



Light is essential  
Products for medical devices

Light is OSRAM

**OSRAM**

# The right light for your application



## Analyzing

### Benefits

Effective and optimized illumination for analyzing and diagnostics to identify the molecular structure of a compound or to determine its purity. The filament with tight tolerances provides an excellent and uniform illumination of small areas with constant and brilliant light over the entire lifetime. Customized solutions on request.

### Discharge/Halogen

- HBO®
- XBO®
- HXP®
- 64258
- 64259
- 64623 HLX®
- Halogen modules



## Medical Fiber Optics

### Benefits

Illumination of human organs or tissue containing a well-balanced spectral characteristic and high color rendering. Focused light beam for easy and efficient coupling into light guides with small diameters. Optimized for endoscopy and surgical headlamps.

### Discharge/Halogen

- XBO®
- 64627 HLX®
- 64634 HLX®
- 64653 HLX®



## Microscopy

### Benefits

Illumination for microscopy visualization in medical and life science systems. Providing white light and a wide range of wavelengths for fluorescence applications. Optimized for surgical, diagnostic, and inspection microscopy.

### Discharge/Halogen

- HBO®
- XBO®
- HXP®
- Halogen lamps without reflector



### Surgical Lighting

#### Benefits

Instant brilliant light and light output over life with a constant color temperature and excellent color rendering.

#### Halogen

- 64291 XIR®
- 64292 XIR®
- 64668 XIR®
- 64638 HLX®
- 64642 HLX®
- 64643
- 64647
- 64650



### Purification with UV Light

#### Benefits

Long life and high germicidal efficiency for surface sterilization, air and water purification.

#### Discharge

- PURITEC® HNS®



### Bilirubin therapy lighting

#### Benefits

Used in medical devices, OSRAM BLUE is the perfect solution for the treatment of jaundice. Its compact design is suitable for mobile equipment and hand-held luminaires. It works emission-free and with low energy consumption.

#### Discharge

- DULUX® S BLUE 9W/71
- DULUX® L BLUE 18W/71
- L BLUE 18W/71



### Dental curing

#### Benefits

Exposure of light-activated composites and adhesives. High irradiation level required for short curing times in dental applications.

#### Discharge

- HBO®
- HXP®

#### Halogen

- 64613
- 64617/64617S
- 64624

# The right light for your application

## Halogen lamps

### Halogen HLX® lamp family



- HLX® tungsten halogen low-voltage lamp with or without a reflector
- Xenon-gas-filled lamps have up to 10% higher luminous efficacy than standard lamps
- Instant light
- Dimmable
- Mercury-/Ozone-free

### Infrared-coated capsule XIR®



- Tungsten halogen capsule filled with xenon gas and in addition, with infrared (IR) coating on the glass bulb for maximum energy efficiency
- IR capsule produces up to 30% higher luminous efficacy than standard lamps with the same characteristics (wattage and lamp life)
- Mercury-/Ozone-free

### Halogen Lamp Modules – Customized Solutions



- Various lamp types can be combined with a customized lamp base
- Automatic computer-controlled production process with very tight tolerances
- Lamp is optimally adjusted in the system after the replacement, no readjustment necessary
- Special customized solutions on request

## Discharge lamps

### XBO® 75W, 100W, 150W



- Xenon discharge lamp for DC operation
- Color rendering index >95
- Short arc
- Hot restart

### Optimized UV Light HBO®



- Mercury discharge lamp for DC/AC operation at constant power
- Short arc

### Optimized UV & Blue Light with Long Life HXP® R 120W UV



- Mercury discharge lamp for AC operation at constant power
- Short arc
- Long average life: up to 2,000 hours
- Focus diameter of approx. 5mm
- Reflector of HXP® R 120W UV coated for maximum reflection in 320 ... 500 nm range
- ECG/lamp system



## Discharge lamps

### UV, Blue & White Light with Long Life HXP® R 120W VIS, 200W



- Mercury discharge lamp for AC operation at constant power
- Short arc
- Long average life: up to 2,000 hours
- Focus diameter of approx. 5 mm
- Reflector coated for maximum reflection in blue and visible spectral range
- ECG/lamp system

### Excellent Xenon Light XBO® R 100W, 180W, 300W



- Xenon discharge lamp for DC operation
- Color rendering index >95
- Short arc
- Focus diameter of approx. 5 mm
- Reflector coated for maximum reflection in visible spectral range
- Ozone-free
- Hot restart

### Ceramic Xenon Light XBO® C 175W, 300W



- Xenon discharge lamp for DC operation
- Small arc gap provides a precise focus onto small areas
- High brightness
- Provides daylight color temperature with extremely high CRI
- Highly efficient light source due to pre-aligned reflector
- Compact and rugged design

## Discharge lamps

### Linear PURITEC® HNS® UV-C Light



- Efficient at disinfecting air, water and surfaces
- Effective and environmentally friendly disinfection without chemicals
- Low mercury content
- Long lifetime thanks to special high-quality coating of the glass bulb
- 4W-60W

### Compact PURITEC® HNS® UV-C Light



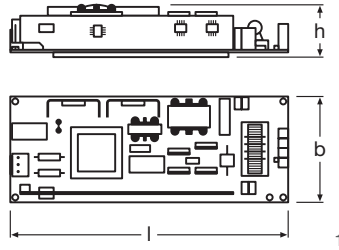
- Efficient at disinfecting air, water and surfaces
- Effective and environmentally friendly disinfection without chemicals
- Low mercury content
- Long lifetime thanks to special high-quality coating of the glass bulb
- 5W-95W

### OSRAM BLUE lamps



- Low mercury content
- Long lifetime thanks to special high-quality coating of the glass bulb
- High quality

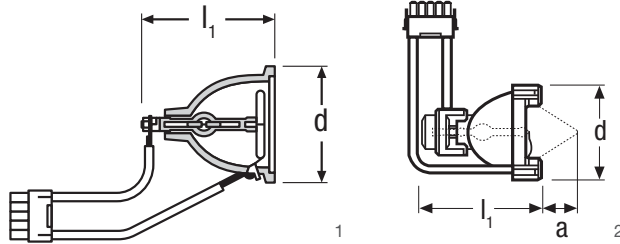
Light Sources



ECG for medical applications

| Product Name                 | Item Number | kV START         | W   | l [mm] | b [mm] | h [mm] | AC/DC               |    |   |
|------------------------------|-------------|------------------|-----|--------|--------|--------|---------------------|----|---|
| PT-VIP 2AC/380 O1 DIM 120 EN | 49306       | 20 <sup>1)</sup> | 120 | 150    | 60     | 32     | DC/AC <sup>1)</sup> | 25 | 1 |

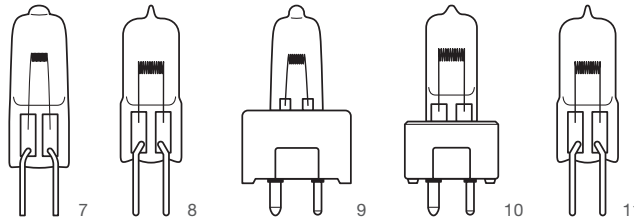
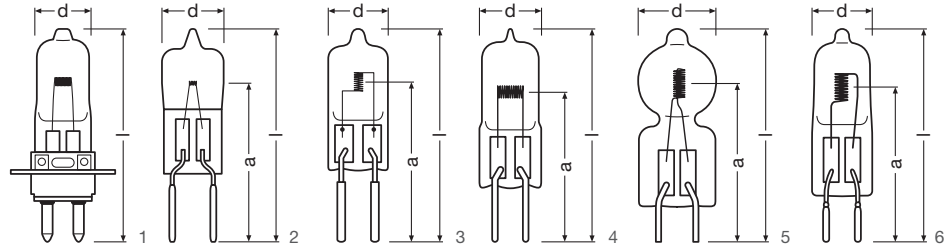
1) Maximum



HXP® Mercury short-arc lamps, long life

| Product Name                       | Item Number | W                 | V                     | A   | AC/DC | t [h] | e [mm] | l1 max. [mm] |      |        |     |    |   |
|------------------------------------|-------------|-------------------|-----------------------|-----|-------|-------|--------|--------------|------|--------|-----|----|---|
| HXP R 120 W/17 C <sup>1)</sup>     | 68895       | 120 <sup>3)</sup> | 70...95 <sup>4)</sup> | 1.5 | AC    | 2000  | 65     | 77           | 17.3 | Forced | p20 | 50 | 1 |
| HXP R 120 W/45 C VIS <sup>1)</sup> | 69119       | 120 <sup>3)</sup> | 60...90 <sup>4)</sup> | 1.4 | AC    | 2000  | 67     | 77           | 45   | Forced | p20 | 2  | 2 |
| HXP R 120 W/45 C UV <sup>1)</sup>  | 69120       | 120 <sup>3)</sup> | 60...90 <sup>4)</sup> | 1.4 | AC    | 2000  | 67     | 77           | 45   | Forced | p20 | 2  | 2 |
| HXP R 200 W/45 M <sup>2)</sup>     | 69820       | 200 <sup>3)</sup> | 60...96 <sup>4)</sup> | 3.4 | AC    | 2000  | 67     | 77           | 45   | Forced | p20 | 2  | 2 |

1) To be operated with PT-VIP 2AC/380 O1 DIM 120 VS25  
 2) To be operated with PT-VIP 4AC/380 O3 200 DIM VS50  
 3) Not relevant  
 4) Initial voltage range

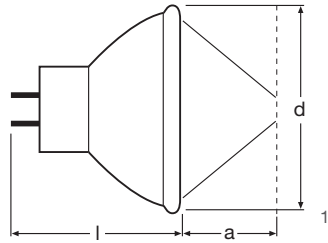


Low-voltage halogen lamps without reflector

| Product Name | Item Number | ANSI    | LIF    | W                 | V    | t [h] | d [mm] | l [mm] | LCL a [mm]         | φ-b [mm]               |         |        |   |    |    |
|--------------|-------------|---------|--------|-------------------|------|-------|--------|--------|--------------------|------------------------|---------|--------|---|----|----|
| 64223        | 54245       |         | M/43   | 10 <sup>1)</sup>  | 6    | 300   | 9      | 38     | 24                 | 1.5*0.7                | Any     | G4     | B | 40 | 2  |
| 64225        | 54260       | ESA/FHS | M/29   | 10 <sup>1)</sup>  | 6    | 100   | 9.5    | 31     | 19.5               | 1.7*0.65               | s90     | G4     | B | 40 | 2  |
| 64250 HLX    | 54261       | ESB     | M/30   | 20 <sup>1)</sup>  | 6    | 100   | 9      | 31     | 19.4 <sup>2)</sup> | 2.3*0.8                | Any     | G4     | B | 40 | 2  |
| 64251 HLX    | 54021       |         |        | 20 <sup>1)</sup>  | 6    | 100   | 9      | 40     | 14                 | 2.3*0.8                | Any     | PG22   | B | 30 | 1  |
| 64265 HLX    | 54606       |         |        | 30 <sup>1)</sup>  | 6    | 100   | 9      | 31     | 19.5               | 1.6*1.6                | Any     | G4     | B | 40 | 2  |
| 64275        | 54258       |         | M/137  | 35 <sup>1)</sup>  | 6    | 50    | 9      | 35     | 26 <sup>3)</sup>   | 1.3*1.6                | Any     | G4     | C | 40 | 3  |
| 64258        | 54262       |         |        | 20 <sup>1)</sup>  | 12   | 2000  | 9.5    | 30     | 19.5 <sup>2)</sup> | 3.25*0.7 <sup>4)</sup> | s90     | G4     | C | 40 | 2  |
| 64260        | 54022       |         | M/185  | 30 <sup>1)</sup>  | 12   | 50    | 9      | 40     | 14                 | 2.6*1.3                | Any     | PG22   | B | 30 | 1  |
| 64261 HLX    | 54247       |         | M/130  | 30 <sup>1)</sup>  | 12   | 50    | 11.5   | 44     | 30                 | 2.6*1.3                | Any     | G6.35  | B | 40 | 7  |
| 64602        | 54607       |         | M/134  | 50 <sup>1)</sup>  | 12   | 1100  | 11.5   | 44     | 30                 | 3.0*3                  | s90     | G6.35  | C | 40 | 4  |
| 64610 HLX    | 54249       | BRL     | A1/220 | 50 <sup>1)</sup>  | 12   | 50    | 11.5   | 44     | 30 <sup>3)</sup>   | 3.3*1.6                | s90     | G6.35  | B | 40 | 7  |
| 64611 HLX    | 54608       |         |        | 50 <sup>1)</sup>  | 12   | 100   | 11.5   | 44     | 30                 | 3.3*1.6                | s90     | G6.35  | B | 40 | 7  |
| 62138 HLX    | 54256       |         |        | 100 <sup>1)</sup> | 12   | 50    | 11.5   | 37     | 27                 | 2.4*1.8                | p90/p15 | G6.35  | B | 40 | 3  |
| 64621 HLX    | 54032       |         |        | 100 <sup>1)</sup> | 12   | 2000  | 11.5   | 48     | 18                 | 4.7*2.7                | s90     | PG22   | B | 30 | 1  |
| 64623 HLX    | 54251       | EVA     | M/28   | 100 <sup>1)</sup> | 12   | 2000  | 11.5   | 44     | 30                 | 4.7*2.7                | s90     | GY6.35 | B | 40 | 8  |
| 64625 HLX    | 54248       | FCR     | A1/215 | 100 <sup>1)</sup> | 12   | 50    | 11.5   | 44     | 30 <sup>3)</sup>   | 4.2*2.3                | s90     | GY6.35 | B | 40 | 8  |
| 64628        | 54276       | FDT     | A1/261 | 100 <sup>1)</sup> | 12   | 50    | 13     | 57     | 27                 | 4.2*2.3                | s90     | GY9.5  | B | 12 | 9  |
| 64626 HLX    | 54038       | EHE     | A1/45  | 100 <sup>1)</sup> | 12   | 50    | 11.5   | 48     | 18                 | 4.2*2.3                | s90     | PG22   | B | 30 | 1  |
| 64291 XIR    | 54318       |         |        | 40 <sup>1)</sup>  | 22.8 | 800   | 12     | 44     | 30 <sup>3)</sup>   | 3.9*1.4                | h90     | G6.35  | B | 40 | 5  |
| 64650        | 54257       |         |        | 50 <sup>1)</sup>  | 22.8 | 1200  | 13     | 44     | 30                 | 2.0*5                  | Any     | G6.35  | C | 40 | 6  |
| 64668 XIR    | 54323       |         |        | 80 <sup>1)</sup>  | 22.8 | 400   | 14     | 44     | 30 <sup>3)</sup>   | 2.2*5.5                | h90     | G6.35  | B | 40 | 5  |
| 64292 XIR    | 54322       |         |        | 150 <sup>1)</sup> | 22.8 | 600   | 14     | 44     | 30 <sup>3)</sup>   | 2.8*6.7                | s90     | G6.35  | B | 40 | 5  |
| 64638 HLX    | 54252       |         |        | 100 <sup>1)</sup> | 24   | 300   | 13     | 50     | 30                 | 5.3*2.6                | Any     | G6.35  | B | 40 | 8  |
| 64647        | 54320       |         |        | 120 <sup>1)</sup> | 24   | 700   | 13     | 44     | 30                 | 2.3*6.4                | Any     | G6.35  | B | 40 | 3  |
| 64640 HLX    | 54263       | FCS     | A1/216 | 150 <sup>1)</sup> | 24   | 50    | 11.5   | 50     | 31.7 <sup>2)</sup> | 5.8*2.9                | s90     | G6.35  | B | 40 | 8  |
| 64642 HLX    | 54264       | FDV     | M/184  | 150 <sup>1)</sup> | 24   | 300   | 11.5   | 50     | 31.7 <sup>2)</sup> | 6.0*3.2                | s90     | G6.35  | B | 40 | 8  |
| 64643        | 54277       | FDS     | A1/262 | 150 <sup>1)</sup> | 24   | 100   | 15     | 57     | 33.5               | 6.0*3                  | s90     | GY9.5  | B | 12 | 10 |
| 64655 HLX    | 54254       | EJH     | A1/223 | 250 <sup>1)</sup> | 24   | 50    | 12.5   | 55     | 33                 | 7.0*3.5                | s90     | G6.35  | B | 40 | 11 |
| 64657 HLX    | 54255       | EVC     | M/33   | 250 <sup>1)</sup> | 24   | 300   | 13.5   | 55     | 33                 | 8.0*4                  | s90     | G6.35  | B | 40 | 11 |
| 64656 HLX    | 54253       | FNT     |        | 275 <sup>1)</sup> | 24   | 75    | 13.5   | 55     | 33                 | 7.0*3.5                | s90     | G6.35  | B | 40 | 11 |
| 64654 HLX    | 54304       |         |        | 250 <sup>1)</sup> | 24   | 300   | 13.5   | 67     | 35                 | 8.0*4                  | s90     | GY9.5  | B | 12 | 10 |
| 64663 HLX    | 54259       | EVD     | A1/239 | 400 <sup>1)</sup> | 36   | 50    | 15     | 60     | 36                 | 9.3*4.9                | s90     | G6.35  | B | 40 | 11 |

1) Not relevant  
 2) ±0.3 mm  
 3) ±0.5 mm  
 4) Restricted tolerances 3.5±0.25\*0.8±0.10

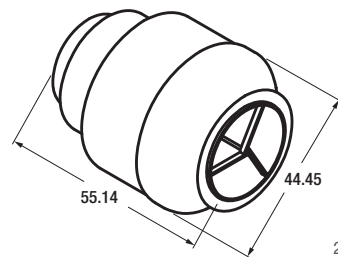
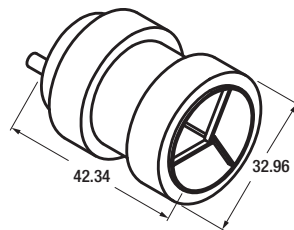
## Light Sources



### Halogen lamps with reflector MR16

| Product Name            | Item Number | ANSI  | LIF    | W                 | V   | t[h] | Ø [mm] | l [mm] | a [mm] | Beam    | Material | Base   | Temp | Weight | Quantity |
|-------------------------|-------------|-------|--------|-------------------|-----|------|--------|--------|--------|---------|----------|--------|------|--------|----------|
| 64607                   | 54123       | EFM   | A1/229 | 50 <sup>2)</sup>  | 8   | 50   | 51     | 42     | 32     | p90/p15 | Aluminum | GZ6.35 | B    | 20     | 1        |
| 64615 HLX               | 54126       | EFN   | A1/230 | 75 <sup>2)</sup>  | 12  | 50   | 51     | 42     | 32     | p90/p15 | Dichroic | GZ6.35 | B    | 20     | 1        |
| 64627 HLX               | 54189       | EFP   | A1/231 | 100 <sup>2)</sup> | 12  | 50   | 51     | 42     | 32     | p90/p15 | Dichroic | GZ6.35 | B    | 20     | 1        |
| 64629                   | 54192       | EFP-6 |        | 100 <sup>2)</sup> | 12  | 600  | 51     | 42     | 32     | p90/p15 | Dichroic | GZ6.35 | B    | 20     | 1        |
| 64637                   | 54223       | EBV   | A1/271 | 100 <sup>2)</sup> | 12  | 1500 | 51     | 42     | 32     | s120    | Dichroic | GZ6.35 | B    | 20     | 1        |
| 64620                   | 54211       | EFR-5 |        | 150 <sup>2)</sup> | 15  | 500  | 50     | 42     | 32     | p90/p15 | Dichroic | GZ6.35 | B    | 20     | 1        |
| 64634 HLX               | 54210       | EFR   | A1/232 | 150 <sup>2)</sup> | 15  | 50   | 51     | 42     | 32     | p90/p15 | Dichroic | GZ6.35 | B    | 20     | 1        |
| 64635 HLX <sup>1)</sup> | 54233       |       |        | 150 <sup>2)</sup> | 15  | 50   | 51     | 45     | 19     | Any     | Gold     | GZ6.35 |      | 20     | 1        |
| 93637                   | 54732       | EJV   |        | 150 <sup>2)</sup> | 21  | 100  | 51     | 44.5   | 44.5   | s90     | Dichroic | GX5.3  | E    | 24     | 1        |
| 93638                   | 54842       | EKE   |        | 150 <sup>2)</sup> | 21  | 200  | 51     | 44.5   | 44.5   | s90     | Dichroic | GX5.3  | E    | 24     | 1        |
| 93653                   | 54841       | ELC-3 |        | 250 <sup>2)</sup> | 24  | 300  | 51     | 44.5   | 35     | Any     | Dichroic | GX5.3  | E    | 24     | 1        |
| 93506                   | 54986       | ENH   |        | 250 <sup>2)</sup> | 120 | 175  | 51     | 44.5   | 152.5  | s90     | Dichroic | GY5.3  | E    | 24     | 1        |
| 93518                   | 54776       | ELH   |        | 300 <sup>2)</sup> | 120 | 35   | 51     | 45     | 152.5  | s90     | Dichroic | GY5.3  | E    | 24     | 1        |

1) Infrared lamp; temperature at the focal point approximately 1300°C  
2) Not relevant

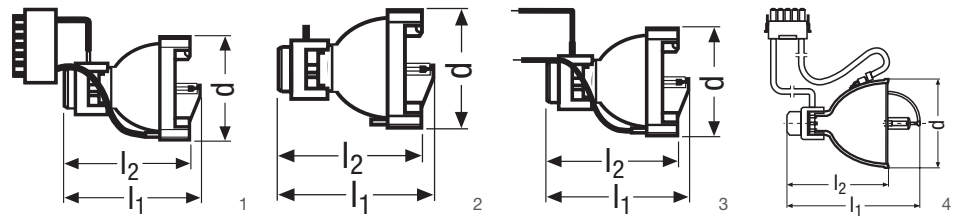


### XBO® Ceramic Xenon short-arc lamps with internal reflector 175W...300W

| Product Name                   | Item Number | W   | V    | A  | t[h]                   | lm   | K    | Beam       | Quantity |
|--------------------------------|-------------|-----|------|----|------------------------|------|------|------------|----------|
| XBO C 175W/BF                  | 55202       | 175 | 12.5 | 14 | 1000 <sup>1), 2)</sup> | 2200 | 5800 | Horizontal | 1        |
| XBO C 300W/BF                  | 55203       | 300 | 14   | 21 | 1000 <sup>1), 2)</sup> | 5000 | 5800 | Horizontal | 1        |
| XBO C 300W/MAJ1817             | 55204       | 300 | 14   | 21 | 1000 <sup>1), 2)</sup> | 5000 | 5800 | Horizontal | 1        |
| XBO C 300W/EPKI                | 55207       | 300 | 13   | 22 | 500 <sup>1), 2)</sup>  | 7400 | 5900 | Horizontal | 2        |
| XBO C 300W/X7000 <sup>3)</sup> | 55205       | 300 | 14   | 22 | 1000 <sup>1), 2)</sup> | 7450 | 5900 | Horizontal | 2        |
| XBO C 300W/X8000 <sup>4)</sup> | 55206       | 300 | 14   | 22 | 1000 <sup>1), 2)</sup> | 7450 | 5900 | Horizontal | 2        |

1) Up to 50% of initial output  
2) Warranty is up to 50% of the Average Rated Life  
3) Exclusive only to LuxteL assembly CL1571/X7000  
4) Exclusive only to LuxteL assembly CL1567/X8000

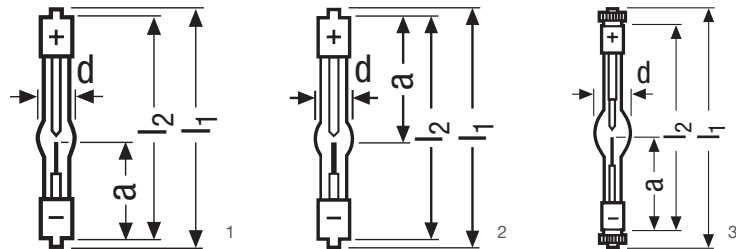




**XBO® Xenon short-arc lamps with reflector 85W...300W**

| Product Name                       | Item Number | W         | V                         | A             | t[h] |      |    |        |     | AC/DC |   |   |
|------------------------------------|-------------|-----------|---------------------------|---------------|------|------|----|--------|-----|-------|---|---|
| XBO R 100 W/45 C OFR <sup>1)</sup> | 69191       | 85...115  | 12...14 <sup>2)</sup>     | 7.0...7.4     | 500  | 77   | 45 | Forced | p20 | DC    | 2 | 1 |
| XBO R 100 W/45 OFR <sup>1)</sup>   | 69197       | 85...115  | 12...14 <sup>2)</sup>     | 7.0...7.4     | 500  | 77   | 45 | Forced | p20 | DC    | 2 | 2 |
| XBO R 101 W/45 C OFR <sup>1)</sup> | 69190       | 85...115  | 12...14 <sup>2)</sup>     | 7.0...7.4     | 500  | 77   | 45 | Forced | p20 | DC    | 2 | 3 |
| XBO R 180 W/45 OFR <sup>1)</sup>   | 69186       | 150...210 | 12.8...14.8 <sup>2)</sup> | 11.75...12.25 | 500  | 81.5 | 45 | Forced | p20 | DC    | 2 | 2 |
| XBO R 180 W/45 C OFR <sup>1)</sup> | 69183       | 150...210 | 12.8...14.8 <sup>2)</sup> | 11.75...12.25 | 500  | 81.5 | 45 | Forced | p20 | DC    | 2 | 1 |
| XBO R 181 W/45 C OFR <sup>1)</sup> | 69184       | 150...210 | 12.8...14.8 <sup>2)</sup> | 11.75...12.25 | 500  | 81.5 | 45 | Forced | p20 | DC    | 2 | 3 |
| XBO R 300 W/60 C OFR <sup>1)</sup> | 69167       | 250...300 | 16...20 <sup>2)</sup>     | 18            | 1000 | 80   | 60 | Forced | p20 | DC    | 2 | 4 |

1) OFR = Ozone-free version  
2) Initial voltage range

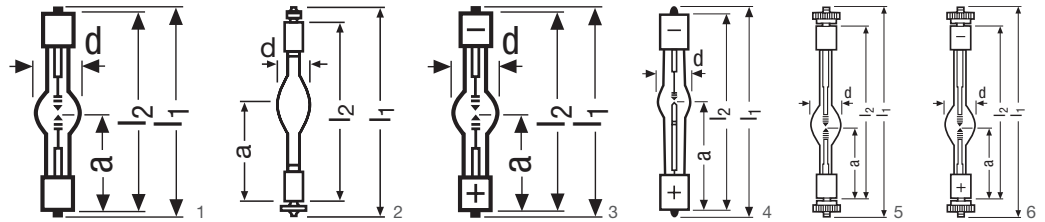


**XBO® Xenon short-arc lamps without reflector**

| Product Name                   | Item Number | W         | V                         | A                 | t[h]                        | l [mm] | l max. [mm] | LCL a [mm]          |
|--------------------------------|-------------|-----------|---------------------------|-------------------|-----------------------------|--------|-------------|---------------------|
| XBO 75 W/2                     | 69231       | 64...86   | 12...16 <sup>6)</sup>     | 4.9...5.9         | 400                         | 90     | 82          | 37 <sup>9)</sup>    |
| XBO 75 W/2 OFR <sup>1)</sup>   | 69232       | 64...86   | 12...16 <sup>6)</sup>     | 4.9...5.9         | 400                         | 90     | 82          | 37 <sup>9)</sup>    |
| XBO 100 W OFR <sup>1)</sup>    | 69233       | 85...115  | 12.8...14.4 <sup>6)</sup> | 7.0...7.4         | 500                         | 90     | 82          | 44.5 <sup>10)</sup> |
| XBO 150 W/CR OFR <sup>1)</sup> | 69237       | 125...180 | 15...18 <sup>6)</sup>     | 8.5 <sup>7)</sup> | 3000 h / 1200 <sup>8)</sup> | 150    | 127         | 57 <sup>9)</sup>    |
| XBO 150 W/1                    | 69234       | 130...175 | 17...21 <sup>6)</sup>     | 7.5 <sup>7)</sup> | 1200                        | 150    | 127         | 57 <sup>9)</sup>    |
| XBO 150 W/4 <sup>2)</sup>      | 69238       | 130...175 | 17...21 <sup>6)</sup>     | 7.5 <sup>7)</sup> | 1200                        | 150    | 127         | 57 <sup>9)</sup>    |

| Product Name                   | Item Number |            |                    |         |          | AC/DC |    |   |
|--------------------------------|-------------|------------|--------------------|---------|----------|-------|----|---|
| XBO 75 W/2                     | 69231       | Convection | s100 <sup>3)</sup> | SFa9-2  | SFa7.5-2 | DC    | 10 | 1 |
| XBO 75 W/2 OFR <sup>1)</sup>   | 69232       | Convection | s100 <sup>3)</sup> | SFa9-2  | SFa7.5-2 | DC    | 10 | 1 |
| XBO 100 W OFR <sup>1)</sup>    | 69233       | Convection | s100 <sup>3)</sup> | SFa9-2  | SFa7.5-2 | DC    | 10 | 2 |
| XBO 150 W/CR OFR <sup>1)</sup> | 69237       | Forced     | s15 <sup>4)</sup>  | SFc12-4 | SFcX12-4 | DC    | 10 | 3 |
| XBO 150 W/1                    | 69234       | Forced     | s15 <sup>4)</sup>  | SFc12-4 | SFcX12-4 | DC    | 10 | 3 |
| XBO 150 W/4 <sup>2)</sup>      | 69238       | Forced     | s15 <sup>5)</sup>  | SFc12-4 | SFcX12-4 | DC    | 10 | 3 |

1) OFR = Ozone-free version  
2) Lamp uses a special quality of quartz glass, known as SUPRASIL, which – in comparison to conventional quartz – provides higher transmission below 250 nm  
3) If vertical, then anode on top; up to 10° below horizontal, cathode on top  
4) For vertical burning position: anode (+) on top  
5) Anode (+) on top  
6) Initial voltage range  
7) Operation with rated current recommended  
8) In vertical burning position / In horizontal burning position  
9) Distance from end of base to tip of electrode (cold)  
10) Distance from end of base to tip of anode (cold)

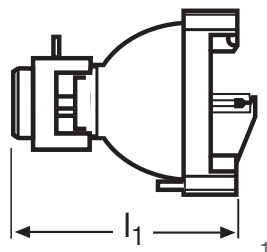


**HBO® Mercury short-arc lamps without reflector 50W...200W**

| Product Name      | Item Number | W   | V                     | A                       | AC/DC | t [h]                     | d [mm] |                   |
|-------------------|-------------|-----|-----------------------|-------------------------|-------|---------------------------|--------|-------------------|
| HBO 50 W/AC 39 V  | 69213       | 50  | 39...45 <sup>6)</sup> | 1.1...1.3 <sup>5)</sup> | AC    | 100                       | 10     | 47 <sup>1)</sup>  |
| HBO 50 W/AC 34 V  | 69214       | 50  | 34...39 <sup>6)</sup> | 1.3...1.5 <sup>5)</sup> | AC    | 100                       | 10     | 47 <sup>1)</sup>  |
| HBO 50 W/3        | 69215       | 50  | 20...26 <sup>6)</sup> | 1.9...2.5 <sup>5)</sup> | DC    | 200                       | 9      | 47 <sup>1)</sup>  |
| HBO 100 W/2       | 69217       | 100 |                       | 4.3...5.6 <sup>5)</sup> | DC    | 200                       | 10     | 82 <sup>1)</sup>  |
| HBO 103 W/2       | 69182       | 100 | 17...25 <sup>6)</sup> | 4.0...5 <sup>5)</sup>   | DC    | 300                       | 10     | 82 <sup>1)</sup>  |
| HBO 200 W/4       | 69224       | 200 | 54...63 <sup>6)</sup> | 3.0...3.7 <sup>5)</sup> | AC    | 200                       | 17     | 102 <sup>1)</sup> |
| HBO 200 W/2 57 V  | 69198       | 200 | 57...65 <sup>6)</sup> | 3.0...3.5 <sup>5)</sup> | AC/DC | 400 h / 200 <sup>8)</sup> | 17     | 102 <sup>1)</sup> |
| HBO 200 W/DC 57 V | 69225       | 200 | 48...65 <sup>6)</sup> | 3.0...4.3 <sup>5)</sup> | DC    | 1000                      | 17     | 102 <sup>1)</sup> |
| HBO 200 W/DC TM   | 69163       | 200 | 57...65 <sup>6)</sup> | 3.0...4.3 <sup>5)</sup> | DC    | 400                       | 17     | 102 <sup>1)</sup> |

| Product Name      | Item Number |                   |                  |                   |                       |                       |    |   |
|-------------------|-------------|-------------------|------------------|-------------------|-----------------------|-----------------------|----|---|
| HBO 50 W/AC 39 V  | 69213       | 47 <sup>1)</sup>  | 22 <sup>2)</sup> | s45 <sup>3)</sup> | SFa6-2                | SFa6-2                | 10 | 1 |
| HBO 50 W/AC 34 V  | 69214       | 47 <sup>1)</sup>  | 22 <sup>2)</sup> | s45 <sup>3)</sup> | SFa6-2                | SFa6-2                | 10 | 2 |
| HBO 50 W/3        | 69215       | 47 <sup>1)</sup>  | 22 <sup>2)</sup> | s45 <sup>4)</sup> | SFa8-2                | SFa6-2                | 10 | 3 |
| HBO 100 W/2       | 69217       | 82 <sup>1)</sup>  | 43 <sup>2)</sup> | s90 <sup>4)</sup> | SFa9-2                | SFa7.5-2              | 10 | 4 |
| HBO 103 W/2       | 69182       | 82 <sup>1)</sup>  | 43 <sup>2)</sup> | s90 <sup>4)</sup> | SFa9-2                | SFa7.5-2              | 10 | 4 |
| HBO 200 W/4       | 69224       | 102 <sup>1)</sup> | 40 <sup>2)</sup> | s20 <sup>5)</sup> | SFc10-4               | SFc10-4               | 10 | 5 |
| HBO 200 W/2 57 V  | 69198       | 102 <sup>1)</sup> | 40 <sup>2)</sup> | s90 <sup>4)</sup> | SFc10-4               | SFc10-4               | 10 | 6 |
| HBO 200 W/DC 57 V | 69225       | 102 <sup>1)</sup> | 40 <sup>2)</sup> | s90 <sup>4)</sup> | SFc10-4               | SFc10-4               | 10 | 6 |
| HBO 200 W/DC TM   | 69163       | 102 <sup>1)</sup> | 40 <sup>2)</sup> | s90 <sup>4)</sup> | SFc10-4 <sup>7)</sup> | SFc10-4 <sup>7)</sup> | 10 | 6 |

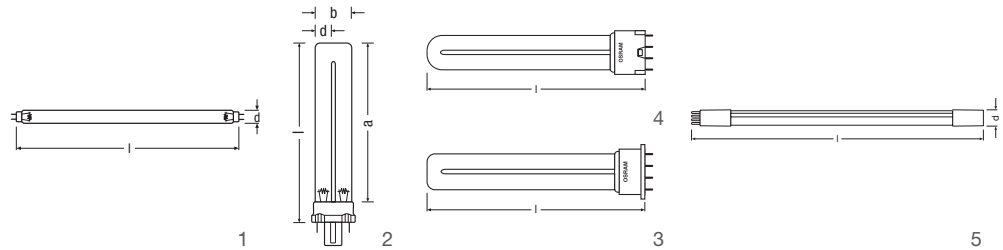
- 1) Maximum
- 2) Distance from end of base to tip of anode (cold)
- 3) Observe "UP" marking
- 4) Anode underneath
- 5) Reference base pointing downwards (shorter shaft)
- 6) Initial electrical values
- 7) With 8-32 UNC-3 B thread
- 8) Reduced lifespan in AC operation







**HBO® Mercury short-arc lamps with reflector 100W**

| Product Name   | Item Number | W   | V                     | A                     | AC/DC | t [h] | UVA/W                   | d [mm] |    |    |     |     |     |     |
|----------------|-------------|-----|-----------------------|-----------------------|-------|-------|-------------------------|--------|----|----|-----|-----|-----|-----|
| HBO R 103 W/45 | 69311       | 100 | 20...25 <sup>1)</sup> | 4.0...5 <sup>1)</sup> | DC    | 300   | 3.8 W / 5 <sup>2)</sup> | 68     | 77 | 45 | p20 | Pin | Pin | 2 1 |

- 1) Initial electrical values
- 2) Aperture 3 mm round / Aperture 5 mm round



## PURITEC® HNS® Germicidal ultraviolet lamps

| Product Name                                     | Item Number | W                   | A    | ∅ [mm] | l [mm] |  |  |  |  |
|--|-------------|---------------------|------|--------|--------|---|---|---|---|
| G4T5/OF (HNS 4 W G5)                             | 23397       | 4 <sup>2)</sup>     | 0.17 | 16     | 136    | G5  | 0.9   | 25  | 1   |
| G6T5/OF (HNS 6 W G5)                             | 23399       | 6 <sup>2)</sup>     | 0.16 | 16     | 212    | G5  | 1.7   | 25  | 1   |
| G8T5/OF (HNS 8 W G5 G5)                          | 21061       | 7 <sup>2)</sup>     | 0.15 | 16     | 288    | G5  | 2   | 25  | 1   |
| HNS 11W G5 25X1 (HNS 11W G5)                     | 23354       | 11 <sup>2)</sup>    | 0.41 | 16     | 212    | G5  | 2.5   | 25  | 1   |
| HNS 16 W G5 (HNS 16 W G5)                        | TBD         | 16 <sup>2)</sup>    | 0.43 | 16     | 288    | G5  | 4   | 25  | 1   |
| GCF5DS/G23/SE/OF (HNS S 5 W G23) <sup>1)</sup>   | 23396       | 5 <sup>2)</sup>     | 0.18 | 28     | 108    | G23   | 1.3   | 10  | 2   |
| GCF7DS/G23/SE/OF (HNS S 7 W G23) <sup>1)</sup>   | 20390       | 7 <sup>2)</sup>     | 0.18 | 28     | 135.5  | G23   | 1.8   | 10  | 2   |
| GCF9DS/G23/SE/OF (HNS S 9 W G23) <sup>1)</sup>   | 21062       | 9 <sup>2)</sup>     | 0.18 | 28     | 165.5  | G23   | 2.5   | 10  | 2   |
| GCF11DS/G23/SE/OF (HNS S 11 W G23) <sup>1)</sup> | 23398       | 11 <sup>2)</sup>    | 0.16 | 28     | 235.5  | G23   | 3   | 10  | 2   |
| HNS S/E 7 W 2G7 (HNS S/E 7 W 2G7)                | TBD         | 6.50 <sup>2)</sup>  | 0.18 | 28     | 112    | 2G7   | 1.9   | 10  | 3   |
| HNS S/E 9 W 2G7 (HNS S/E 9 W 2G7)                | TBD         | 8 <sup>2)</sup>     | 0.17 | 28     | 142    | 2G7   | 2.5   | 10  | 3   |
| HNS S/E 11 W 2G7 (HNS S/E 11 W 2G7)              | TBD         | 11 <sup>2)</sup>    | 0.15 | 28     | 212    | 2G7   | 3.6   | 10  | 3   |
| HNS S 13 W GX23 (HNS S 13 W GX23)                | TBD         | 13.40 <sup>2)</sup> | 0.28 | 28     | 179    | GX23  | 3.4   | 10  |   |
| GFT18DL/2G11/SE/OF (HNS L 18 W 2G11)             | 21054       | 18 <sup>2)</sup>    | 0.38 | 40     | 214    | 2G11  | 5.5   | 10  | 4   |
| GFT24DL/2G11/SE/OF (HNS L 24 W 2G11)             | 20849       | 24 <sup>2)</sup>    | 0.35 | 40     | 314.5  | 2G11  | 7.3   | 10  | 4   |
| GFT36DL/2G11/SE/OF (HNS L 36 W 2G11)             | 23392       | 36 <sup>2)</sup>    | 0.44 | 40     | 408    | 2G11  | 10.8  | 10  | 4   |
| GFT55DL/2G11/SE/OF (HNS L 55 W 2G11)             | 23401       | 55 <sup>2)</sup>    | 0.55 | 40     | 533    | 2G11  | 17  | 10  | 4   |
| GFT60DL/2G11/SE/OF (HNS L 60 W 2G11)             | 23402       | 60 <sup>2)</sup>    | 0.8  | 40     | 408    | 2G11  | 19  | 10  | 4   |
| GFT95DL/2G11/SE/OF (HNS L 95 W 2G11)             | 23403       | 95 <sup>2)</sup>    | 0.8  | 40     | 533    | 2G11  | 27  | 10  | 4   |
| G15T8/OF (HNS 15W G13)                           | 21259       | 15 <sup>2)</sup>    | 0.33 | 26     | 438    | G13   | 4   | 25  | 1   |
| G25T8/OF (HNS 25W G13)                           | 55197       | 25 <sup>2)</sup>    | 0.60 | 26     | 437.3  | G13   | 7.8   | 25  | 1   |
| G30T8/OF (HNS 30W G13)                           | 21080       | 30 <sup>2)</sup>    | 0.36 | 26     | 895    | G13   | 12  | 25  | 1   |
| HNS 36W G13 (HNS 36W G13)                        | TBD         | 36 <sup>2)</sup>    | 0.44 | 26     | 1200   | G13   | 15  | 25  | 1   |
| G55T8/OF (HNS 55W G13)                           | 21283       | 55 <sup>2)</sup>    | 0.77 | 26     | 895    | G13   | 18  | 25  | 1   |
| G16T5L/4PSE (HNS 16W 4P SE)                      | 55030       | 16 <sup>2)</sup>    | 0.40 | 16     | 320.3  | 4P SE   | 4   | 40  | 5   |
| G20T5L/4PSE (HNS 20W 4P SE)                      | 55031       | 20 <sup>2)</sup>    | 0.45 | 16     | 430    | 4P SE   | 6   | 40  | 5   |
| G36T5L/4PSE (HNS 36W 4P SE)                      | 55032       | 36 <sup>2)</sup>    | 0.43 | 16     | 845.4  | 4P SE   | 14  | 40  | 5   |

<sup>1)</sup> UV irradiance 253.7 nm measured at a distance of 1 m at mid-lamp level, at 20 °C ambient temperature, free-burning. Between 0.3...3.0 m, the irradiance is inversely proportional to the square of the distance

<sup>2)</sup> Not relevant

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