



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

file copy

MATERIAL LICENSE

PHILIPS LIGHTING COMPANY
A DIVISION OF NORTH AMERICAN PHILIPS CORPORATION
200 Franklin Square Drive
P.O. Box 6800
Somerset, NJ 08875-6800

License No. 29-20609-02E
Docket No. 030-22295
Amendment No. 09

In accordance with letter received July 6, 1992, NRC License No. 29-20609-02E is amended in its entirety to read as follows:

Pursuant to the Atomic Energy Act of 1954, as amended; the Energy Reorganization Act of 1974, as amended (Public Law 93-438); 10 CFR Part 30, "Rules of General Applicability to Domestic Licensing of Byproduct Material;" Section 32.14, 10 CFR Part 32, "Specific Domestic Licenses to Manufacture or Transfer Certain Items Containing Byproduct Material;" and application dated November 29, 1989; letters dated January 10, 1990; March 5, 1990; March 5, 1991; April 8, 1991; and October 2, 1992; and letter received July 6, 1992; a license is hereby issued to Philips Lighting Company, a Division of North American Philips Corporation, to distribute Krypton-85, Hydrogen-3, and Promethium-147 as contained in electron tubes, glow switches, and inner arc tubes to persons exempt from licensing pursuant to Section 30.15, 10 CFR Part 30, or equivalent provisions of the regulations of any Agreement State.

This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and other applicable rules, regulations, and orders of the U.S. Nuclear Regulatory Commission now or hereafter in effect, and to the following conditions:

1. This license does not authorize possession or use of licensed material.
2. The licensee is authorized to distribute only from its facilities located at RD #2, Bath, New York; Docks Corner Road, South Brunswick, New Jersey; 4875 WestPark Drive, Atlanta, Georgia; 601 Meadowlands Blvd., Washington, Pennsylvania; Hoult Road, Fairmont, West Virginia; 1435 Bradley Lane, Carrollton, Texas; 421 Frederick Street, El Paso, Texas; 7800 District Blvd., Bakersfield, California; 440 N. Medinah Road, Roselle, Illinois; 3861 South 9th Street, Salina, Kansas; 1560 Lisbon Road, Lewiston, Maine; Bldg. 11, 23rd Street & 9 Duss Avenue, Ambridge, Pennsylvania; 1180 Andover Park West, Tukwila, Washington; and Crestwood Industrial Park, 1 Moran Drive, Mountain Top, Pennsylvania.

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3. The licensee shall submit periodic material transfer reports as specified in Section 32.16, 10 CFR Part 32.

This license shall expire on June 30, 1996.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Original signed by:

DATE: NOV 03 1992

BY:

Michael A. Lamastra
Medical, Academic, and Commercial
Use Safety Branch
Division of Industrial and
Medical Nuclear Safety, NMSS
Washington, D.C. 20555

ML00-cy to
Reg I

NOV 03 1992

Philips Lighting Company
ATTN: Mr. Paul J. Walitsky
Radiation Safety Officer
200 Franklin Square Drive
P.O. Box 6800
Somerset, New Jersey 08875-6800

Dear Mr. Walitsky:

Enclosed is Amendment No. 09 amending NRC License No. 29-20609-02E in its entirety.

Please review the enclosed document carefully and be sure that you understand all the conditions. If there are any errors or questions, please contact me so that appropriate corrections and answers can be provided.

Please be advised that you must conduct your program involving radioactive materials in accordance with the conditions specified in your NRC license, representations made in your license application, and other rules, regulations, and orders of the U.S. Nuclear Regulatory Commission, now or hereafter in effect, to include the following:

1. Operate in accordance with NRC regulations in 10 CFR Part 19, "Notices, Instructions, and Reports to Workers: Inspection and Investigations;" 10 CFR Part 20, "Standards for Protection Against Radiation;" and other applicable regulations.
2. Use radioactive material only for the purpose(s) indicated in your license.
3. Notify NRC in writing of any change in mailing address (no fee is required if the location of radioactive material remains the same).
4. Request and obtain appropriate amendments if you plan to change control or ownership of your organization, change locations of distribution of radioactive material, or make any other changes in your program which are contrary to the license conditions or representations made in your license application and any supplemental correspondence with NRC. A license fee may be charged for the amendments if you are not in a fee-exempt category.
5. Submit a complete renewal application with proper fee or termination request at least 30 days before the expiration date on your license. You should receive a reminder notice approximately 90 days before the expiration date. Possession of radioactive material after your license expires is a violation of NRC regulations.

NOV 03 1992

6. Request termination of your license if you plan to permanently discontinue activities involving radioactive material, see 10 CFR 30.36.

You will be periodically inspected by NRC. Failure to conduct your program in compliance with NRC regulations, license conditions, and representations made in your license application and supplemental correspondence with NRC may result in enforcement action(s) against you. This could include issuance of a notice of violation; imposition of a civil penalty; or an order suspending, modifying, or revoking your license as specified in the General Statement of Policy and Procedure for NRC Enforcement Actions, 10 CFR Part 2, Appendix C.

If you have any questions, you may contact me at (301) 504-2686.

Sincerely,

Original signed by:

Susan L. Greene
Commercial Section
Medical, Academic, and Commercial
Use Safety Branch
Division of Industrial and
Medical Nuclear Safety, NMSS

Enclosure:
Amendment No. 09

DISTRIBUTION:
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PHILIPS

Philips Lighting

Susan Greene
U.S. Nuclear Regulatory Commission
Washington D.C., 20555

October 2, 1992

Re: Additional Data MSR, SN, HPM, HPA lamps
License 29-20609-02E

Dear Susan,

I have decided obtained information from the European catalogs concerning the lamps being added to the possession and distribution licenses.

These lamps are almost exclusively used in commercial and industrial settings.

MSR: Lamps are used for television studio lighting, film and theater lighting and projectors. They are similar to the previous licensed MHN lamps in that the Kr-85 is in the inner arc tube which is mounted inside the outer bulb. The difference between the two lamps is that the MSR is a single ended lamp while the MHN has electrical connections at both ends. A catalog page is attached.

I have noted that some of the wattages listed in our application are not shown in the catalog. These are newer versions for which catalog pages have yet been prepared. A table showing wattages and KR-85 loadings is attached.

MSD: The lamp is very similar to the MSR with longer life. There was no published data available. The table attached shows a single MSD lamp of 200 watts.

SN: These lamps are used for projection studio and stage lighting, microscopy and copyboard lighting. These are also arc tubes within outer bulbs. They

Philips Lighting Company

A Division of North American Philips Corporation

200 Franklin Square Drive • P.O. Box 6800
Somerset, New Jersey 08856-6800



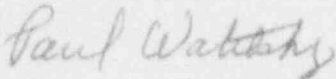
PHILIPS LIGHTING
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are single ended. A catalog page is attached.
Here too, the krypton is in the inner tube.

HPM: These lamps are used for photochemical processes. The lamp is a quartz arc tube and is designed to be mounted in a fixture which focuses the ultraviolet wavelengths to circuits or micro-fiche. The Kr-85 is in the arc tube. These are double ended lamps similar to the previously licensed MHN lamps. In this lamp there is no inner tube. Catalog pages are attached.

HPA: These lamps are similar to the HPM configuration. They are used for photochemical processes in the reprographic industry, UV lacquer curing and printed circuits. These lamps are mounted in fixtures or equipment which are part of the industrial process. Philips will not sell these lamps for suntanning purposes. This is a single tube and the KR-85 is in the arc tube. Catalog pages are attached.

Very truly yours,



Paul Walitsky, CHMM
Radiation Safety Officer
Manager of Environmental Affairs

A new distribution center is being opened at Mountaintop, PA. We would like to add this new location to the license as well. The address is :

Crestwood Industrial Park
1 Moran Drive
Mountaintop, PA 18707

Authorization Amounts (Line 8):

Philips Lighting Company wishes to import ^{+Distribute} several lamp types from Belgium (Philips Lighting, Turnhout) which contain Krypton-85 (See Table 1 for lamp types, packaging and loading per lamp). Table 2 will show the warehouse quantities required. Table 3 lists the warehouse locations. If by the agreement state limit increases are needed appropriate amendment applications will be made.

The same quality control procedures described in our amendment adding the MHN lamps are followed for these lamps. They are all produced in the same facility.

Labeling will use the same wording previously approved for the MHN. The label will appear on all individual lamp packages and on the outer cartons.

The wording reads as follows:

"This lamp contains an arc tube with a filling gas containing KR-85 and is distributed by Philips Lighting Company, a division of North American Philips Lighting Corporation."

Table 1:

TYPES/WATTS	PACKAGING	ACTIVITY nCi
MSR-200	4 PACK	9.5
MSR-200-HR	4 PACK	9.5
MSR-400	4 PACK	24.0
MSR-575	4 PACK	60.0
MSR-700	4 PACK	80.0
MSR-1200	4 PACK	150
MSR-2500	4 PACK	250
MSR-4000	1 PACK	625
MSR-200-SA	4 PACK	9.5
MSD-200	4 PACK	26.0
SN-250	4 PACK	20.0

Table 1 (CONTINUED):

TYPES/WATTS	PACKAGING	ACTIVITY nCi
SN-500	4 PACK	80.0
SN-600	4 PACK	150
SN-1000	10 PACK	250
SN-500-507	4 PACK	80
HPM-10	4 PACK	11
HPM-12	4 PACK	.3
HPM-13	4 PACK	.5
HPM-14	4 PACK	.7
HPM-15	4 PACK	.5
HPM-16	4 PACK	.2
HPM-17	4 PACK	.5
HPM-17/OLEL	4 PACK	.5
HPM-19	4 PACK	.5
HPM-19/C	4 PACK	.5
HPM-4020	4 PACK	17
HPM-4000	4 PACK	.1
HPM-3000	4 PACK	11
HPM-L-1250-R	4 PACK	12
HPM-20/20C	4 PACK	15.3
HPM-25	4 PACK	.4
HPM-30	4 PACK	.9
HPM-1001	4 PACK	12.5
HPM-2010	4 PACK	16
HPA-400	4 PACK	12.5
HPA-400/305	4 PACK	9.0
HPA-400/30 SA	4 PACK	5.0
HPA-1000	4 PACK	1.6
HPA-1200S	4 PACK	17.0
HPA-1000/20	4 PACK	.3

Table 1 (CONTINUED):

TYPE/WATTS	PACKAGING	ACTIVITY nCi
HPA-1200-R	4 PACK	.4
HPA-2000	4 PACK	1.2
HPA-2000-R	4 PACK	N/A
HPA-2000-S	4 PACK	.2
HPA-1001-R	4 PACK	12.4
HPA-2010-R	4 PACK	16
HPA-3000-R	4 PACK	11
HPA-4020-R	4 PACK	17
HPA-419-R	4 PACK	9
HPA-1019-R	4 PACK	18
HPA-5005-R	4 PACK	48

Table 2:

TYPE/WATTS	nCi	QUANTITY	Total uCi
MSR-200	9.5	10	.095
MSR-200-HR	9.5	75	.712
MSR-400	24	500	.712
MSR-575	60	100	12
MSR-700	80	5000	400
MSR-1200	150	100	15
MSR-2500	250	500	125
MSR-4000	625	150	93.75
MSR-400-SA	9.5	100	.95
MSD-200	26	100	2.6
SN-250	20	50	1
SN-500	80	100	8
SN-660	150	50	7.5
SN-1000	250	50	12.5
SN-500-507	80	100	8
HPM-10	11	500	5.5
HPM-12	.3	500	.15
HPM-13	.5	50	.025
HPM-14	.7	250	.175
HPM-15	.5	300	.150
HPM-16	.2	250	.05
HPM-17	.5	500	.250
HPM-17/OLEC	.5	5000	2.5
HPM-19	.5	100	.05
HPM-19/C	.5	100	.050
HPM-L1250R	12	5000	60
HPM-L1250	12	1000	12
HPM-20/20C	15.3	300	4.6
HPM-25	.4	250	.1
HPM-30	.9	250	.225

Table 2 (Continued):

TYPE/WATTS	nCi	QUANTITY	Total uCi
HPM-1001	12.5	250	3.125
HPM-2010	16	250	4
HPM-3000	11	250	2.75
HPM-4000	.1	250	.025
HPM-4020	17	250	4.250
HPA-400	12.5	500	6.2
HPA-400/305(C)	9	250	2.25
HPA-400/305A	5	500	2.5
HPA-1000/100S	.6	200	.12
HPA-1200S	17	250	4.250
HPA-1000/20	.3	250	.075
HPA-1200R	.4	250	.100
HPA-2000	1.2	250	.3
HPA-200R	.2	200	.040
HPA-2000S	.2	250	.05
HPA-1001R	12.4	250	3.10
HPA-2010R	16	250	4
HPA-3000R	11	250	2.75
HPA-4020R	17	250	4.25
HPA-419R	9	250	2.25
HPA-1019R	18	250	4.5
HPA-5005R	48.02	250	12

Table 3 :

WAREHOUSE LOCATIONS	
1)	Docks Corner Rd., South Brunswick N.J.
2)	4875 West Park Dr., Atlanta GA
3)	601 Meadowlands Blvd., Meadowlands PA
4)	Hoult Rd., Fairmont W.V.
5)	1435 Bradley Lane, Carrollton TX
6)	7800 District Blvd., Bakersfield CA
7)	440 N. Medinah Rd., Roselle IL
8)	23rd St. & Duss Ave., Ambridge PA
9)	3861 South 9th St., Salina KS
10)	Crestwood Industrial Park, 1 Moran Dr., Mountain Top PA

The total increase in loading is estimated to be 830.5 micro curies or .830 mCi. It should be noted that the 4000watt MSR lamp contains approximately 625 nCi. This represents an increase in maximum individual unit loading. We hereby apply for an amendment to reflect the changes in location, an increase of 830.5 micro curies and an increase to 625 nano curies maximum per lamp.

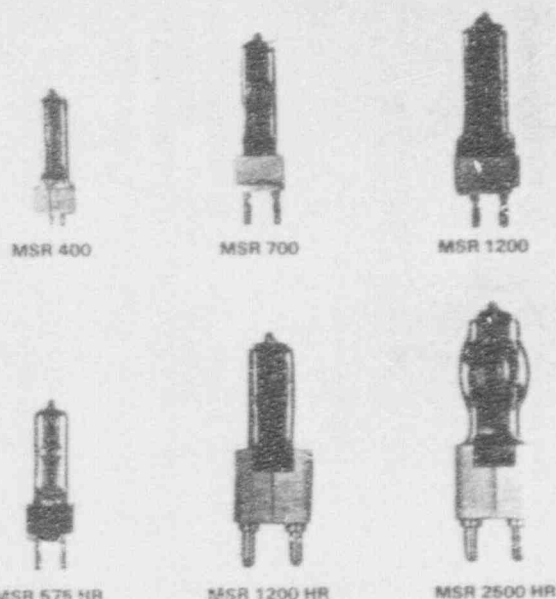
If you have any questions please do not hesitate to contact me at (908) 563-3197.

Very truly yours,

Paul Walitsky

Paul Walitsky, CHMM
Radiation Safety Officer
Manager of Environmental Affairs

cc: Susan Greene, NCR Washington D.C.



MEDIUM SOURCE RARE EARTH LAMPS MSR

High-pressure discharge lamps with short arc length (6-14 mm). The lamps are filled with a noble gas, mercury halides and with additives of rare earths from the lanthanides (such as dysprosium, holmium, thulium, etc.). The average internal pressure in the lamp is between 10 and 20 bar. These lamps can be compared with HMI lamps. The main differences are that the MSR lamps are single-ended and dimmable with the feature of stable colour temperature.

- Colour temperature 5600 K, slightly below the black body line, in order to match film sensitivity.
- High luminous efficacies, between 80 and 96 lm/W.
- Dimmable to 40% of lamp power with stable colour temperature (30% of light output).
- Universal burning position.
- Continuous spectrum.
- Colour rendering index constant throughout life.
- Average change of colour temperature over life approximately 50 K/100 hours.
- Axial arc with single-ended lamp base giving optimum efficiency in optical systems.
- Light centre length, tolerance only ± 1 mm.
- Low re-strike voltage when the lamps are cold.
- Hot re-strike capability with 575 HR, 1200 HR and 2500 HR.
- Hot re-strike lamps may be run from non-hot re-strike ballast/starter combinations.

Applications

- Colour television, indoor/outdoor filming
- Film studio lighting
- Theatre stage lighting
- Large overhead projector lighting
- Disco effect lighting

Type	Initial luminous flux lm	Luminous efficacy lm/W	Arc length mm	Colour rendering index Ra min	Colour temp. K
MSR 400	32000	80	6	92	5600
MSR 700	56000	80	8	95	5600
MSR 1200	110000	91	10	95	5600
MSR 575 HR	49000	85	7	95	5600
MSR 1200 HR	110000	91	10	95	5600
MSR 2500 HR	240000	96	14	95	5600

Type	CIE chromaticity coordinates		UV output W	Maintenance at end of life (%) 3h/1h	Minimum power level with stable colour temp. W
	x	y			
MSR 400	330	330	40	80	160
MSR 700	330	330	70	90	280
MSR 1200	330	330	100	90	480
MSR 575 HR	330	330	50	90	230
MSR 1200 HR	330	330	100	90	480
MSR 2500 HR	330	330	200	90	1000

Type	Lamp wattage ¹⁾ nom./max W	Nom. lamp current ²⁾ A	Lamp voltage V	Base
MSR 400	400/450	6.9	67	GX 9.5
MSR 700	700/800	11.0	72	G22/28 x 42
MSR 1200	1200/1400	13.8	100	G22/30 x 53
MSR 575 HR	575/600	6.95	95	G22
MSR 1200 HR	1200/1400	13.8	100	G38
MSR 2500 HR	2500/2800	25.6	115	G38

Type	Burning position	Average life h ³⁾	Replacement after hours ⁴⁾	Ordering number
MSR 400	any	650	750	9280 779 051
MSR 700	any	1000	1200	9280 780 051
MSR 1200	any	800	1000	9280 781 051
MSR 575 HR	any	750	1000	8222 341 441
MSR 1200 HR	any	800	1000	8222 341 440
MSR 2500 HR	any	500	750	8222 341 439

¹⁾ Maximum acceptable wattage for short periods.

²⁾ Current as measured on conventional copper/iron ballasts. However, electronic ballasts have a power factor of 1, so the lamp current will be approx. 13% less.

³⁾ Based on cycle of 3 hours on/1 hour off, nominal wattage.

⁴⁾ In view of increased shattering risk.



Fig. 1



Fig. 2



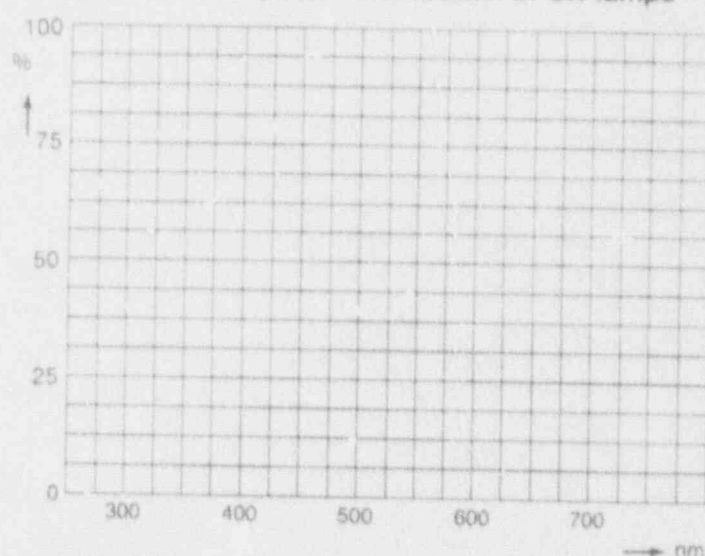
Fig. 3



Fig. 4

The SN tin halide short-arc lamps are light sources with excellent colour rendering properties. The molecular radiation gives rise to a quasi-continuous spectrum. Applications are many: overhead and daylight slide projection, studio and stage lighting, microscopy, copyboard lighting etc.

Relative spectral power distribution of SN lamps



Electrical and ordering data

Type	Lamp wattage W	Lamp current A	Lamp voltage V	Base	Burning position ¹⁾	Average life ²⁾ h	Ignition peak voltage V	Initial luminous flux lm	Luminous efficacy lm/W	Arc dimensions mm	Colour rendering Ra min	Colour temp. K	Data CIE chromaticity coordinates ³⁾ x y	Ordering number
SN 250	220	3.5	75	GY 8.5	any	750	1 500 ⁴⁾	12 000	55	2 x 5	85	5500	0.332 0.348	9281 600 051
SN 500	440	6.8	75	GX 9.5	any	750	1 500 ⁴⁾	27 000	61	3 x 7	85	5500	0.332 0.348	9281 601 051
SN 500 HR ⁵⁾	440	6.8	75	GX 9.5+Fa4	any	750	35 000 ⁶⁾	27 000	61	3 x 7	85	5500	0.332 0.348	8222 341 117
SN 1000	880	13.5	75	QY 16	any	750	1 500 ⁴⁾	56 000	62	4 x 11	85	5500	0.332 0.348	9281 602 051

¹⁾ Horizontal with stem top position

²⁾ Three hours per switching

³⁾ HR: hot restrike

⁴⁾ Min. 200 µsec. - min. 2° peaks per half cycle between 60° and 90°

⁵⁾ Min. 10 peaks per half cycle between 60° and 90°

SN tin halide lamps



HPA 400



HPA 400/30

HPA

Definition

An HPA medium-pressure metal halide lamp with iron and cobalt additives. The lamp is ozone-free and emits radiation mainly between 300 and 400 nm.

Description

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

The high quality of these lamps is expressed in their:

- long average lamp life
- high radiant efficiency
- excellent UV-A output maintenance

Applications

HPA lamps are extremely suitable for many photo-chemical processes such as plate-making in the reprographic industry, UV lacquer curing and printed circuits. Although these lamps emit long, medium and short-wave UV radiation, they are suitable for suntanning, provided that a proper filter is used to cut out all UV-B and UV-C and possibly the visible light.

For correct and optimum operation of the lamps, when used in equipment, forced cooling is required to keep the lamp temperature within the necessary limits.

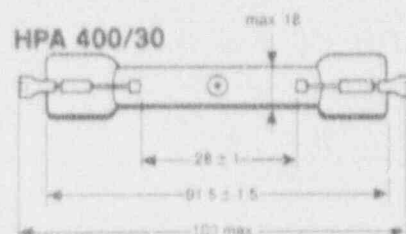
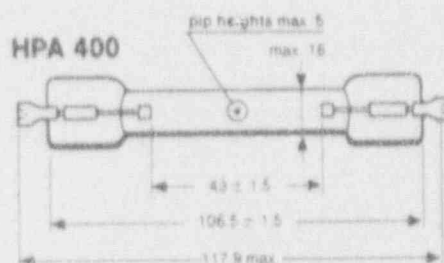
Electrical and ordering data

Type	Nominal lamp wattage W	Lamp voltage V	Lamp current A	Min. supply voltage V	Run-up time min.	Life h ¹⁾	Radiation maintenance % ₂	Base	Min. bulb temp °C	Max. bulb temp °C	Max. pinch temp °C	Burning position	Radiation output ³⁾ $\mu\text{W}/\text{cm}^2$			Ordering number
													UV-A	UV-B	UV-C	
HPA 400	400	126±15	2.5	198	4	750	75	R7s	750	950	350	horiz. ±10°	1000	320	50	9280 750 060
HPA 400/30	380	133±15	3.1	198	4	750	75	R7s	750	950	350	horiz. ±10°	900	320	50	9280 755 060

¹⁾ At 5% failures. ²⁾ At the end of life. ³⁾ Measured at 1.00m distance.

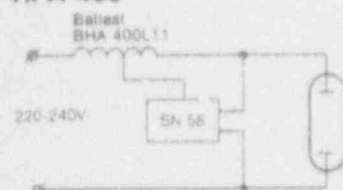
Medium-pressure metal halide lamps

Dimensions

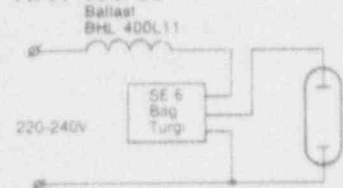


Circuit diagrams

HPA 400



HPA 400/30



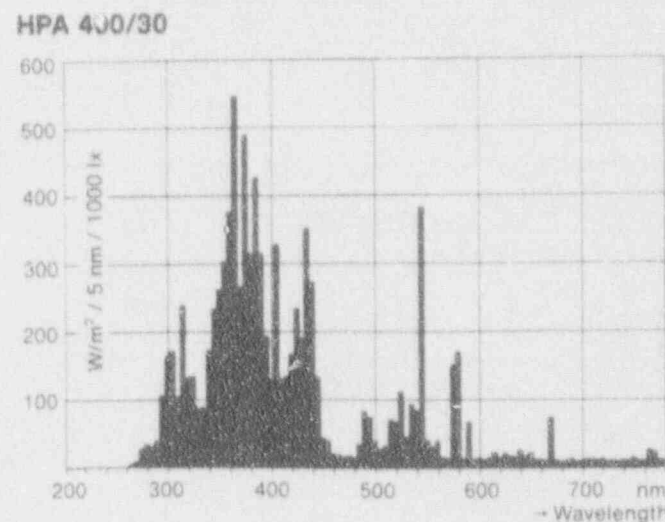
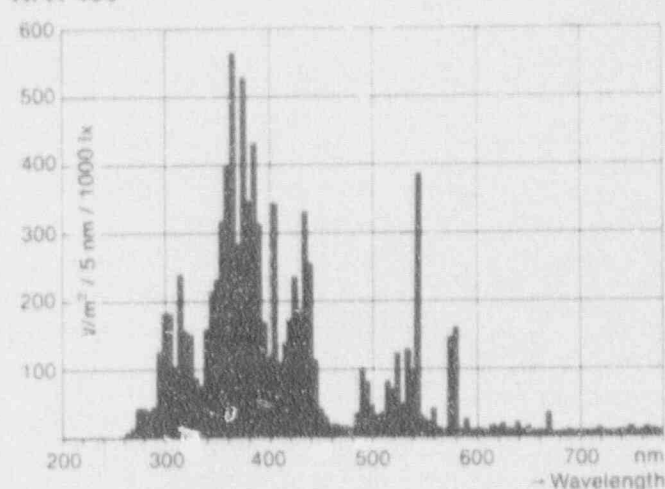
Ordering data accessories

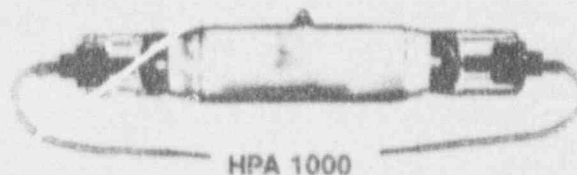
Lamp	Ballast	Ignitor
HPA 400	BHA 400L11 9136 049 503	SN 58 9136 195 799
HPA 400/30	BHL 400L11 9136 049 203	SE 6 Bag Turqi

Packing data

Type	Ordering number	Weight g	Packing unit			
			Qty	Gross weight kg	Dimensions cm	Volume m ³
HPA 400	9280 750 080	17	4	0.29	30x10x11	0.0033
HPA 400/30	9280 755 080	14	4	0.29	30x10x11	0.0033

Normalized spectral irradiance distribution at 1,50 metres





HPA 1000



HPA 1000/20

HPA

Definition

An HPA medium-pressure metal halide lamp with iron and cobalt additives. The lamp is ozone-free and emits radiation mainly between 300 and 400 nm.

Description

HPA lamps are made of ozone-free quartz and are so constructed as to give optimum UV-A radiation. They also emit short-wave UV-B and UV-C, which harmful to human eyes and skin.

The high quality of these lamps is expressed in their:

- long average lamp life
- high radiant efficiency
- excellent UV-A output maintenance

Applications

HPA lamps are extremely suitable for many photo-chemical processes such as plate-making in the reprographic industry, UV lacquer curing and printed circuits. Although these lamps emit long, medium and short-wave UV radiation, they are suitable for suntanning, provided that a proper filter is used to cut out all UV-B and UV-C and possibly the visible light.

For correct and optimum operation of the lamps, when used in equipment, forced cooling is required to keep the lamp temperature within the necessary limits.

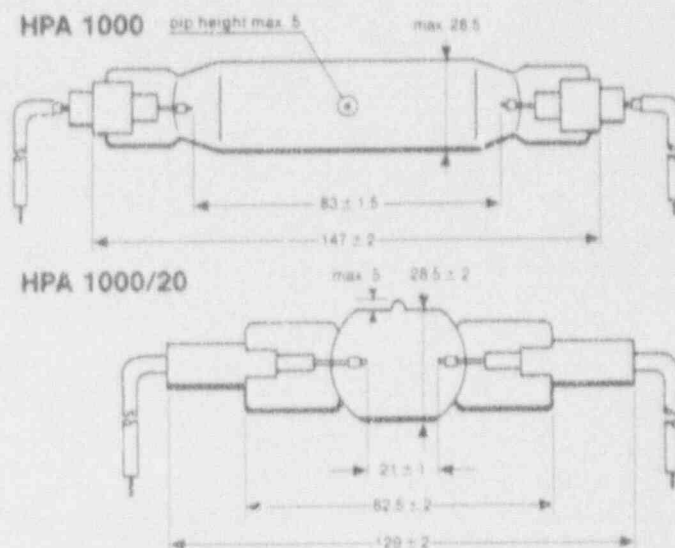
Electrical and ordering data

Type	Nominal lamp wattage W	Lamp voltage V	Lamp current A	Min. supply voltage V	Run-up time min	Life h ¹⁾	Radiation maintenance % ²⁾	Base	Min. bulb temp °C	Max. bulb temp °C	Max. pinch temp °C	Burning position	Radiation output ³⁾ µW/cm ²			Ordering number
													UV-A	UV-B	UV-C	
HPA 1000	930	133 ± 15	8	198	3	750	85	cap + cable	750	950	350	horiz. ± 10°	2500	900	230	9280 753 051
HPA 1000/20	1100	120 ± 10	10.5	198	3	750	85	cap + cable	750	950	350	horiz. ± 10°	2700	1100	250	9280 756 080

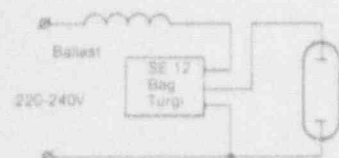
¹⁾ At 5% failures. ²⁾ At the end of life. ³⁾ Measured at 1,00m distance.

Medium-pressure metal halide lamps

Dimensions



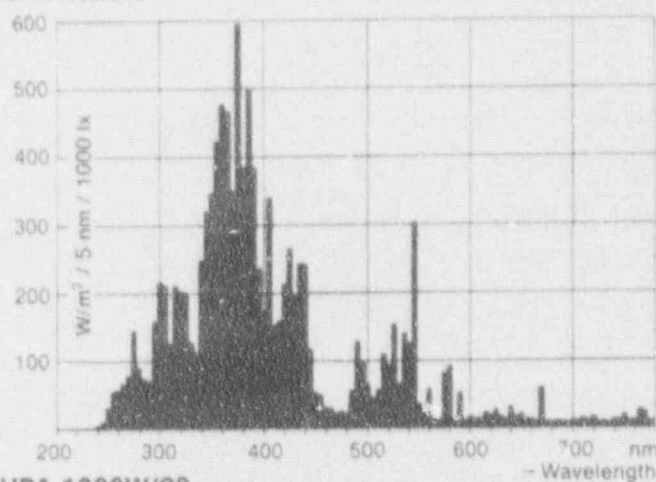
Circuit diagram



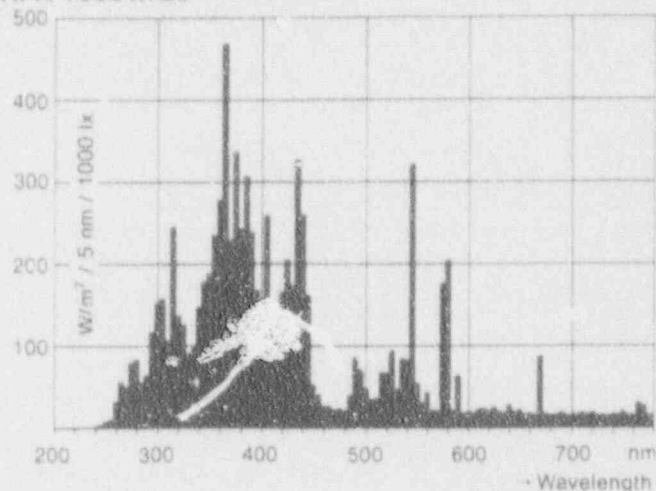
HPA 1000 and HPA 1000/20

Normalized spectral irradiance distribution at 3,00 metres

HPA 1000W



HPA 1000W/20



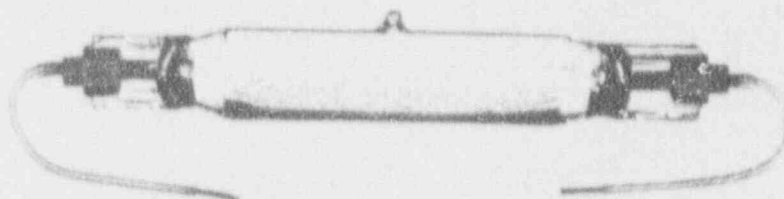
Ordering data accessories

Lamp	Ballast	Ignitor
HPA 1000	BHL 1000L02 9136 060 103	SE 12 Bag Turp
HPA 1000/20		SE 12 Bag Turp

1) To be determined by user.

Packing data

Type	Ordering number	Weight g	Packing unit			
			Qty	Gross weight kg	Dimensions cm	Volume m ³
HPA 1000	9280 753 051	50	4	0.31	30x10x11	0.0033
HPA 1000/20	9280 756 060	33	4	0.31	30x10x11	0.0033



HPA

Definition

An HPA medium-pressure metal halide lamp with iron and cobalt additives. The lamp is ozone-free and emits radiation mainly between 300 and 400 nm.

Description

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

The high quality of these lamps is expressed in their:

- long average lamp life
- high radiant efficiency
- excellent UV-A output maintenance

Applications

HPA lamps are extremely suitable for many photochemical processes such as plate-making in the reprographic industry, UV lacquer curing and printed circuits. Although these lamps emit long, medium and short-wave UV radiation, they are suitable for suntanning, provided that a proper filter is used to cut out all UV-B and UV-C and possibly the visible light.

For correct and optimum operation of the lamps, when used in equipment, forced cooling is required to keep the lamp temperature within the necessary limits.

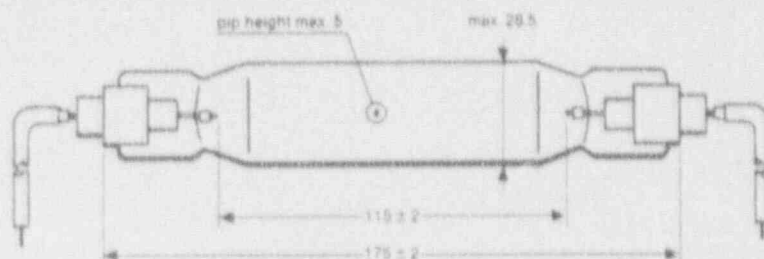
Electrical and ordering data

Type	Nominal lamp wattage W	Lamp voltage V	Lamp current A	Min. supply voltage V	Run-up time min.	Life h ¹⁾	Radiation maintenance % ²⁾	Base	Min. bulb temp. °C	Max. bulb temp. °C	Max. pinch temp. °C	Burning position	Radiation output ³⁾ $\mu\text{W}/\text{cm}^2$			Ordering number
													UV-A	UV-B	UV-C	
HPA 2000	1750	265 \pm 15	7.6	342	3	750	85	cap + cable	750	950	350	horiz $\pm 10^\circ$	4800	900	450	9280 754 051

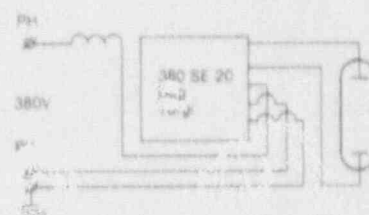
¹⁾ At 5% failures. ²⁾ At the end of life. ³⁾ Measured at 1.00m distance.

Medium-pressure metal halide lamp

Dimensions



Circuit diagram



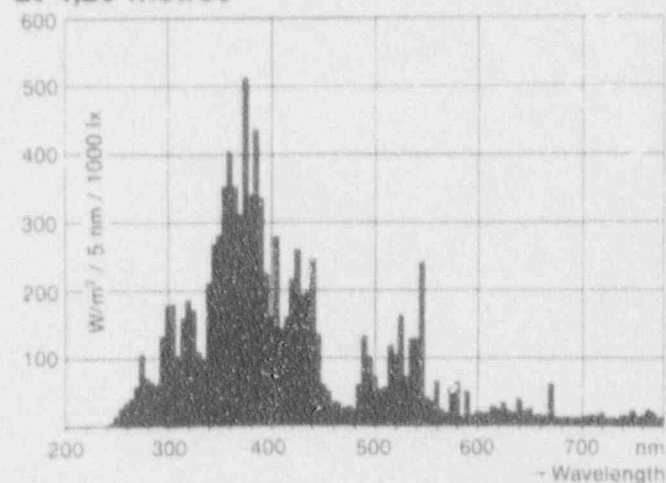
Ordering data accessories

Ballast	Ignitor
BHL 2000 L 18 (380V) 9136 070 089	380 SE 20 Bag Turpi

Packing data

Type	Ordering number	Weight g	Packing unit			
			Qty	Gross weight kg	Dimensions cm	Volume m ³
HPA 2000	9280 754 051	56	4	0.21	30x10x11	0.0033

Normalized spectral irradiance distribution at 4,20 metres

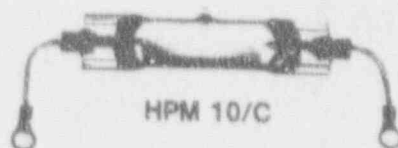




HPM 10



HPM 10/B



HPM 10/C

HPM

Definition

High-pressure metal halide lamps for photochemical processes.

Description

An HPM high-pressure metal halide lamp with lead and gallium iodide additives. The lamp is made of ozone-free quartz and suitable for a wide range of applications.

- For optimum operation of the lamp, forced cooling is required in order to keep bulb and pinch temperatures within the given tolerances.
- Lamps operating at higher wattages than nominal may be subject to reduced useful life.

Applications

HPM lamps, with an activation wavelength between 320 and 440 nm, are designed for all kinds of photochemical processes. They are intended particularly for application in plate-making and the manufacture of printed circuits and micro-fiche duplicating.

Electrical and ordering data

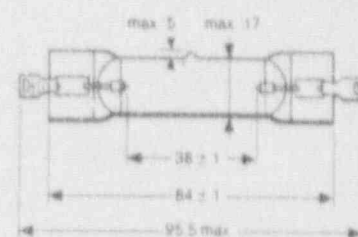
Type	Nominal lamp wattage W	Lamp voltage V	Lamp current A	Min. supply voltage V	Run-up time min	Life h ¹⁾	Radiation maintenance % ²⁾	Base	Min. bulb temp °C	Max. bulb temp °C	Max. pinch temp °C	Burning position	Radiation output µW cm ⁻² 320-450nm UV-A ³⁾	Ordering number
HPM 10	400	125 ± 10	3.5	198	3	750	85	R7s	750	950	350	horiz. ± 10°	900	9290 705 051
HPM 10/B	400	125 ± 10	3.5	198	3	750	85	barrel ends	750	950	350	horiz. ± 10°	900	P280 706 051
HPM 10/C	400	125 ± 10	3.5	198	3	750	85	cap. + cable	750	950	350	horiz. ± 10°	900	8222 341 263

¹⁾ At 5% failures. ²⁾ At the end of life. ³⁾ Measured at 1.00m distance.

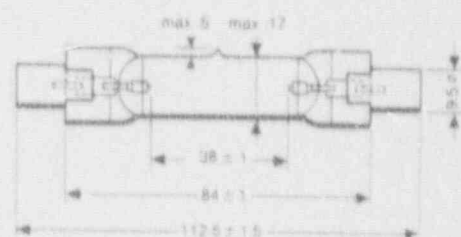
High-pressure metal halide lamps

Dimensions

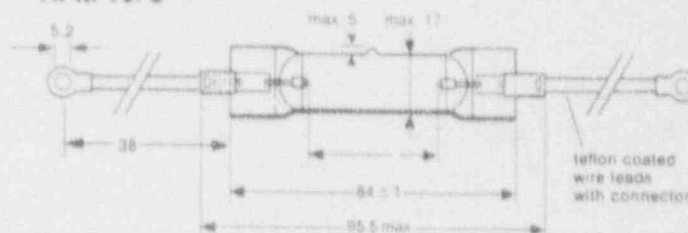
HPM 10



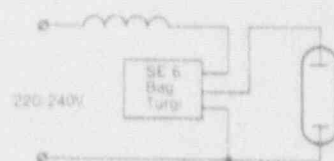
HPM 10/B



HPM 10/C



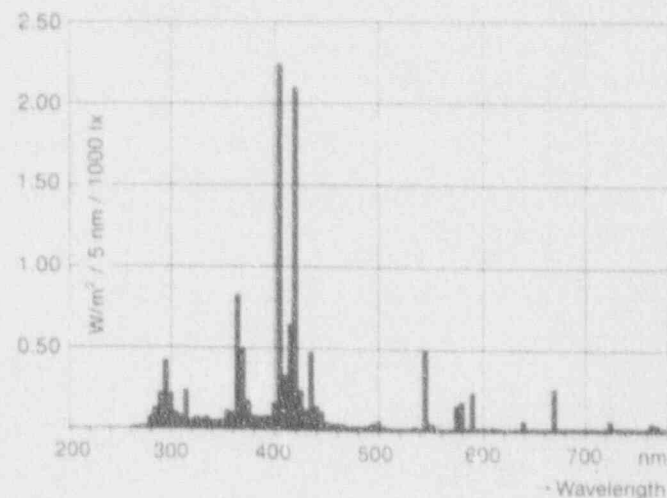
Circuit diagram



Ordering data accessories

Ballaat	Ignitor
BHL 400L11	SE 6 Bag Turgi
9136 049 203	

Normalized spectral irradiance distribution at 1.50 metres



Packing data

Type	Ordering number	Packing unit				
		Qty	Nett weight kg	Gross weight kg	Dimensions cm	Volume m ³
HPM 10	9290 705 051	4	0.14	0.60	24x17x18	0.007
HPM 10/B	9280 706 051	4	0.14	0.60	24x17x18	0.007
HPM 10/C	9222 341 263	4	0.20	0.84	24x17x18	0.007



HPM

Definition

High-pressure metal halide lamp for photochemical processes.

Description

An HPM high-pressure metal halide lamp with lead and gallium iodide additives. The lamp is made of ozone-free quartz and suitable for a wide range of applications.

- For optimum operation of the lamp, forced cooling is required in order to keep bulb and pinch temperatures within the given tolerances.
- Lamps operated at higher wattages than nominal may be subject to reduced useful life.

Applications

HPM lamps, with an activation wavelength between 320 and 440 nm, are designed for all kinds of photochemical processes. They are intended particularly for application in plate-making and the manufacture of printed circuits.

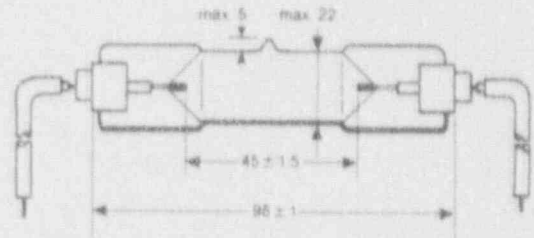
Electrical and ordering data

Type	Nominal lamp wattage W	Lamp voltage V	Lamp current A	Min. supply voltage V	Run-up time min.	Life h ¹⁾	Radiation maintenance % ²⁾	Base	Min. bulb temp °C	Max. bulb temp °C	Max. pinch temp °C	Burning position	Radiation output $\mu\text{W}/\text{cm}^2$ 320-450nm UV-A ³⁾	Ordering number
HPM 12	460	120 \pm 10	4.1	198	5	750	80	cap. + cable	750	950	350	horiz. \pm 10°	1000	928C 728 051

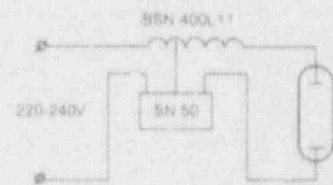
¹⁾ At 5% failures. ²⁾ At the end of life. ³⁾ Measured at 1.00m distance.

High-pressure metal halide lamp

Dimensions



Circuit diagram



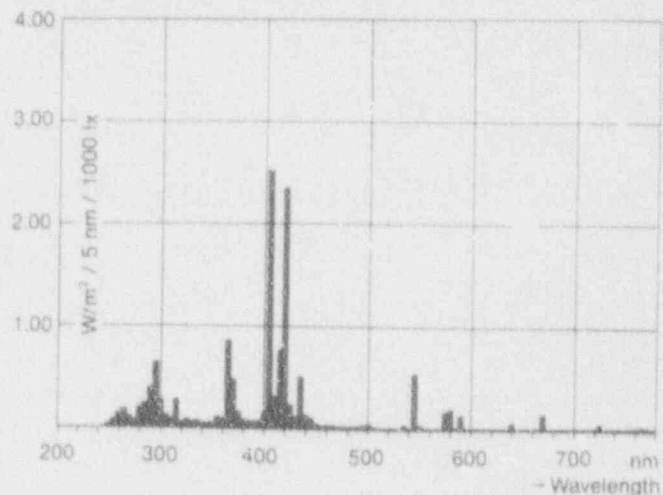
Ordering data accessories

Ballast	Ignitor
BSN 400L11	SN 50
9136 230 203	9136 160 103

Packing data

Type	Ordering number	Packing unit				
		Qty	Nett weight kg	Gross weight kg	Dimensions cm	Volume m³
HPM 12	9280 729 051	4	0.14	0.60	24x17x18	0.007

Normalized spectral irradiance distribution at 1,50 metres





HPM

Definition

High-pressure metal halide lamp for photochemical processes.

Description

An HPM high-pressure metal halide lamp with lead and gallium iodide additives. The lamp is made of ozone-free quartz and suitable for a wide range of applications.

- For optimum operation of the lamp, forced cooling is required in order to keep bulb and pinch temperatures within the given tolerances.
- Lamps operated at higher wattages than nominal may be subject to reduced useful life.

Applications

HPM lamps, with an activation wavelength between 320 and 440 nm, are designed for all kinds of photochemical processes. They are intended particularly for application in plate-making and the manufacture of printed circuits.

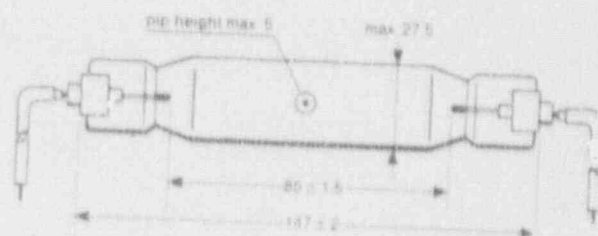
Electrical and ordering data

Type	Nominal lamp wattage W	Lamp voltage V	Lamp current A	Min. supply voltage V	Run-up time min	Life h ¹⁾	Radiation maintenance % ²⁾	Base	Min. bulb temp °C	Max. bulb temp °C	Max. pinch temp °C	Burning position	Radiation output $\mu\text{W}/\text{cm}^2$ 320-450nm UV-A ³⁾	Ordering number
HPM 13	1000	135 \pm 10	8	198	3	750	75	cap + cable	750	950	350	horiz \pm 10°	23u0	9280 744 051

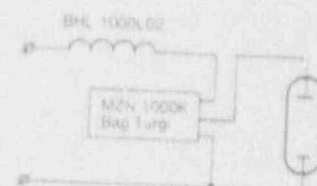
¹⁾ At 5% failures. ²⁾ At the end of life. ³⁾ Measured at 1,00m distance.

High-pressure metal halide lamp

Dimensions



Circuit diagram



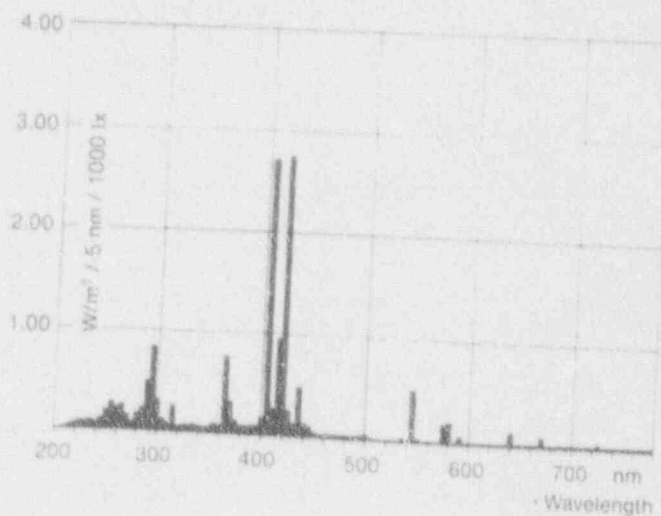
Ordering data accessories

Ballast	Ignitor
BHL 1000L02	MZN 1000 K Bag Tung
9138 060 103	

Packing data

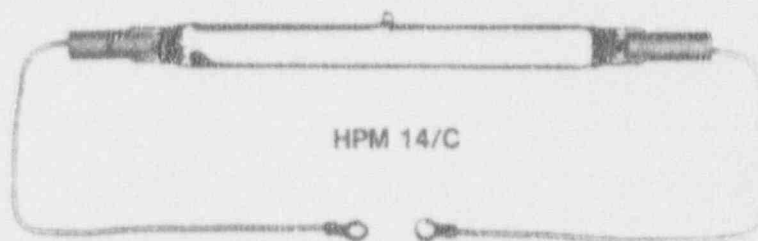
Type	Ordering number	Packing unit				
		Qty	Nett weight kg	Gross weight kg	Dimensions cm	Volume m ³
HPM 13	5260 722 051	4	0.36	1.09	24x17x18	0.007

Normalized spectral irradiance distribution at 3.00 metres





HPM 14/B



HPM 14/C

HPM

Definition

High-pressure metal halide lamp for photochemical processes.

Description

An HPM high-pressure metal halide lamp with lead and gallium iodide additives. The lamp is made of ozone-free quartz and suitable for a wide range of applications.

- For optimum operation of the lamp, forced cooling is required in order to keep bulb and pinch temperatures within the given tolerances.
- Lamps operating at higher wattages than nominal may be subject to reduced useful life.

Applications

HPM lamps, with an activation wavelength between 320 and 440 nm, are designed for all kinds of photochemical processes. They are intended particularly for application in plate-making and the manufacture of printed circuits.

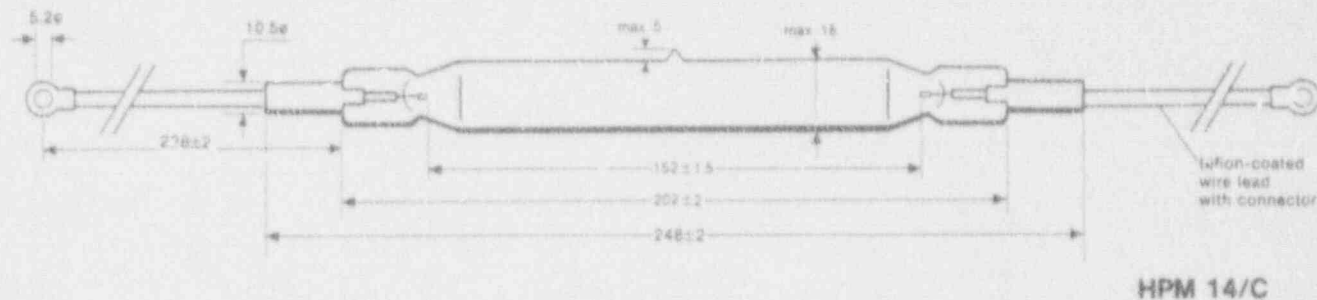
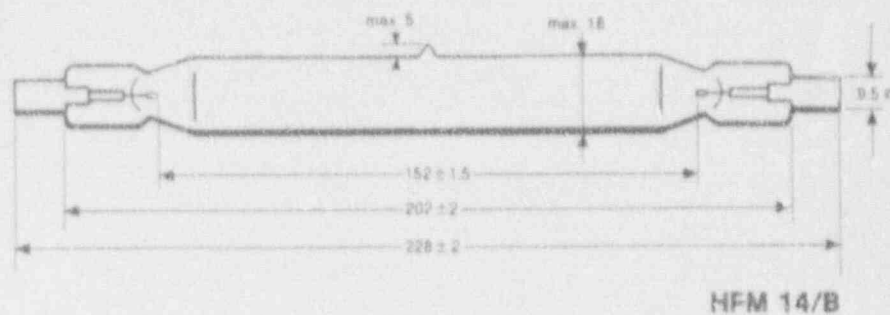
Electrical and ordering data

Type	Nominal lamp wattage W	Lamp voltage V	Lamp current A	Min. supply voltage V ¹⁾	Run-up time min.	Life h ²⁾	Radiation maintenance % ³⁾	Base	Min. bulb temp °C	Max. bulb temp °C	Max. pinch temp °C	Burning position	Radiation output $\mu\text{W}/\text{cm}^2$ 320-450nm UV-A ⁴⁾	Ordering number
HPM 14/B	1200	500 \pm 40	2.6	-10%	3	750	80	barrel ends	750	950	350	horiz. $\pm 10^\circ$	3000	8222 341 188
HPM 14/C	1200	500 \pm 40	2.6	-10%	3	750	30	cap + cable	750	950	350	horiz. $\pm 10^\circ$	3000	8222 341 200

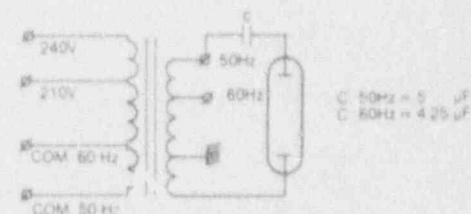
¹⁾ At 5% failures. ²⁾ At the end of life. ³⁾ Measured at 1.00m distance. ⁴⁾ -10% of mains nominal.

High-pressure metal halide lamps

Dimensions



Circuit diagram



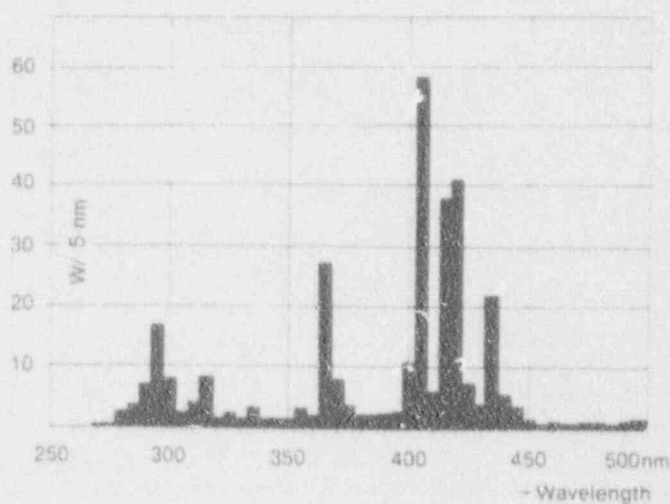
Ordering data accessories

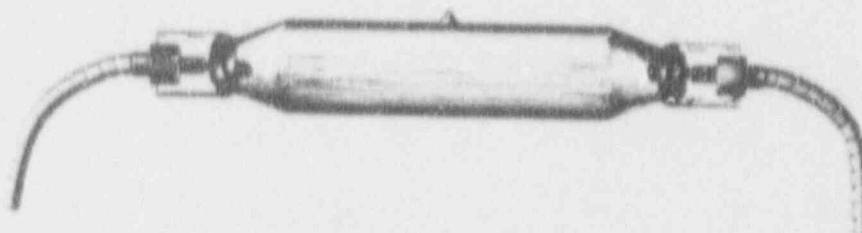
Ballast	Ignitor
SHAPE MAGNETRONICS Type: P/N W 4032 or equivalent	not required

Packing data

Type	Ordering number	Packing unit				
		Qty	Nett weight kg	Gross weight kg	Dimensions cm	Volume m ³
HFM 14/B	8222 341 188	4	0.36	1.09	37x17x18	0.011
HPM 14/C	8222 341 250	4	0.36	1.09	37x17x18	0.011

Absolute spectral power distribution





HPM

Definition

High-pressure metal halide lamp for photochemical processes.

Description

An HPM high-pressure metal halide lamp with lead and gallium iodide additives. The lamp is made of ozone-free quartz and suitable for a wide range of applications.

- For optimum operation of the lamp, forced cooling is required in order to keep bulb and pinch temperatures within the given tolerances.
- Lamps operating at higher wattages than nominal may be subject to reduced useful life.

Applications

HPM lamps, with an activation wavelength between 320 and 440 nm, are designed for all kinds of photochemical processes. They are intended particularly for application in plate-making and the manufacture of printed circuits.

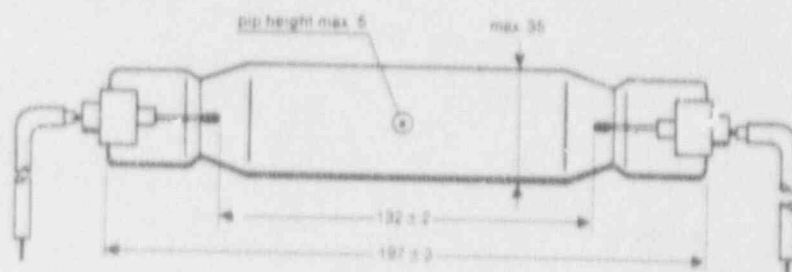
Electrical and ordering data

Type	Nominal lamp wattage W	Lamp voltage V	Lamp current A	Min. supply voltage V	Run-up time min	Life h ¹⁾	Radiation maintenance % ²⁾	Base	Min. bulb temp. °C	Max. bulb temp. °C	Max. pinch temp. °C	Burning position	Radiation output $\mu\text{W}/\text{cm}^2$ 320-450nm UV-A ³⁾	Ordering number
HPM 10	2000 ⁴⁾	240 ± 15	9	342	3	750	75	cap + cable	750	950	350	horiz ± 10°	4000	9280 728 051

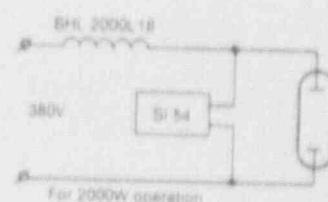
¹⁾ At 5% failures. ²⁾ At 1/2 end of life. ³⁾ Measured at 1.00m distance. ⁴⁾ Operate from 1000 to 4000W

High-pressure metal halide lamp

Dimensions



Circuit diagram



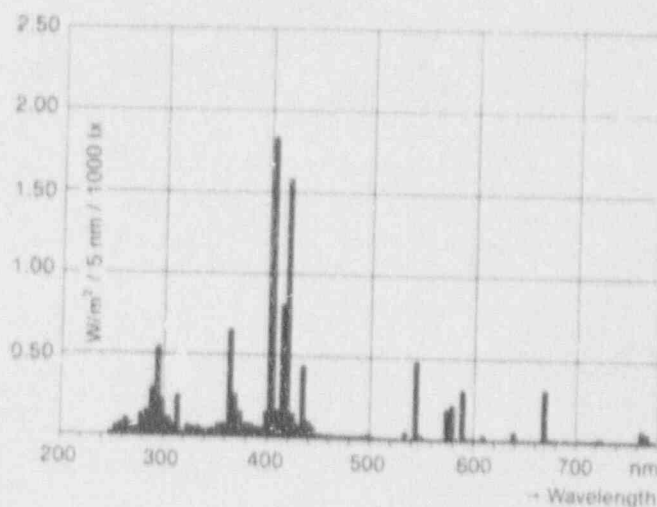
Ordering data accessories

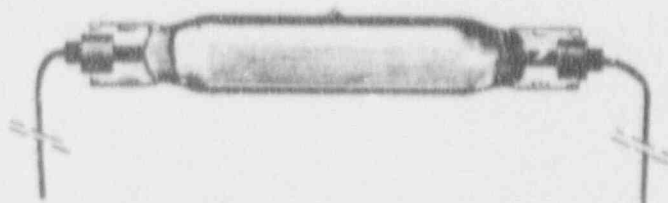
Ballast	Ignitor
BHL 2000L18	Si 54
9136 070 089	9136 191 499
or equivalent	or Walter Bauch, Berlin, type 250 K

Packing data

Type	Ordering number	Packing unit			
		Qty	Nett weight kg	Gross weight kg	Dimensions cm
HPM 15	9280 728 051	4	0.36	1.09	37x17x18
					Volume m ³
					0.011

Normalized spectral irradiance distribution at 4,20 metres (2000 W)





HPM

Definition

High-pressure metal halide lamp for photochemical processes.

Description

An HPM high-pressure metal halide lamp with lead and gallium iodide additives. The lamp is made of ozone-free quartz and suitable for a wide range of applications.

- For optimum operation of the lamp, forced cooling is required in order to keep bulb and pinch temperatures within the given tolerances.
- Lamps operating at higher wattages than nominal may be subject to reduced useful life.

Applications

HPM lamps, with an activation wavelength between 320 and 440 nm, are designed for all kinds of photochemical processes. They are intended particularly for application in plate-making and the manufacture of printed circuits.

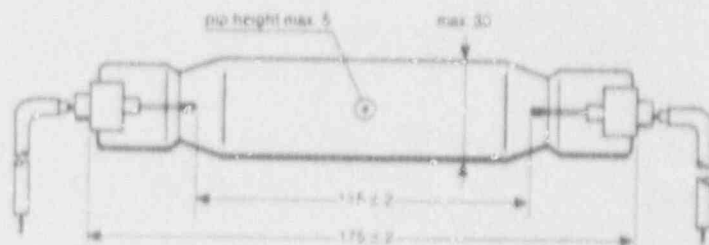
Electrical and ordering data

Type	Nominal lamp wattage W	Lamp voltage V	Lamp current A	Min. supply voltage V	Run-up time min	Life h ¹⁾	Radiation maintenance % ²⁾	Base	Min. bulb temp. °C	Max. bulb temp. °C	K ² x pinch temp. °C	Burning position	Radiation output $\mu\text{W}/\text{cm}^2$ 320-450nm UV-A ³⁾	Ordering number
HPM 17	2000 ⁴⁾	220 \pm 15	8.7	342	2	750	75	cap + cable	750	950	350	horiz \pm 10°	5000	9280 727 051

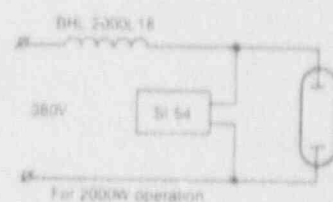
¹⁾ At 5% failures. ²⁾ At the end of life. ³⁾ Measured at 1.00m distance. ⁴⁾ Operate from 1000 to 4000W.

High-pressure metal halide lamp

Dimensions



Circuit diagram



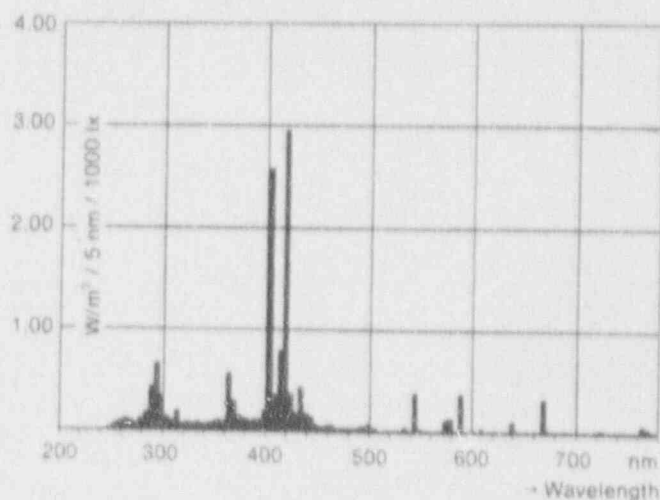
Ordering data accessories

Ballast	Ignitor
BHL 2000L 18	SI 54
9136 070 089	9136 151 499
or equivalent	or Walter Baue, Berlin, type 250 K

Packing data

Type	Ordering number	Packing unit			
		Qty	Net weight kg	Gross weight kg	Dimensions cm
HPM 17	9280 727 051	4	0.90	1.09	37x17x18
					Volume m ³
					0.011

Normalized spectral irradiance distribution at 4.20 metres (2000 W)

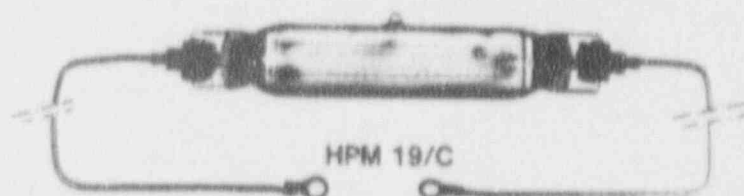




HPM 19 BT



HPM 19 NA



HPM 19/C

HPM

Definition

High-pressure metal halide lamps for photochemical processes.

Description

An HPM high-pressure metal halide lamp with lead and gallium iodide additives. The lamp is made of ozone-free quartz and suitable for a wide range of applications.

- For optimum operation of the lamp, forced cooling is required in order to keep bulb and pinch temperatures within the given tolerances.
- Lamps operating at higher wattages than nominal may be subject to reduced useful life.

Applications

HPM lamps, with an activation wavelength between 320 and 440 nm, are designed for all kinds of photochemical processes. They are intended particularly for application in plate-making and the manufacture of printed circuits.

Electrical and ordering data

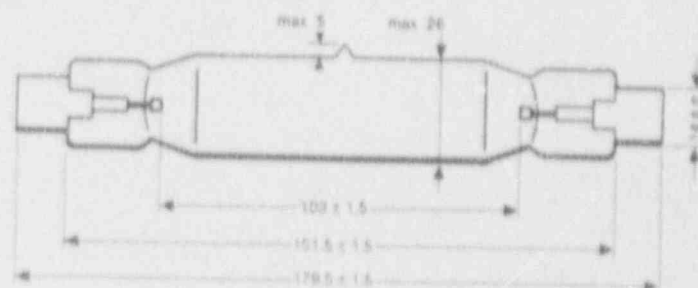
Type	Nominal lamp wattage W	Lamp voltage V	Lamp current A	Min. supply voltage V ¹⁾	Run-up time min	Life h ²⁾	Radiation maintenance % ³⁾	Base	Min bulb temp °C	Max bulb temp °C	Max pinch temp °C	Burning position	Radiation output μW/cm ² 320-450nm UV-A ⁴⁾	Ordering number
HPM 19 BT	2000	200 ± 15	11	-10%	3	750	80	barrel ends 9.5ø	750	950	350	horiz. ± 10°	5000	9280 748 060
HPM 19 NA	2000	200 ± 15	11	-10%	3	750	80	barrel ends 14.4ø	750	950	350	horiz. ± 10°	5000	9280 749 060
HPM 19/C	2000	200 ± 15	11	-10%	3	750	80	cap + cable	750	950	350	horiz. ± 10°	5000	8222 341 236

¹⁾ At 5% failures. ²⁾ At the end of life. ³⁾ Measured at 1,00m distance. ⁴⁾ -10% of mains nominal.

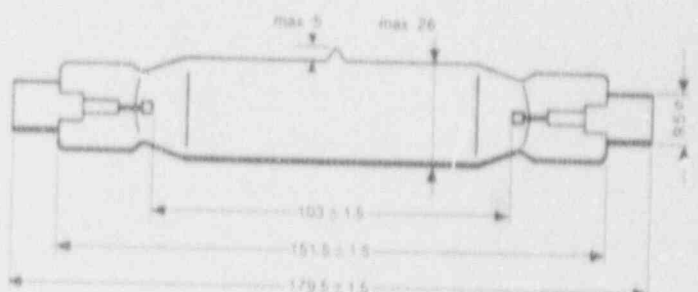
High-pressure metal halide lamps

Dimensions

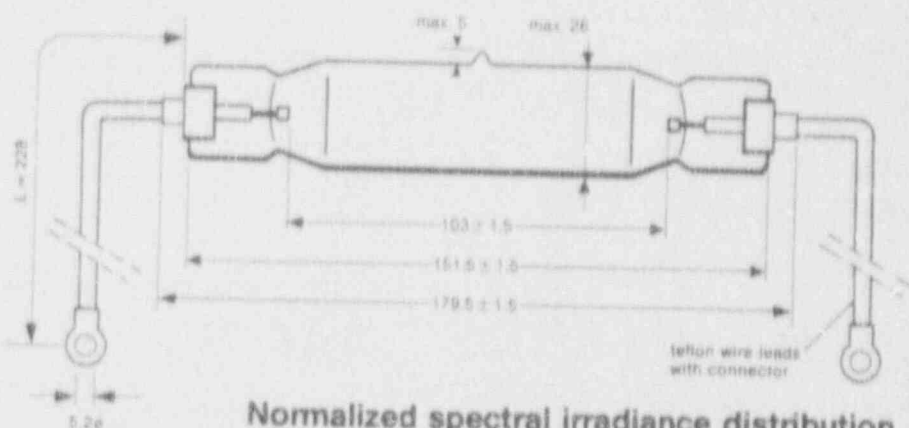
HPM 19 NA



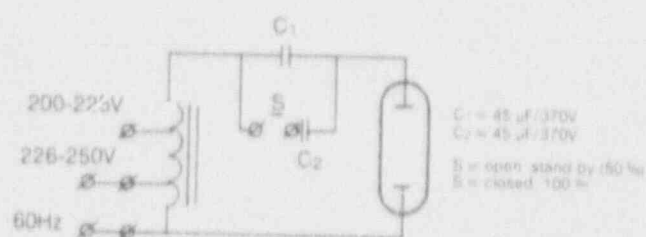
HPM 19 BT



HPM 19/C



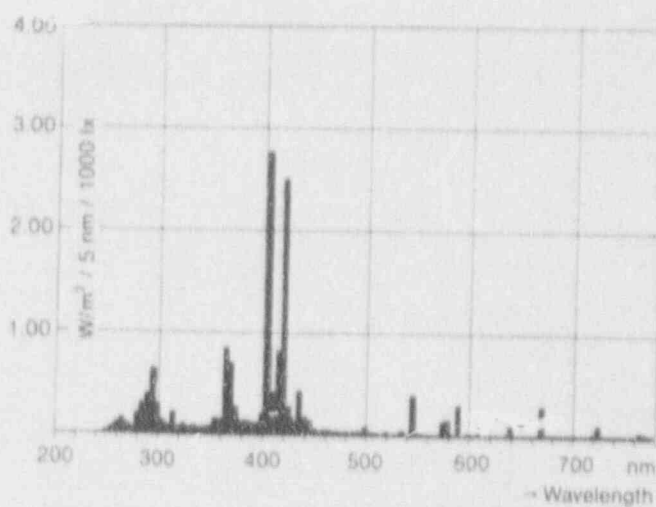
Circuit diagram



Packing data

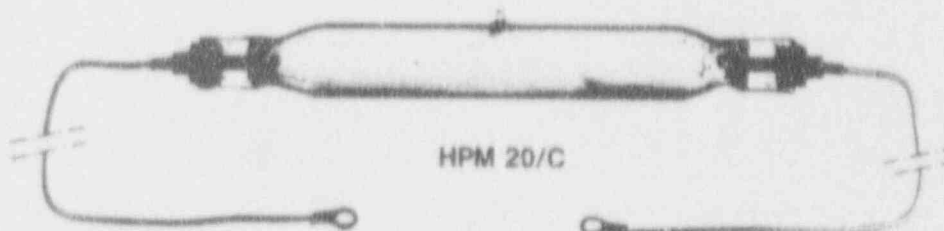
Type	Ordering number	Packing unit				
		Qty	Net weight kg	Gross weight kg	Dimensions cm	Volume m ³
HPM 19 BT	9280 748 060	4	0.50	1.09	37x17x18	0.011
HPM 19 NA	9280 749 060	4	0.50	1.09	37x17x18	0.011
HPM 19/B	8222 341 236	4	0.65	1.69	37x17x18	0.011

Normalized spectral irradiance distribution at 4.20 metres





HPM 20/B



HPM 20/C

HPM

Definition

High-pressure metal halide lamp for photochemical processes.

Description

An HPM high-pressure metal halide lamp with lead and gallium iodide additives. The lamp is made of ozone-free quartz and suitable for a wide range of applications.

- For optimum operation of the lamp, forced cooling is required in order to keep bulb and pinch temperatures within the given tolerances.
- Lamps operating at higher wattages than nominal may be subject to reduced useful life.

Applications

HPM lamps, with an activation wavelength between 320 and 440 nm, are designed for all kinds of photochemical processes. They are intended particularly for application in plate-making and the manufacture of printed circuits.

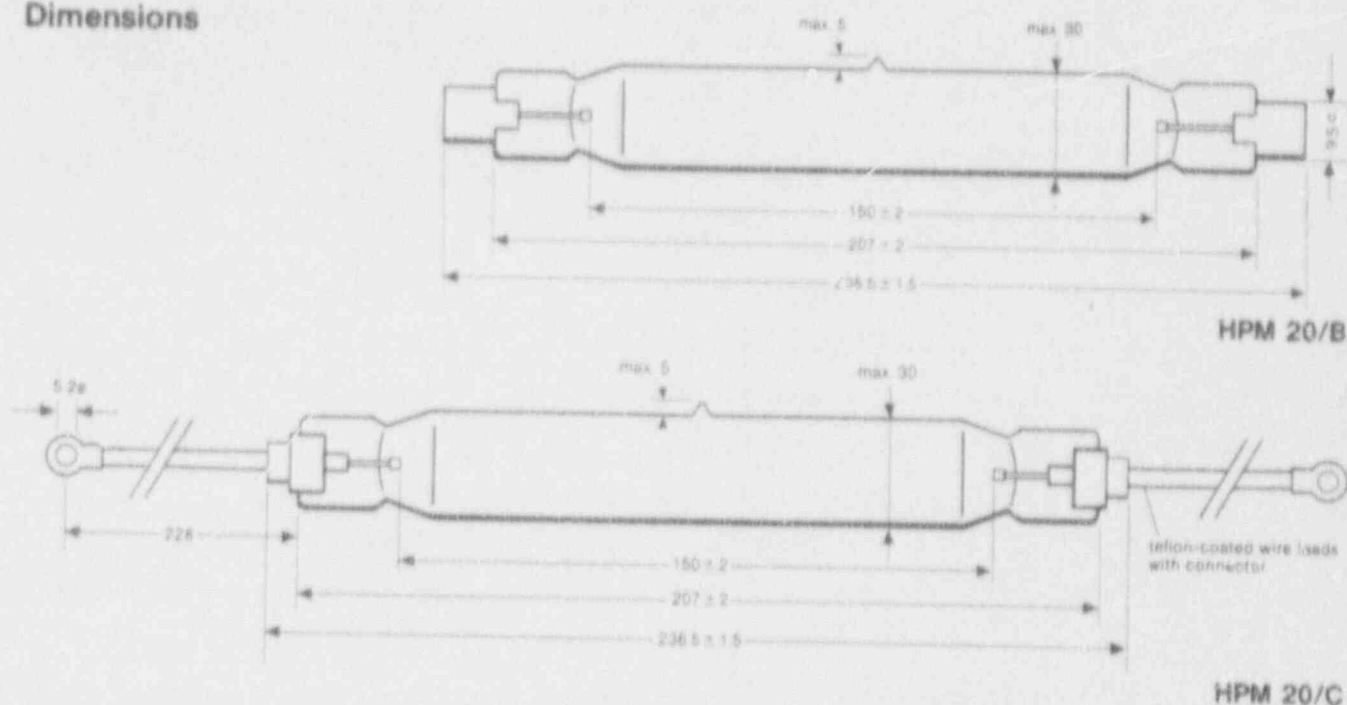
Electrical and ordering data

Type	Nominal lamp wattage W	Lamp voltage V	Lamp current A	Min supply voltage V ¹⁾	Run-up time min	Life h ²⁾	Radiation maintenance % ³⁾	Base	Min. bulb temp. °C	Max. bulb temp. °C	Max. pinch temp. °C	Burning position	Radiation output 320-450nm μW/cm ² (V·A ⁴⁾)	Ordering number
HPM 20/B	3000	350 ± 15	9.7	-10%	2	750	90	barrel ends	750	950	350	hor ± 10°	7500	9280 746 051
HPM 20/C	3000	350 ± 15	9.7	-10%	2	750	90	cable	750	950	350	hor ± 10°	7500	8222 341 201

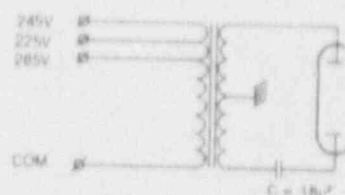
¹⁾ At 5% failures. ²⁾ At the end of life. ³⁾ Measured at 1.00m distance. ⁴⁾ -10% of mains nominal.

High-pressure metal halide lamps

Dimensions



Circuit diagram



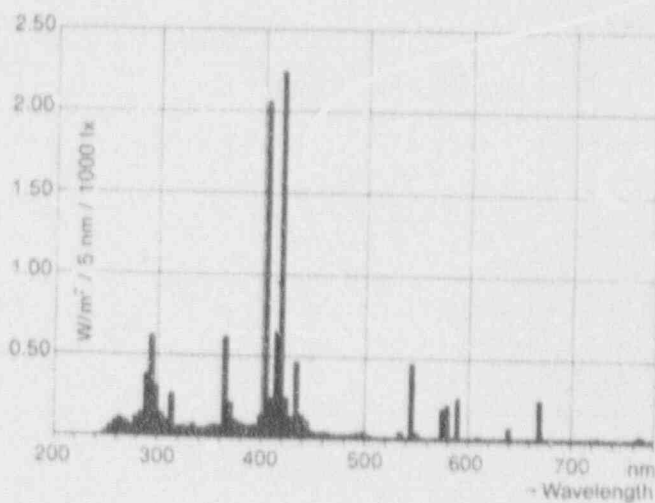
Ordering data accessories

Ballast	Igniter
SHAPE MAGNETRONICS	
Type: ADD/ILL 60101	not required
or equivalent	

Packing data

Type	Ordering number	Packing unit				Volume m ³
		Qty	Nett weight kg	Gross weight kg	Dimensions cm	
HPM 20/B	9280 746 051	4	0.50	1.20	37x17x18	0.011
HPM 20/C	8222 341 201	4	0.65	1.60	37x17x18	0.011

Normalized spectral irradiance distribution at 4.30 metres



CONVERSATION RECORD

TIME

DATE

9/30/92

TYPE

☐ VISIT☐ CONFERENCE☒ TELEPHONE☐ INCOMING☒ OUTGOING

ROUTING

NAME/SYMBOL

INT

Location of Visit/Conference:

NAME OF PERSON(S) CONTACTED OR IN CONTACT
WITH YOUORGANIZATION (Office, dept., bureau,
etc.)

TELEPHONE NO.

Paul Walitzky

Philips

SUBJECT

license amendment

SUMMARY

informal Mr. Walitzky that if they
were amending their possession license
to increase activity for lamp, they
must also amend their distribution
license.

Mr. Walitzky will be sending in
information on lamps to include
with amendment deleting points of
distribution.

ACTION REQUIRED

Wait for information

NAME OF PERSON DOCUMENTING CONVERSATION

SIGNATURE

DATE

Susan L. Greene

Susan L. Greene

10/22/92

ACTION TAKEN

SIGNATURE

TITLE

DATE



PHILIPS

Philips Lighting

September 14, 1992

U.S. Nuclear Regulatory Commission
License Fee and Debt Collection Branch
Mail Stop MNBB 4503
Washington, D.C. 20555

Enclosed please find a check in the amount of \$300.00 for license renewal fee. License #s 29-20609-02E and 29-20609-03.

Thank You.

Sincerely,

Paul Walitsky/kc

Paul Walitsky, CHMM
Manager, Environmental Affairs

U.S. NUCLEAR REG.
COMMISSION

92 SEP 16 AM 9:00

RECEIVED
U.S. NUCLEAR REG.
COMMISSION

Philips Lighting Company

A Division of North American Philips Corporation

200 Franklin Square Drive • P.O. Box 8800
Somerset, New Jersey 08875-6800



AUG 25 1992

Philips Lighting
Attn: Paul Walitsky, CHMM
Radiation Safety Officer
Manager of Environmental Affairs
200 Franklin Square Drive
P.O. Box 6800
Somerset, NJ 08875-6800

Gentlemen:

This refers to your letter dated July 14, 1992, and letter received July 7, 1992, for amendments to Materials Licenses 29-20609-03 and 29-20609-02E.

We received your check for \$600. Your request, however, is subject to amendment fees totaling \$900 as specified in fee Categories 3B (\$550) and 3I (\$350) of \$170.31, 10 CFR 170, which went into effect August 9, 1991. A copy of the July 10, 1991, Federal Register notice regarding the revisions to the Commission's license and annual fee regulations (10 CFR 170 and 10 CFR 171) is enclosed.


Please note that effective August 9, 1991, materials licensees are also subject to the annual fees specified in revised 10 CFR 171. Payment of the additional \$300 fee should be made to the U.S. Nuclear Regulatory Commission and mailed to the following address:

U.S. Nuclear Regulatory Commission
ATTN: Sandra Kimberley
License Fee and Debt Collection Branch, OC/DAF
Mail Stop MNBB 4503
Washington, DC 20555

Your application will be processed by the Region I Licensing staff located at 475 Allendale Road, King of Prussia, Pennsylvania 19406. The fee, however, is required prior to issuance of the amendments. When submitting the additional fee, please refer to CONTROL NUMBERS 116913 and 021419.

If we do not receive a reply from you within 30 calendar days from the date of this letter, we shall assume that you do not wish to pursue your application and will void this action.

Sincerely,



Sandra Kimberley
License Fee and Debt Collection Branch
Division of Accounting and Finance
Office of the Controller


Enclosure:
July 10, 1991, Federal Register notice

cc: Region I
Susan Greene, HQS

DISTRIBUTION
Pending Fee File
OC/DAF R/F
LFDCB R/F (2)

OFFICE: OC/LFDCB
NAME: BBrown
DATE: 8/25/92

OC/LFDCB 
SKimberley
8/25/92

OC/LFDCB 
MMessier
8/25/92

IAO 01\B:PHILIPSL.mer



PHILIPS

Philips Lighting

Ms. Arrendondo
United States Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406-1415

July 14, 1992

RE: License No. 29-20609-03

Dear Ms. Arrendondo,

As part of our recent letter Philips Lighting Company hereby requests an amendment to the above license. Philips Lighting has several warehouses, is opening a new warehouse and wishes to warehouse low level nuclides containing lamps in a location not previously licensed. In addition, Philips Lighting wishes to import five new lamp types which contain Krypton-85. The changes are described in detail below.

Location changes:

Philips Lighting Company has applied for a State of Washington Radioactive Materials License to distribute lamps containing Kr-85, Tritium or Promethium-147 from a distribution center in Tukwila, Washington. In addition, Philips Lighting has closed two locations listed in 29-20609-03:

22 Avenue C
Leetsdale, PA

1005 Berkshire Lane
Plymouth, MN

The Leetsdale location was replaced by Building 11 which is listed on License 29-20609-02E:

Building 11
23rd Street & 9 Duss Avenue
Ambridge, PA

The address in Tukwila, Washington is:

1180 Andover Park West
Tukwila, WA 98180

Philips Lighting Company

A Division of North American Philips Corporation

200 Franklin Square Drive P.O. Box 6800
Somerset, New Jersey 08875-6800



PHILIPS LIGHTING
OFFICIAL SPONSOR
1992 U.S. OLYMPIC TEAM

A new distribution center is being opened at Mountaintop, PA. We would like to add this new location to the license as well. The address is :

Crestwood Industrial Park
1 Moran Drive
Mountaintop, PA 18707

Authorization Amounts (Line 8):

Philips Lighting Company wishes to import several lamp types from Belgium (Philips Lighting, Turnhout) which contain Krypton-85 (See Table 1 for lamp types, packaging and loading per lamp). Table 2 will show the warehouse quantities required. Table 3 lists the warehouse locations. If by the Agreement state limit increases are needed appropriate amendment applications will be made.

The same quality control procedures described in our amendment adding the MHN lamps are followed for these lamps. They are all produced in the same facility.

Labeling will use the same wording previously approved for the MHN. The label will appear on all individual lamp packages and on the outer cartons.

The wording reads as follows:

"This lamp contains an arc tube with a filling gas containing KR-85 and is distributed by Philips Lighting Company, a division of North American Philips Lighting Corporation."

Table 1:

TYPES/WATTS	PACKAGING	ACTIVITY nCi
MSR-200	4 PACK	9.5
MSR-200-HR	4 PACK	9.5
MSR-400	4 PACK	24.0
MSR-575	4 PACK	60.0
MSR-700	4 PACK	80.0
MSR-1200	4 PACK	150
MSR-2500	4 PACK	250
MSR-4000	1 PACK	625
MSR-200-SA	4 PACK	9.5
MSD-200	4 PACK	26.0
SN-250	4 PACK	20.0

Table 1 (CONTINUED):

TYPES/WATTS	PACKAGING	ACTIVITY nCi
SN-500	4 PACK	80.0
SN-600	4 PACK	150
SN-1000	10 PACK	250
SN-500-507	4 PACK	80
HPM-10	4 PACK	11
HPM-12	4 PACK	.3
HPM-13	4 PACK	.5
HPM-14	4 PACK	.7
HPM-15	4 PACK	.5
HPM-16	4 PACK	.2
HPM-17	4 PACK	.5
HPM-17/OLEL	4 PACK	.5
HPM-19	4 PACK	.5
HPM-19/C	4 PACK	.5
HPM-4020	4 PACK	17
HPM-4000	4 PACK	.1
HPM-3000	4 PACK	11
HPM-L-1250-R	4 PACK	12
HPM-20/20C	4 PACK	15.3
HPM-25	4 PACK	.4
HPM-30	4 PACK	.9
HPM-1001	4 PACK	12.5
HPM-2010	4 PACK	16
HPA-400	4 PACK	12.5
HPA-400/305	4 PACK	9.0
HPA-400/20 SA	4 PACK	5.0
HPA-1000	4 PACK	1.6
HPA-1200S	4 PACK	17.0
HPA-1000/20	4 PACK	.3

Table 1 (CONTINUED):

TYPE/WATTS	PACKAGING	ACTIVITY nCi
HPA-1200-R	4 PACK	.4
HPA-2000	4 PACK	1.2
HPA-2000-R	4 PACK	N/A
HPA-2000-S	4 PACK	.2
HPA-1001-R	4 PACK	12.4
HPA-2010-R	4 PACK	16
HPA-3000-R	4 PACK	11
HPA-4020-R	4 PACK	17
HPA-419-R	4 PACK	9
HPA-1019-R	4 PACK	18
HPA-5005-R	4 PACK	48

Table 2:

TYPE/WATTS	nCi	QUANTITY	Total uCi
MSR-200	9.5	10	.095
MSR-200-HR	9.5	75	.712
MSR-400	24	500	.712
MSR-575	60	100	12
MSR-700	80	5000	400
MSR-1200	150	100	15
MSR-2500	250	500	125
MSR-4000	625	150	93.75
MSR-400-SA	9.5	100	.95
MSD-200	26	100	2.6
SN-250	20	50	1
SN-500	80	100	8
SN-660	150	50	7.5
SN-1000	250	50	12.5
SN-500-507	80	100	8
HPM-10	11	500	5.5
HPM-12	.3	500	.15
HPM-13	.5	50	.025
HPM-14	.7	250	.175
HPM-15	.5	300	.150
HPM-16	.2	250	.05
HPM-17	.5	500	.250
HPM-17/OLEC	.5	5000	2.5
HPM-19	.5	100	.05
HPM-19/C	.5	100	.050
HPM-L1250R	12	5000	60
HPM-L1250	12	1000	12
HPM-20/20C	15.3	300	4.6
HPM-25	.4	250	.1
HPM-30	.9	250	.225

Table 2 (Continued):

TYPE/WATTS	nCi	QUANTITY	Total uCi
HPM-1001	12.5	250	3.125
HPM-2010	16	250	4
HPM-3000	11	250	2.75
HPM-4000	.1	250	.025
HPM-4020	17	250	4.250
HPA-400	12.5	500	6.2
HPA-400/305(C)	9	250	2.25
HPA-400/305A	5	500	2.5
HPA-1000/100S	.6	200	.12
HPA-1200S	17	250	4.250
HPA-1000/20	.3	250	.075
HPA-1200R	.4	250	.100
HPA-2000	1.2	250	.3
HPA-200R	.2	200	.040
HPA-2000S	.2	250	.05
HPA-1001R	12.4	250	3.10
HPA-2010R	16	250	4
HPA-3000R	11	250	2.75
HPA-4020R	17	250	4.25
HPA-419R	9	250	2.25
HPA-1019R	18	250	4.5
HPA-5005R	48.02	250	12

Table 3 :

WAREHOUSE LOCATIONS	
✓ 1)	Docks Corner Rd., South Brunswick N.J.
✓ 2)	4875 West Park Dr., Atlanta GA
✓ 3)	601 Meadowlands Blvd., Meadowlands PA
✓ 4)	Hoult Rd., Fairmont W.V.
✓ 5)	1435 Bradley Lane, Carrollton TX
✓ 6)	7800 District Blvd., Bakersfield CA
✓ 7)	440 N. Medinah Rd., Roselle IL
✓ 8)	23rd St. & Duss Ave., Ambridge PA
✓ 9)	3861 South 9th St., Salina KS
✓ 10)	Crestwood Industrial Park, 1 Moran Dr., Mountain Top PA

The total increase in loading is estimated to be 830.5 micro curies or .830 mCi. It should be noted that the 400 watt MSR lamp contains approximately 625 nCi. This represents an increase in maximum individual unit loading. We hereby apply for an amendment to reflect the changes in location, an increase of 830.5 micro curies and an increase to 625 nano curies maximum per lamp.

If you have any questions please do not hesitate to contact me at (908) 563-3197.

Very truly yours,

Paul Walitsky

Paul Walitsky, CHMM
Radiation Safety Officer
Manager of Environmental Affairs

cc: Susan Greene, NCR Washington D.C.



PHILIPS

Philips Lighting

Ms. Arrendondo
United States Nuclear Regulatory Commission
475 Allendale Pk.
King of Prussia, PA 190406-1415

RE: 29-20609-03 and 29-206609-02E

Dear Ms. Arrendondo,

Philips Lighting requests an amendment to our Possession and Distribution Licenses as listed above. The change in locations is shown in the letter to Ms. Susan Greene which is attached. In addition, we are preparing a possession amendment to add additional lamp types which contain Krypton-85. We have enclosed a check for \$600.00 to cover both amendments. The possession amendment will be submitted shortly.

Very truly yours,

Paul Wallitsky
Radiation Safety Officer

/p1

Philips Lighting Company

A Division of North American Philips Corporation

200 Franklin Square Drive • P.O. Box 6800
Somerset, New Jersey 08875-6800



PHILIPS LIGHTING
OFFICIAL SPONSOR
1992 U.S. OLYMPIC TEAM

MERCANTILE BANK
 Mercantile Bank of St. Louis N.A.

PHILIPS
 PHILIPS LIGHTING COMPANY
 PHILIPS SQUARE, 200 FRANKLIN SQ. DRIVE, P.O. BOX 6800, SOMERSET, NJ 08875-6800

MORGAN BANK (DELAWARE)
 WILMINGTON, DE 19801

9999-92

CHECK DATE: 05/28/92
 CHECK NUMBER: 9A-637184

PAY TO THE ORDER OF

U S NUCLEAR REGULATORY COMM.
 LICENSE FEE & DEBT
 COLLECTION BRANCH, DIV.
 P.O. BOX 954514
 ST LOUIS MO 63195-4514



AMOUNT
 \$600.00

[Signature]

⑆637184⑆ ⑆031100238⑆ 230 18 36 2⑆ ⑆0000060000⑆



PHILIPS

VENDOR NUMBER

07-708545

Philips Lighting

CHECK DATE: 05/28/92
 CHECK NUMBER: 9A-637184

PHILIPS SQUARE, 200 FRANKLIN SQ. DRIVE, P.O. BOX 6800, SOMERSET, NJ 08875-6800 • 201-563-3000

INVOICE DATE	INVOICE NUMBER	BATCH/VOUCHER NUMBER	GROSS AMOUNT	DISCOUNT AMOUNT	NET AMOUNT
05/21/92	AMENDMNT	92177 41580	600.00	.00	600.00
		9999-92			
637184			600.00	.00	600.00
DETACH BEFORE DEPOSITING			TOTAL GROSS AMOUNT	TOTAL DISCOUNT AMOUNT	TOTAL NET AMOUNT



030
-22295
PHILIPS

Philips Lighting

United States Nuclear Regulatory Commission
Washington, D.C. 20555
Attn: Susan Greene

Re: License 29-20609-02E

Dear Ms. Susan Greene,

Philips Lighting Co. hereby applies for an amendment to our license authorizing distribution of lighting products containing low level nuclides.

Item 2:

Delete: a) 22 Avenue C Building 19
Leetsdale, PA

b) 1005 Bershire Lane
Plymouth, MN

Add: 1180 Andover Park West
Tukwila, WA 98188

Crestwood Industrial Park
Mountain Top, PA 18707

Very truly yours,

Paul Walitsky

Paul Walitsky
Radiation Safety Officer

/PL

Log	Aug 2 1992
Remitter	
Check No.	9A-437184/9A-657723
Amount	\$500.00 See check 116713
Fee Category	3C
Type of Fee	Am5
Date Check Rec'd	9/24/92
Date Completed	
By	B. Brown

U.S. NUCLEAR REG
COMMISSION

92 JUL -7 P1:50

RECEIVED
U.S. NUCLEAR REG
COMMISSION

REC'D

JUL 6 1992

Philips Lighting Company

A Division of North American Philips Corporation
200 Franklin Square Drive P.O. Box 6800
Somerset, New Jersey 08875-6800



021419

R1201021

LICENSING TRACKING SYSTEM

DATE: 920706

PAGE: 1

LTS WORKSHEET

DOCKET NO : 03022205 LICENSE NO : 29-20609-02E STATUS: 0
MAIL CONTROL 021419 RECEIPT DATE : 920706 ACTION TYPE: 4
DUE DATE : 921004
FED GOVT ⁹²¹¹⁰³ INST. CODE : 20609 LICENSE REGION: 0
ISSUE DATE: ~~920717~~ ORIGINAL DATE: 850227 EXPIRATION DATE: 19960630
NAME : PHILIPS LIGHTING CO. DECOM FIN ASSUR REQD: N
SUBM:
DEPT/BUREAU: DIV OF NORTH AMERICAN PHILIPS CORP CONT PLAN REQD: N APPRV:
BUILDING
STREET : 200 FRANKLIN SQUARE DRIVE, P.O. Box 6800
CITY : SOMERSET STATE: NJ ZIP: 088756800
CONTACT PERSON: PAUL J. WALITSKY, R.S.O. PHONE: 908-563-3197
PRIMARY PGM CODE : 03251 SECONDARY PGM CODES:
INSPECTION REGION: 1 PRIORITY CODE: 5 INSPECTION CATEGORY: E
RADIATION SAFETY OFFICER: PAUL J. WALITSKY
STATES WHERE USE IS AUTHORIZED: 0 0 - ALL LISTED STATES
1 - SAME AS STATE IN ADDRESS
2 - ALL STATES
3 - NON-AGREEMENT STATES
AUTHORIZED STATES: NY, NJ, CT, PA, TX, WV, VA (USE ONLY IF ABOVE IS ZERO)
REPORTING IDENTIFICATION SYMBOL: IL, KS, ME, WA
APPROVAL FOR: REDISTRIBUTION: N STORAGE ONLY: N
TEMPORARY JOB SITES: Y INCINERATION: N
BURIAL: N
EXEMPTIONS: (1) _____ (2) _____

11/3/92 CB
28

POSSESSION LIMIT INFORMATION

PAGE: 2

MATERIAL TYPE
MODEL NUMBER
DESCRIPTION
TOTAL QUANTITY
OTHER

FORM CODE: _____ AGGREGATE CODE: _____

UNIT: _____
SOURCES: _____

MATERIAL TYPE
MODEL NUMBER
DESCRIPTION
TOTAL QUANTITY
OTHER

FORM CODE: _____ AGGREGATE CODE: _____

UNIT: _____
SOURCES: _____

MATERIAL TYPE
MODEL NUMBER
DESCRIPTION
TOTAL QUANTITY
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MATERIAL TYPE
MODEL NUMBER
DESCRIPTION
TOTAL QUANTITY
OTHER

FORM CODE: _____ AGGREGATE CODE: _____

UNIT: _____
SOURCES: _____

INDIVIDUAL USERS

PAGE: 3

NAME

AUTHORIZATION

ADDRESS WHERE MATERIAL IS USED OR POSSESSED

BUILDING:
ROOM:
STREET:
CITY:
STATE:

BUILDING:
ROOM:
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STATE:

DECOMMISSIONING FINANCIAL ASSURANCE INFORMATION

PAGE: 4

DOCKET 03022295 LIC: 29-20609-02E NAME: PHILIPS LIGHTING CO.

PARTY ISSUING MECHANISM: ASSUR TYPE: (C=CERT D=DFP)
NAME: MECH TYPE:
ADDR1: MECH AMOUNT:
ADDR2: APPROVED? DATE:
CITY: EXPIRES ? DATE:
STATE: ZIP:

PARTY ISSUING MECHANISM: ASSUR TYPE: (C=CERT D=DFP)
NAME: MECH TYPE:
ADDR1: MECH AMOUNT:
ADDR2: APPROVED? DATE:
CITY: EXPIRES ? DATE:
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CITY: EXPIRES ? DATE:
STATE: ZIP:

PARTY ISSUING MECHANISM: ASSUR TYPE: (C=CERT D=DFP)
NAME: MECH TYPE:
ADDR1: MECH AMOUNT:
ADDR2: APPROVED? DATE:
CITY: EXPIRES ? DATE:
STATE: ZIP:

PARTY ISSUING MECHANISM: ASSUR TYPE: (C=CERT D=DFP)
NAME: MECH TYPE:
ADDR1: MECH AMOUNT:
ADDR2: APPROVED? DATE:
CITY: EXPIRES ? DATE:
STATE: ZIP:

LICENSE DATA, CONTINUED

PAGE: 5

DOCKET NO: 03022295 LICENSE NUMBER: 28-20809-02E
NAME : PHILIPS LIGHTING CO.

MEDICAL QUALITY MANAGEMENT PROGRAM REQUIRED: N RECEIVED: APPROVED:

DECOMMISSIONING FINANCIAL ASSURANCE REQUIRED: N SUBMITTED:

CONTINGENCY PLAN REQUIRED: N APPROVED:

DECAY-IN-STORAGE APPROVED: N HOLDING FOR < 10 HALF-LIVES APPROVED:

1 1/2 x 65 DAYS, ISOTOPE(S):

INTERIM STORAGE UP TO 1992: N

1st clv

10/23/92

(FOR LFMS USE)
INFORMATION FROM LTS

BETWEEN:

License Fee Management Branch ARM
and
Regional Licensing Sections

Program Code: 03251
Status Code: 0
Fee Category: 31
Exp. Date: 19960630
Fee Comments:
Decom Fin Assur Req'd: N

LICENSE FEE TRANSMITTAL

A. REGION

1. APPLICATION ATTACHED

Applicant/Licensee: PHILIPS LIGHTING CO
Received Date: 920706
Docket No: 3022285
Control No: 21418
License No: 28-20679-02E
Action Type: Amendment

2. FEE ATTACHED

Amount:
Check No:

3. COMMENTS

see copy of ltr to
Region

Signed
Date

W. J. Marty
7-6-92

B. LICENSE FEE MANAGEMENT BRANCH (Check when milestone 03 is entered ☒)

1. Fee Category and Amount: 31 \$300

2. Correct Fee Paid. Application may be processed for:
Amendment
Renewal
License

3. OTHER

Signed
Date

B. Brown
9/24/92