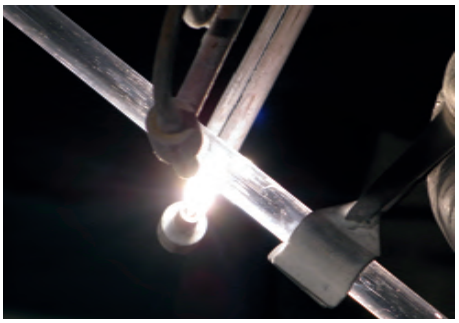
DR.FISCHER ultraviolet solutions is your professional contact for applications in print–, paint–, glue- and curing industries as well as in material testing and the entertainment field. A wide range of standard products is offered and will be extended by application specific products. Lamp spectra are tuned by changing the lamp chemistry to meet specific application needs. All lamps are long arc discharge lamps. The HPA and HPM product ranges are based on Mercury lamps with additives. These are typically metals that will help to tune the lamp spectrum exactly to what is needed to cure inks or activate compounds.

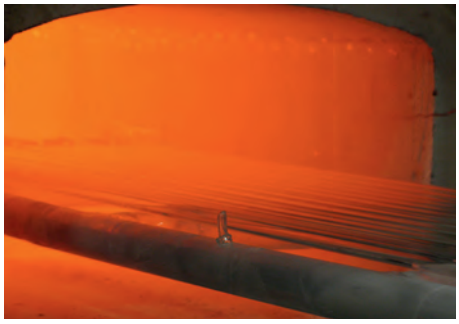
XOP products are filled with pure Xenon gas. This inert gas has the advantage of sending out a broad spectrum that is very close to that of the natural sun. XOP lamps are instant start and restart lamps. Simulating the effects of the sunlight to materials or stroboscopic use in enterntainment are the most frequent applications for this lamp type.

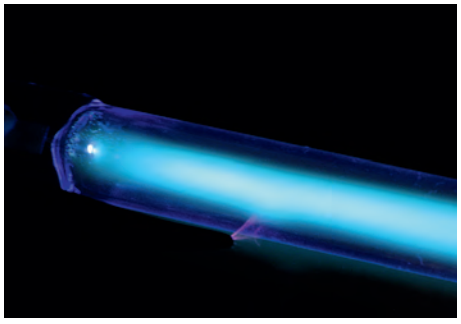
	Lamp types	
Application	**HPA/HPM**	**XOP**
Copying with UV sensitive materials	•	
Curing lacquers/paint/ink	•	
Curing glue/resin	•	
Diazo copying	•	
Polymerization of polyester	•	
Printed circuit boards exposure	•	
Plate-making (offset printing)	•	•
Copy board lighting/copying		•
Stroboscope pulsed light		•
Material testing	•	•











Offset Print HPA UV-A: Medium-pressure metal-halide lamps

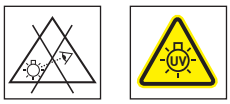
HPA lamps are ideal for reprography and photochemical processes. Optimized for the UVA bandwidth (315 to 400 nm), HPA-R UVA lamps are ideal for a wide range of reprography and photochemical process applications. Their high radiant efficiency and high arc-stability ensure cost-efficient and reliable usage. They provide the ideal light source for contact copying of images from transparent film to UV-sensitive carriers such as film, offset plates, printed circuit boards and microfilms. These lamps are also perfectly suitable for photochemical process applications such as the UV-curing of glues, resins and pigmented lacquers.

Applications

- Contact copying of images from transparent film to UV sensitive carriers like film, offset plates, printed circuit boards or micro films
- UV curing of glues, resins and pigmented lacquers
- Reprography photochemical processes
  - > Plate-making
  - > UV-curing of glues, resins, pigmented lacquers
  - > Printed circuits
- Copying of images
  - > Film
  - > Offset plates
  - > Microfilms

Luminaires

- Measures must be taken to protect eyes and skin from UV-B and UV-C light which is also emitted by the lamps.

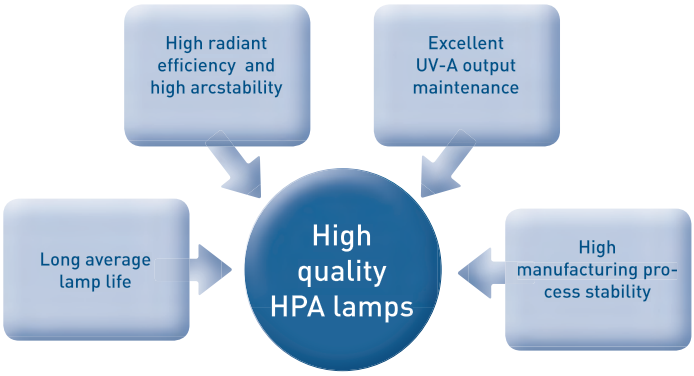


- Bulb body temperature should be kept between 750 and 950°C, with maximum of 350°C at the pinches, this might require forced air cooling adapted to the power level

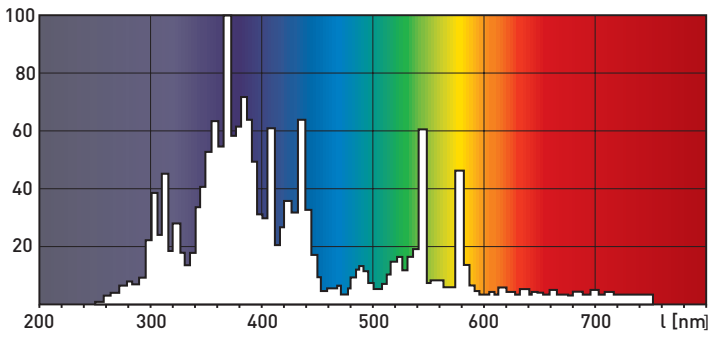
HPA lamps are made of ozone-free quartz and are constructed to generate an optimum UV-A spectrum. They also emit short-wave UV-B and UV-C, which is harmful to human eyes and skin.

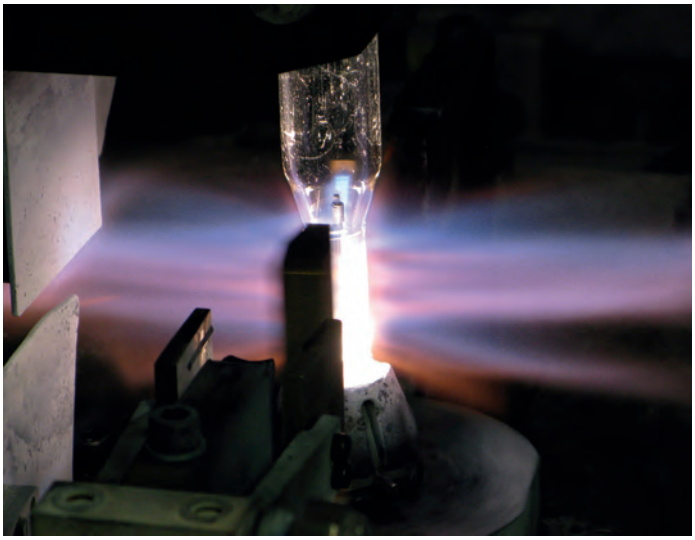
Characteristics of HPA lamps:

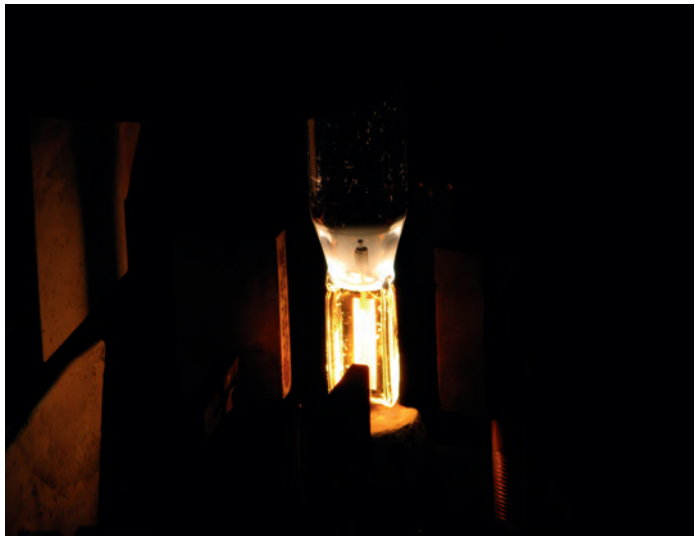
Features	Benefits
• Spectrum is optimized for UV-A radiation • No ozone production	• Best match with UVA photo sensitizers • Best environmental choice



HPA Power Spectral distribution:



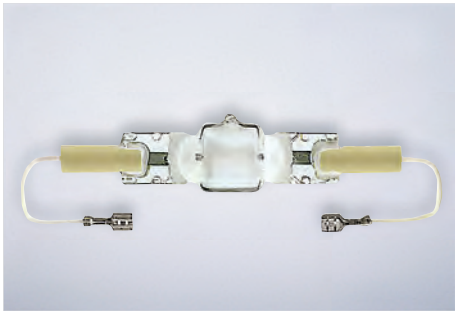


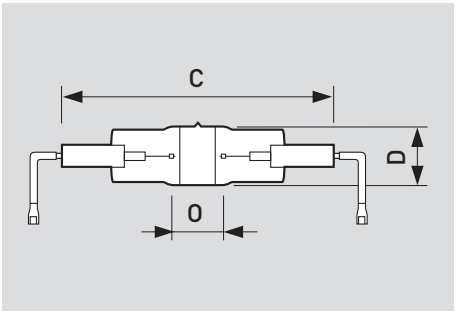


Products

HPA 1000/20 R

DR. FISCHER HPA 1000 lamps are designed for horizontal use.

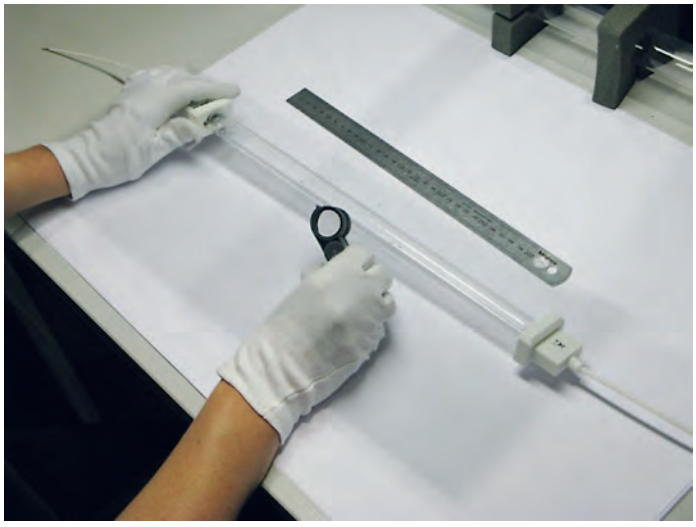




Dimensions in mm

Lamp type	W[1]	V [1]	Lamp [1] current (A)	Run-up time [2] max. min.	UVA irrad. At 0 h [3] µW/cm²	Mainte-nance at 750 h %[4]	Arc length (mm)	Lamp length (mm) [5]	Lamp diam (mm)	Cap base	Cable lenght [6] (mm)	Pces per pack	Article no.
HPA 1000	1100	120	10.5	3	1780	80	21	129 ± 2	28 max.	C10.5L	90 T	4	9280 756 06002

Welding process



Quality control

(1) First electrical value is measured free burning on reference impedance (see table with circuit data) at 0 hours. Second vale gives indication of stand-by operation.
(2) Maximum time to reach 90% of UV-output after cold start on reference circuit. (1)
(3) UV irradiation measured perpendicular to lamp axis at 1 m distance with a relative spectral sensitivity according to IEC. UVA is the wavelength range between 315-400 nm, DIAZO between 320-440 nm. (1)
(4) Percentage of UV output at 750 h compared to 0 h. The lifetime at which maximum 10% of large batch of lamps have failed is also specified at 750 h for all HPA/HPM lamps. This lifetime and UV-maintenance is reached under following test conditions:
- *Pinch temperature: 350°C max.*
- *Bulb temperature: 950°C max., 750°C min. (also at reduced power!)*
- *Switching cycle 5h30' ON, 30'OFF. Horizontal burning position.*

(5) For a definition of Overall Length (OAL), see drawing of lamp base dimensions.
(6) Cable terminal type: T= straight faston terminal, RT= round terminal, F= flag faston, no symbol= stripped end.

HPM Lamps: High-pressure metal halide discharge lamps

HPM Diazo lamps emit in the Diazo range (230 – 450 nm) and are optimized for UVA radiation. Being similar to HPA lamps, HPM lamps are designed to meet the special spectral demands of reprography, photochemical applications and the use of Diazo colors. The lamp spectrum has been modified by adding additives and adjusting the mercury content to generate exactly those spectral lines needed to cure Diazo colors. They are therefore ideal for high-quality, large-format printing and plotting applications in the architectural and engineering industries. In addition, HPM Diazo lamps provide a high radiant efficiency and high arc stability for cost-efficient and reliable usage. They provide the ideal light source for contact copying of images from transparent film to UV-sensitive carriers such as film, offset plates, printed circuit boards and microfilms. They are also ideal for photochemical process applications such as the UV-curing of glues, resins and pigmented lacquers.

Applications

- Contact copying of images from transparent film to UV-sensitive carriers like film, offset plates, printed circuit boards or micro films
- UV curing of glues, resins and pigmented lacquers
- Printing and plotting applications
- Plate making
- Copying of images from transparent film to UV-sensitive carriers such as film, offset plates, printed circuit board and microfilms
- Photochemical process: UV-curing of glues, resins and pigmented lacquers

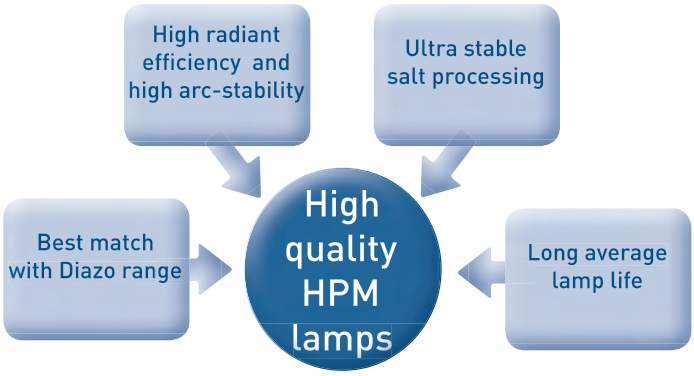
Luminaires

- Measures must be taken to protect eyes and skin from UV-B and UV-C light which is also emitted.

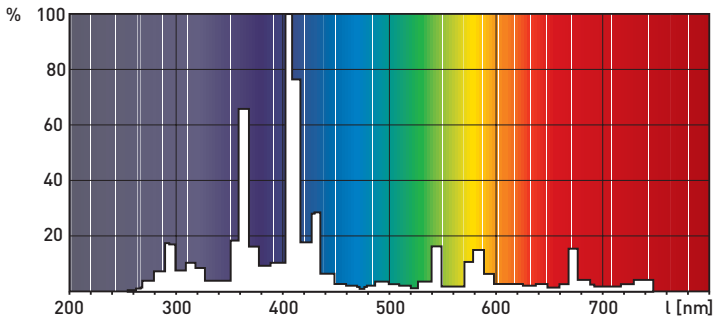
- Bulb temperature should be kept between 750 and 950°C, with maximum of 350°C at the pinches, this may require forced air cooling adapted to the power level

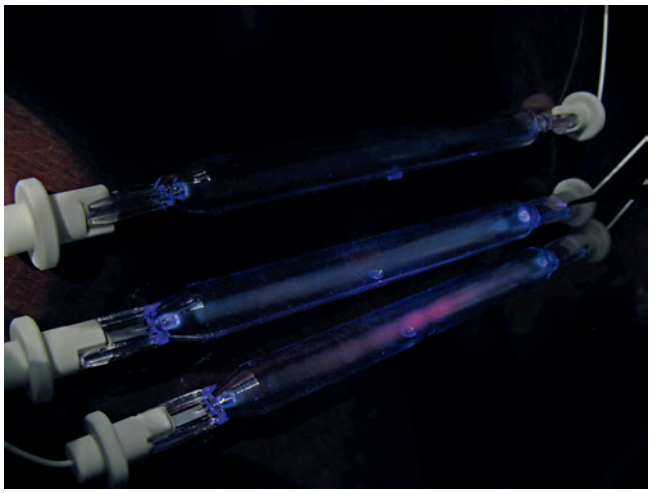
Characteristics of HPM lamps:

Features	Benefits
• Spectrum is optimized for UV-A radiation • No ozone production • HPM Repro lamps radiate in the Diazo range • Most lamps are designed to run at several power levels, e.g. standby, medium and full • Burning position horizontal (+/- 10°)	• Best match with Diazo range • Best environmental choice • Ideal for high quality, large-format printing and plotting applications • Cost-efficient • Reliable usage • High radiant efficiency • High arc stability



HPM Power Spectral distribution:

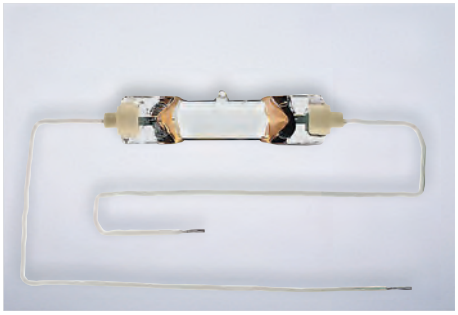


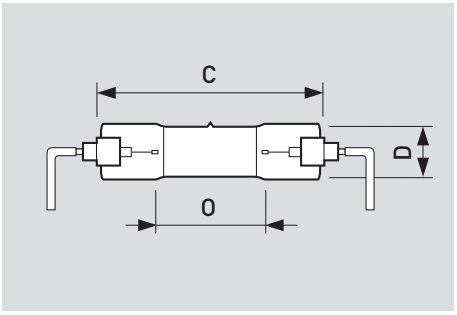


Products

HPM 12

DR. FISCHER HPM 12 lamps are designed for horizontal use.



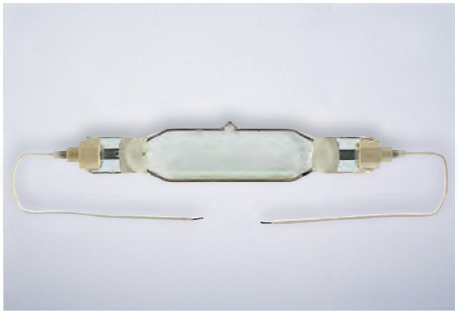


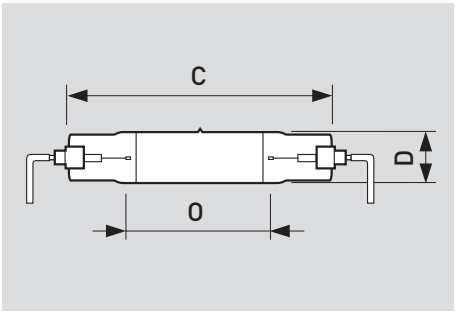
Dimensions in mm

Lamp type	W[1]	V [1]	Lamp [1] current (A)	Run-up time [2] max. min.	Diazo irrad. at 0 h µW/cm²	Maintenance at 750 h %[4]	Arc length (mm)	Lamp length (mm) [5]	Lamp diam (mm)	Cap base	Cable lenght [6] (mm)	Pces per pack	Article no.
HPM 12	460	120	4.1	5	800	80	45	98 ± 2	22 max.	C14X	300	4	9280 729 05102

HPM 13

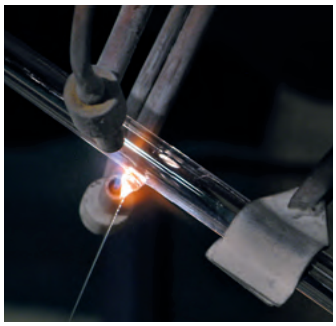
DR. FISCHER HPM 13 lamps are designed for horizontal use.





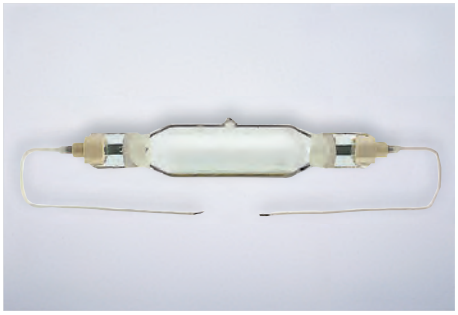
Dimensions in mm

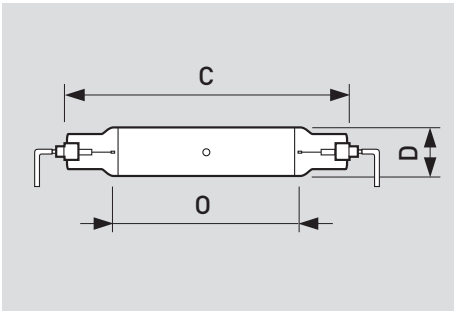
Lamp type	W[1]	V [1]	Lamp [1] current (A)	Run-up time [2] max. min.	Diazo irrad. at 0 h µW/cm²	Maintenance at 750 h %[4]	Arc length (mm)	Lamp length (mm) [5]	Lamp diam (mm)	Cap base	Cable lenght [6] (mm)	Pces per pack	Article no.
HPM 13	1000	125	8.6	3	2000	80	76	147 ± 2	28 max	C14X	145	4	9280 744 05102



HPM 15

DR. FISCHER HPM 15 lamps are designed for horizontal use.



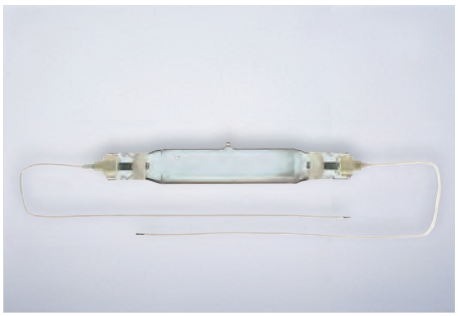


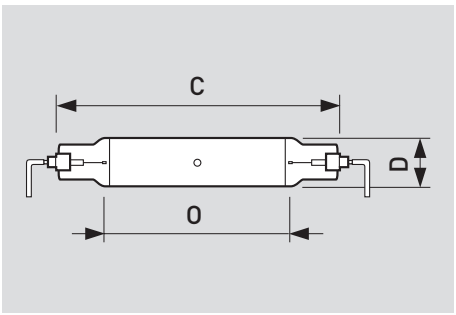
Dimensions in mm

Lamp type	W[1]	V [1]	Lamp [1] current (A)	Run-up time [2] max. min.	Diazo irrad. at 0 h µW/cm²	Mainte-nance at 750 h %[4]	Arc length (mm)	Lamp length (mm) [5]	Lamp diam (mm)	Cap base	Cable lenght [6] (mm)	Pces per pack	Article no.
HPM 15	1950	245	9	4	4100	90	132	205	35 max.	C14X	295	4	9280 723 05102
HPM 15	1950	245	9	4	4100	90	132	205	35 max.	C14X	320	4	9280 728 05102

HPM 17

DR. FISCHER HPM 17 lamps are designed for horizontal use.





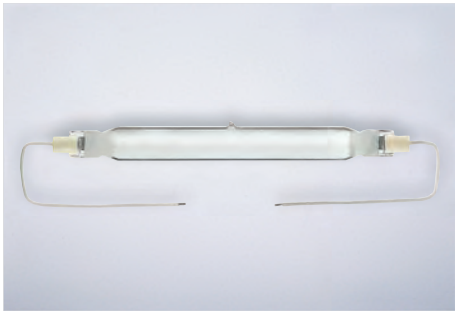
Dimensions in mm

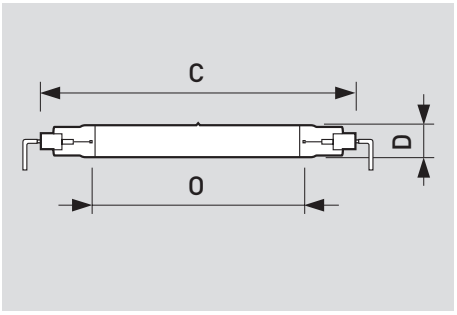
Lamp type	W[1]	V [1]	Lamp [1] current (A)	Run-up time [2] max. min.	Diazo irrad. at 0 h µW/cm²	Mainte-nance at 750 h %[4]	Arc length (mm)	Lamp length (mm) [5]	Lamp diam (mm)	Cap base	Cable lenght [6] (mm)	Pces per pack	Article no.
HPM 17	2000	243	8.7	2	4600	80	110	175	28 max.	C14X	320	4	9280 727 05102

Products

HPM 25

DR. FISCHER HPM 25 lamps are designed for horizontal use.



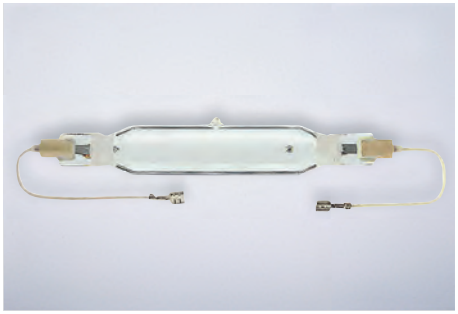


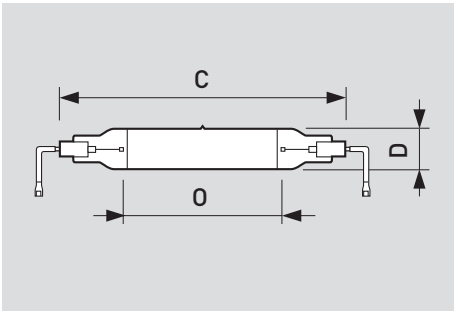
Dimensions in mm

Lamp type	W[1]	V [1]	Lamp [1] current (A)	Run-up time [2] max. min.	Diazo irrad. at 0 h µW/ cm²	Mainte-nance at 750 h %[4]	Arc length (mm)	Lamp length (mm) [5]	Lamp diam (mm)	Cap base	Cable lenght [6] (mm)	Pces per pack	Article no.
HPM 25	5000/1900	245	23.0/10	2	12000	90	185	276 ± 2	28 max.	CU	190	4	9280 792 06002

HPM 3000

DR. FISCHER HPM 3000 lamps are designed for horizontal use.



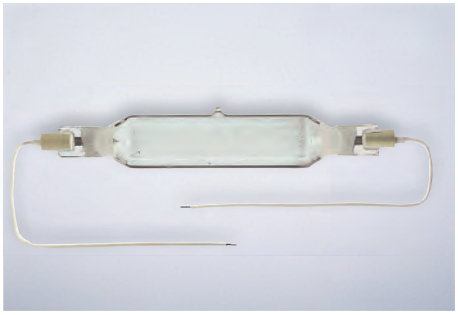


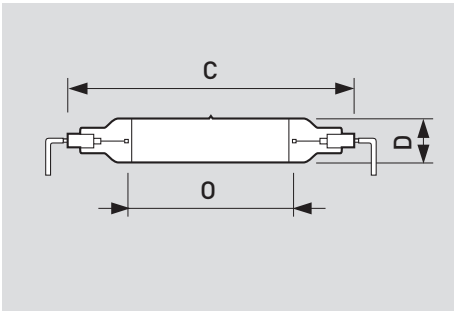
Dimensions in mm

Lamp type	W[1]	V [1]	Lamp [1] current (A)	Run-up time [2] max. min.	Diazo irrad. at 0 h µW/ cm²	Mainte-nance at 750 h %[4]	Arc length (mm)	Lamp length (mm) [5]	Lamp diam (mm)	Cap base	Cable lenght [6] (mm)	Pces per pack	Article no.
HPM 3000	3350	400	9	4	9000	90	105	190	28 max	C10.5S	110 T	4	9280 813 06002

HPM 4010

DR. FISCHER HPM 4010 lamps are designed for horizontal use.



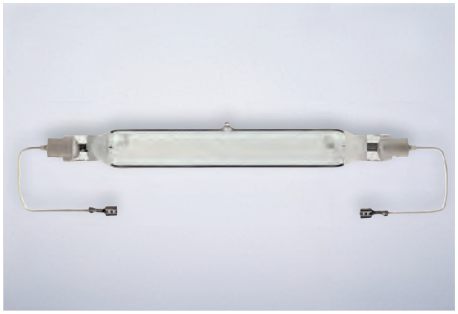


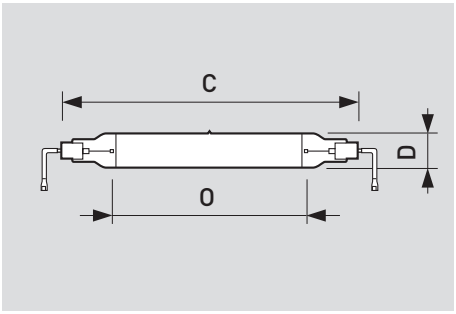
Dimensions in mm

Lamp type	W[1]	V [1]	Lamp [1] current (A)	Run-up time [2] max. min.	Diazo irrad. at 0 h µW/ cm²	Mainte-nance at 750 h %[4]	Arc length (mm)	Lamp length (mm) [5]	Lamp diam (mm)	Cap base	Cable lenght [6] (mm)	Pces per pack	Article no.
HPM 4010	4000	310	13.5	4	10500	90	117	203 ± 3	32 max.	C10.5S	190	4	9280 794 06002

HPM 4020

DR. FISCHER HPM 4020 lamps are designed for horizontal use.





Dimensions in mm

Lamp type	W[1]	V [1]	Lamp [1] current (A)	Run-up time [2] max. min.	Diazo irrad. at 0 h µW/ cm²	Mainte-nance at 750 h %[4]	Arc length (mm)	Lamp length (mm) [5]	Lamp diam (mm)	Cap base	Cable lenght [6] (mm)	Pces per pack	Article no.
HPM 4020	4000	400	11.5	4	11500	90	162	248 ± 3	28 max.	C10.5S	110 T	4	9280 807 06002

(1) First electrical value is measured free burning on reference impedance (see table with circuit data) at 0 hours. Second vale gives indication of stand-by operation.
(2) Maximum time to reach 90% of UV-output after cold start on reference circuit.
(3) UV irradiation measured perpendicular to lamp axis at 1 m distance with a relative spectral sensitivity according to IEC. UVA is the wavelength range between 315-400 nm, DIAZO between 320-440 nm.
(4) Percentage of UV output at 750 h compared to 0 h. The lifetime at which maximum 10% of a large batch of lamps has failed is also specified at 750 h for all HPA/HPM lamps. This lifetime and UV-maintenance is reached under following test conditions:
- *Pinch temperature: 350°C max.*
- *Bulb temperature: 950°C max., 750°C min. (also at reduced power!)*
- *Switching cycle 5h30' ON, 30'OFF. Horizontal burning position.*

(5) For a definition of Overall Length (OAL), see drawing of lamp base dimensions.
(6) Cable terminal type: T= straight faston terminal, RT= round terminal, F= flag faston, no symbol= stripped end.

Introduction

XOP XENON lamps

XOP Xenon lamps are linear lamps equipped with a special cable connection that prevents arcing. Straight XOP lamps have a diameter of 12 mm and an overall length of 241-698 mm, depending on wattage. The spectrum of their radiation output is, like that of all xenon lamps, near-continuous, ranging from about 200 to 1000 nm. Due to this it simulates sunlight very closely. The color temperature is 5600 K. XOP Xenon lamps are used either in continuous or pulsed mode (stroboscopy).

Pulsed xenon lamps are operated on a driver circuit of the semi-resonant type. In addition, they need an electronic igniter to provide the starting pulse of some 10 kV. They have instant ignition and re-ignition and require no warming-up time. The average rated life ranges between 250 and 500 hours at a depreciation of 20% after 250 burning hours.

Depending on the application XOP lamps might need forced-air cooling. The lamps do not generate any ozone. Since they emit UV light, they must be screened to protect the eyes and skin. Care must be taken to avoid overexposure of eyes and skin. In view of the high starting voltage, the lamp holder and cabling must be insulated from the luminaries. The burning position is universal.

Applications

- **Weathering**
  > Xenon lamps are frequently used in sun simulation applications. Due to their near continuous spectrum from UV to IR, they are an ideal source to simulate the effects of sun exposure to adhesives, colors (fading) and materials like plastics (fading, getting brittle and porous, etc.)
  They are the best source in testing the degradation of products exposed to the sunlight as they resemble the day light spectrum very well.

- **Copyboard lighting**
  > Small, horizontal copyboards as well as large vertical ones can be lit very evenly. Owing to their spectral power distribution XOP lamps are eminently suitable for color reproduction, while for black-and-white reproduction these lamps are superior to almost every other light source.
  > Illumination of originals, drawings, photos or any other objects, placed on copyboards, with the purpose of making positive or negative transparent films, which will then serve to make plates.

- **Stop-and-repeat copying machines**
  XOP lamps are extremely useful for this application as no run-up time is necessary

- **Strobe lighting**
  > Dance and night clubs : Provide an illusion of slow motion effects
  > Emergency vehicles and situations
  > Alarm systems
  > Theatre lighting
  > Running lights
  > Special occasion: Haunted house, outdoor Halloween display

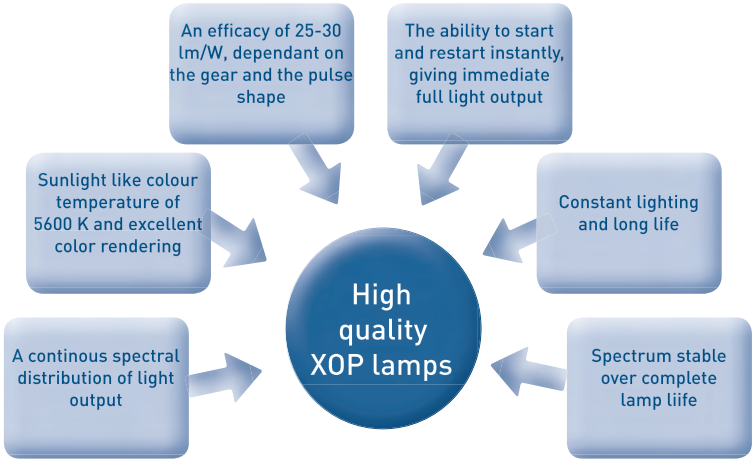
Luminaires

- Screening must be provided to protect eyes and skin from short-wave UV light output.

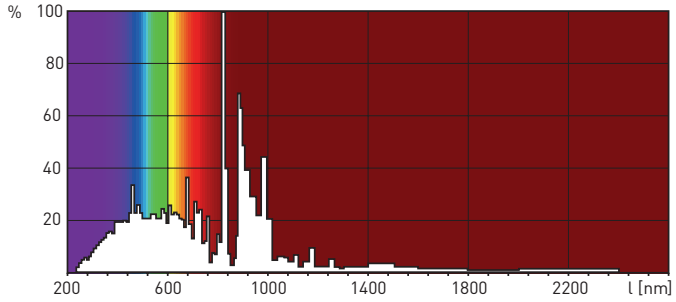
- Lampholder and wiring must be insulated from the luminary because of the high starting voltage

Characteristics of XOP lamps:

Features	Benefits
• Xenon filling • Hot Restrike • Universal burning position • Very small diameter • Instant start • No color degradation over life • Instant light	• Good color performance, resembling sunlight very well • No standby mode needed • Creative freedom • Ideally suited for reflector design • Energy saving • Resembling original colors very well

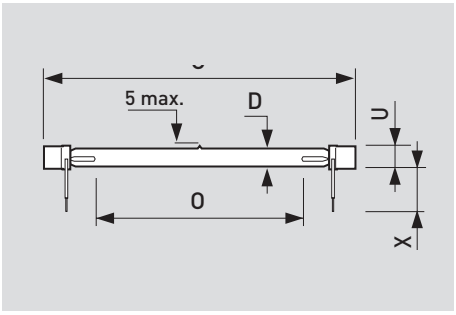


XOP Power Spectral distribution:



XOP

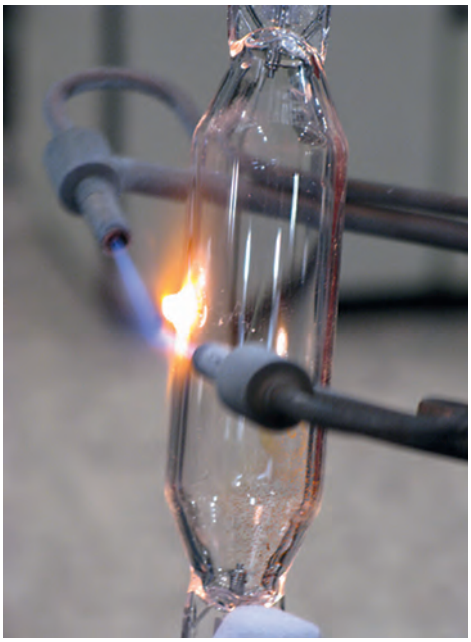
The maximum permissible temperature is 350°C for the pinch and 650°C for the bulb.



Dimensions in mm

Lamp type	W	Ignition supply V	Lamp current (A)	Luminous Efficacy	Dimmable	Cap-base	Cap-base information	Life to 50% failures	Operating position	Pces per pack	Article no.
XOP 7 -OF 1CT/4	650	207	12.3	20-25 lm/W	No	Ceramic 15.8x14.7mm	Cable 115mm	250 hr	any	4	9283 768 05102
XOP 15-OF 1CT/6	1000	207	10.7	20-25 lm/W	No	Ceramic 15.8x14.7mm	Cable 115 mm	250 hr	any	6	9283 769 05102
XOP 25-OF 1CT/6	1100	207	10.5	20-25 lm/W	No	Ceramic 15.8x14.7 mm	Cable 115mm	250 hr	any	6	9283 775 05102

Product	C (max)	D (max)	O	U	X
XOP 7 -OF	241	12	158 ± 3	14.7 ± 0,35	115 ± 5
XOP 15-OF	395	12	312 ± 3	14.7 ± 0,35	115 ± 5
XOP 25-OF	540	12	457 ± 3	14.7 ± 0,35	115 ± 5



Reference Ballasts

For information only, you can find below examples of recommended ballasts:

Lamp type	Reference Impedance Ω	Supply Voltage V	B1	B2	B3	B4	Ignitor	Wiring diagram	Ordering number Lamp
HPA 1000	15.4 (at 10 A)	220	BHL 1000L02	BHL 80L11	BTA18L32	BTA58L32	MZN 1000S	fig.4	9280 756 06002
HPM 12	39 (at 4.6 A)	220	BSN 400L08				SN58	fig.1	9280 729 05102
HPM 13	18.7 (at 7.5 A)	220	BHL 1000L02				MZN 1000S	fig.2	9280 744 05102
HPM 15	28 (at 8 A)	380	BHL 2000L18				380 MZN 4000	fig.2	9280 728 05102
HPM 17	28 (at 8 A)	380	BHL 2000L18				380 MZN 4000	fig.2	9280 727 05102
HPM 25	10.8 (at 25 A)	380	BHL 2000L18	BHL 2000L18	BHL 700L02	BHL 700L02	380 MZN 4000	fig.5	9280 792 06002
HPM 3000	transformer	380	VG12 transformer with C=28µ F (1800V)					fig.6	9280 813 06002
HPM 4010	transformer	380	on request					fig.6	9280 794 06002
HPM 4020	transformer	380	VG12 transformer with C=36µ F (1800V)					fig.6	9280 807 06002

Wiring diagram:

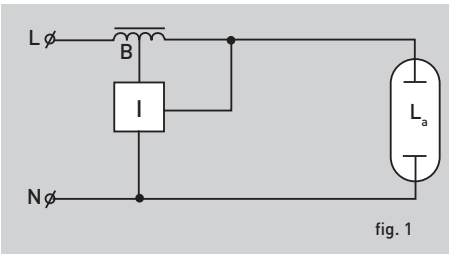


fig. 1

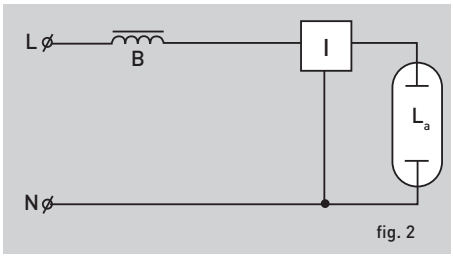


fig. 2

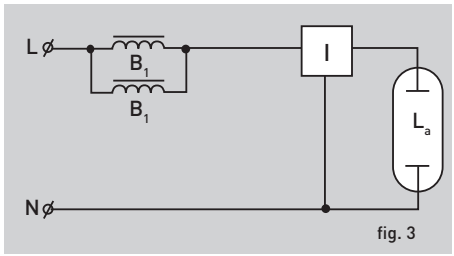


fig. 3

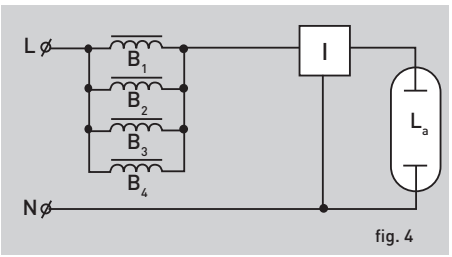


fig. 4

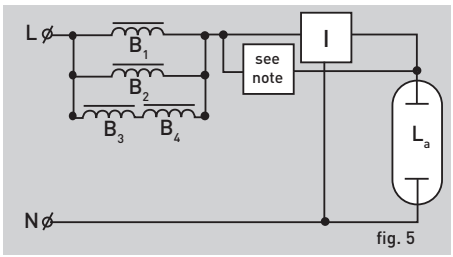


fig. 5

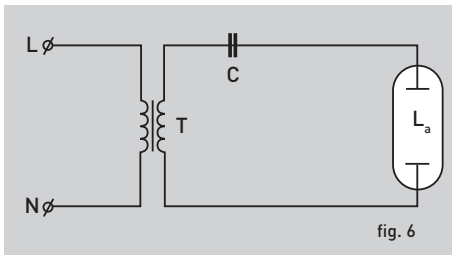


fig. 6

Max. current of 380 MZN 4000 ignitor is 18 A. For lamps with a higher lamp current (HPM 25 C): place a second ignitor in parallel, or bridge the ignitor with a switch closing immediately after ignition.

Logos description

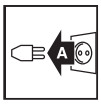

Preferably do not touch quartz with bare hands. If grease or chemical compound have been deposited on quartz, simply clean before lighting with cloth moistened with alcohol.

Looking at the lamp during operation may result in damage to the eye.

Exposure to UV can result in severe damage to the skin.

Non Household

Mercury contents : Recycling is needed



Disconnect installation from power supply before removing or installing a lamp.

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