DAkkS
Deutsche
Akkreditierungsstelle
D-ZM-11321-01-00

Product Service

Certificate

No. Q5 075182 0005 Rev. 00

Holder of Certificate: **PULSION Medical Systems SE**
Hans-Riedl-Straße 17
85622 Feldkirchen
GERMANY

Facility(ies): PULSION Medical Systems SE
Hans-Riedl-Straße 17, 85622 Feldkirchen, GERMANY

Certification Mark:

TÜV SÜD
EN ISO 13485
tuv-sud.com/ps-cert

Scope of Certificate: **Design and development, manufacturing, packaging, marketing, sales and servicing of patient monitors including compatible modules, accessories and disposables for hemodynamic monitoring and measurement of blood pressure, cardiopulmonary, circulatory and organ function variables**

Applied Standard(s): EN ISO 13485:2016
Medical devices - Quality management systems - Requirements for regulatory purposes
(ISO 13485:2016)
DIN EN ISO 13485:2016

The Certification Body of TÜV SÜD Product Service GmbH certifies that the company mentioned above has established and is maintaining a quality management system, which meets the requirements of the listed standard(s). See also notes overleaf.

Report No.: 71515619

Valid from: 2019-05-17
Valid until: 2021-05-24

ÎNTREPRINDEREA CU RĂSPUNDERE LIMITATĂ "ENDO-CHIRURGIE" S.R.L. IDNO 1009600033242 REPUBLICA MOLDOVA

Date, 2019-05-17

Stefan Preiß

NSAI

Certificate of Registration of Quality Management System to ISO 9001:2015

The National Standards Authority of Ireland certifies that:

Excelitas Technologies GmbH & Co.KG
Wenzel-Jaksch-Strasse 31
Wiesbaden D-65199
Germany

has been assessed and deemed to comply with the requirements of the above standard in respect of the scope of operations given below:

Design and Distribution of Optoelectronic Products

SOCIETATEA CU RĂSPUNDERE LIMITATĂ S.R.L. "ENDO-CHIRURGIE" IDNO 1006600033242 REPUBLICA MOLDOVA

Approved by:
Geraldine Larkin
Chief Executive Officer

Approved by:
Lisa Greenleaf
Operations Manager

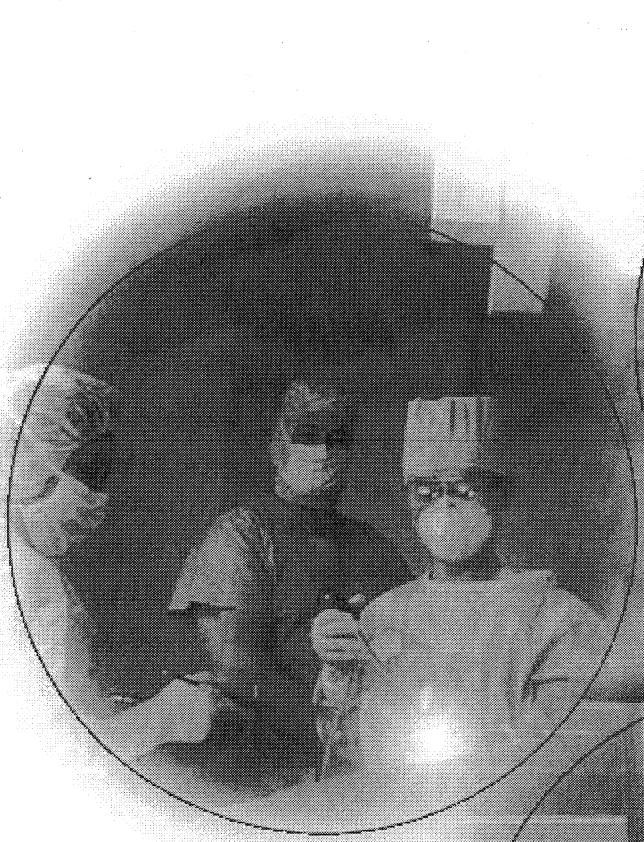
Registration Number: 19.4461
Certification Granted: Jan 28, 2009
Effective Date: Dec 19, 2017
Expiry Date: Dec 18, 2020

ANAB ACCREDITED MANAGEMENT SYSTEMS CERTIFICATION BODY

National Standards Authority of Ireland, 20 Trafalgar Square, Nashua, New Hampshire, NH 03063, USA T +1 603 882 4412

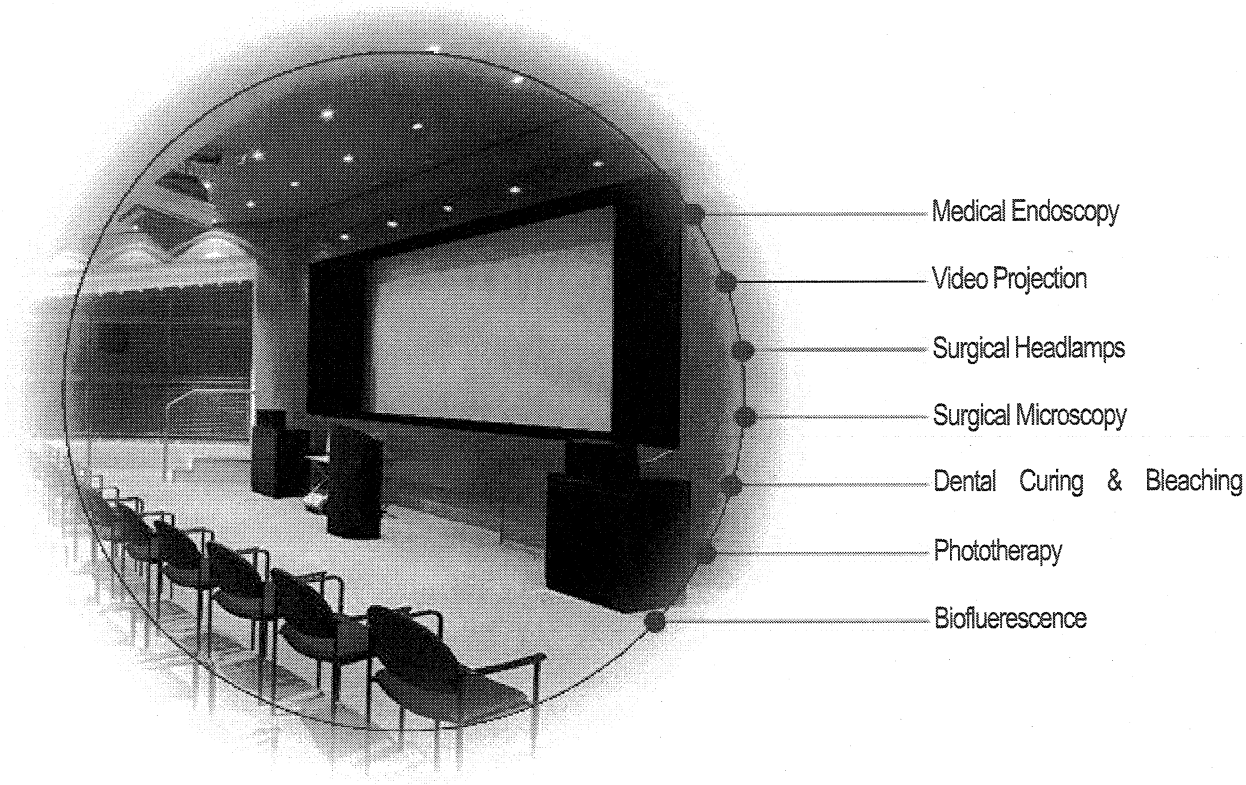
Cermax ®

Products and Specifications



EXCELITAS
TECHNOLOGIES

Short Arc:
Xenon lamps, modules



Excelitas Technologies' Cermax®
xenon short arc lamps and associated operating equipment are a unique and innovative approach to many challenging and demanding lighting applications. Cermax® lamp technology is the leading technology for use in diagnostic and surgical endoscopes, surgical microscopes, surgical headlamps as well as a variety of high performance video and home theatre projectors.

and power supplies.

Safe and compact solution

Utilizing an integrated parabolic or ellipsoidal reflector, Cermax® lamps produce high intensity, collimated or focused output of light. Due to the xenon lamps broad color spectrum, the lamp is filtered to emit either visible, UV or IR light depending on application or usage. With their internal reflector and rugged ceramic body and seal construction, Cermax® lamps are a safe and compact alternative to conventional quartz xenon lamps making them ideal for such applications as medical endoscopy, fiber optic illumination and video projection.

Due to it's new extended operating life, output degradation curve, instant on-off, DC operation and mercury-free content, Excelitas' new Cermax® lamps are an excellent alternative solution to high pressure mercury lamps for the newly emerging home theatre and RPTV markets.

Flexible power ranges

Available in two configurations —parabolic and ellipsoidal, Standard Cermax® lamps have operating power ranges from 80W to 1000W. The newly designed Cermax® lamps are available only with ellipsoidal reflectors and are offered with operating power ranges from 270W to 2700W.

Solid construction

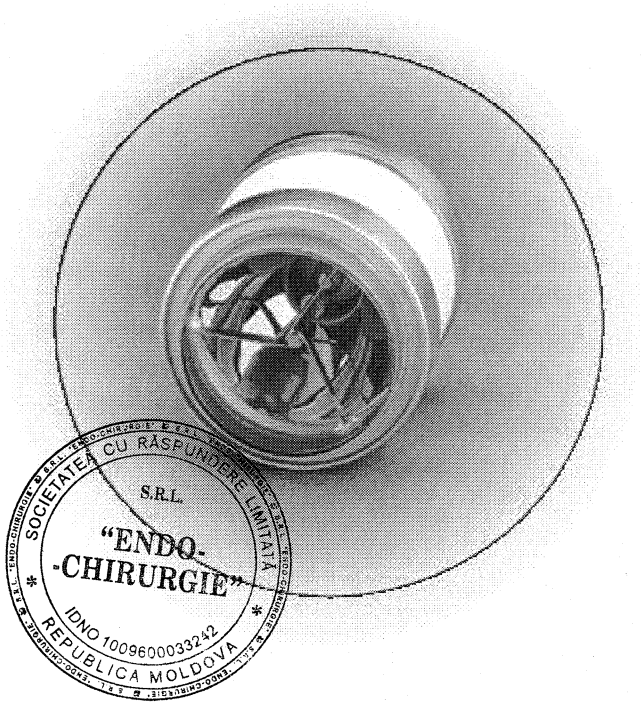
Lamp construction for all lamps is entirely of metal, sapphire and ceramic. No organic (carbon-based) materials, mercury, rare-earth elements, or any other materials with disposal problems are used it the construction of Cermax® lamps. The xenon fill gas is an inert gas and is non-toxic.

Complete solutions

Excelitas Technologies lamp operating equipment, including DC power supplies, lamp holders (modules and heat sinks), light engines and complete fiber-optic illuminators are also included in this specification sheet. All operating equipment has been specifically designed to work perfectly with Cermax® lamps providing the correct amount of current, voltage, ignition pulses, and cooling.

High performance

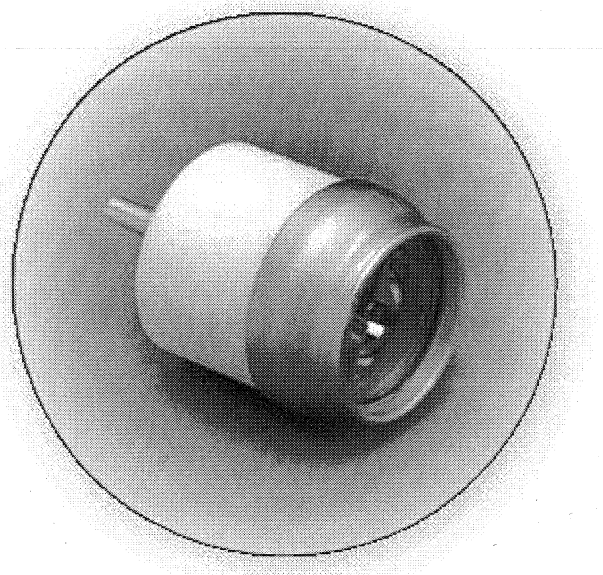
Although the overall efficacy of Cermax® lamps is lower than some alternative technologies, Cermax® xenon lamps provide extremely high brightness due to their DC operation, high pressure and ultra-short arc gaps. They also don't require external reflectors, optics or color balancing (to achieve 6000 K) which greatly lowers the usable efficacy of other lamp technologies. It is the usable, focused, color balance light that is important and Cermax® lamps achieve tremendous performance parameters as compared to any other lamp technology available today.



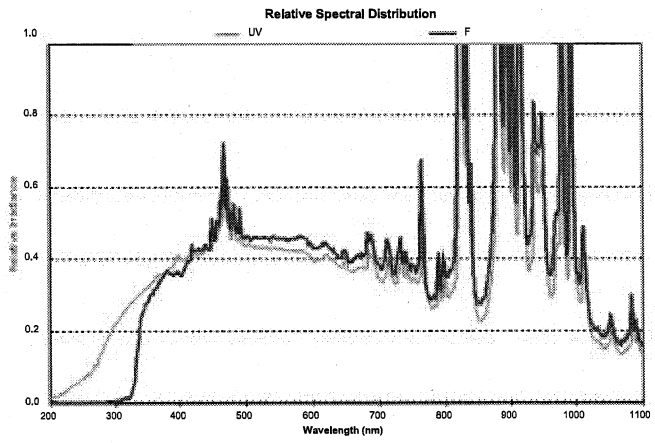
Type A Elliptical

		PE80A-10F	PE80A-10UV	PE80A-13F	PE80A-13UV	PE150A-10F	PE150A-10UV	PE150A-13F	PE150A-13UV
Power (Watts)	Nominal	85	85	85	85	150	150	150	150
	Range	85 - 100	85 - 100	85 - 100	85 - 100	100 - 150	100 - 150	100 - 150	100 - 150
Current (Amps DC)	Nominal	7.7	7.7	7.7	7.7	12.5	12.5	12.5	12.5
	Range	7.0- 10.0	7.0- 10.0	7.0- 10.0	7.0- 10.0	10.0- 14.0	10.0- 14.0	10.0- 14.0	10.0- 14.0
Voltage (Volts DC)	Nominal	11.0	11.0	11.0	11.0	11.7	11.7	11.7	11.7
	Range	10.5- 13.5	10.5- 13.5	10.5- 13.5	10.5- 13.5	10.0- 13.6	10.0- 13.6	10.0- 13.6	10.0- 13.6
Maximum Top Ceramic Operating Temperature (°C)[1]		120	120	120	120	120	120	120	120
Minimum Ignition Voltage at Lamp (kV)[2]		28	28	28	28	28	28	28	28
Minimum Ignition Pulse Duration (nS)		100	100	100	100	100	100	100	100
Radiant Output (Watts)[3]		7.0	7.0	7.0	7.0	21.0	21.0	21.0	21.0
UV Output, <390nm (Watts)[3]		0.4	0.9	0.4	0.9	1.1	2.5	1.1	2.5
IR Output, >770nm (Watts)[3]		4.0	3.6	4.0	3.6	12.0	10.8	12.0	10.8
Visible Output, 390-770nm (Lumens)[3]		800	720	800	720	1800	1620	1800	1620
Color Temperature (Kelvin)[4]		5900	5050	5900	5050	5900	5050	5900	5050
Spot Size at Crossover (inches / mm)	@ 50% points[4]	.10 / 2.5	.10 / 2.6	.11 / 2.8	.11 / 2.9	.10 / 2.5	.10 / 2.6	.11 / 2.8	.11 / 2.9
	@ 10% points[4]	.25 / 6.4	.25 / 6.5	.25 / 6.4	.25 / 6.5	.25 / 6.4	.25 / 6.5	.25 / 6.4	.25 / 6.5
f-Number		1.0	1.0	1.3	1.3	1.0	1.0	1.3	1.3
Focal Distance "A" (inches / mm)		.242 / 6.15	.242 / 6.15	.490 / 12.45	.490 / 12.45	.242 / 6.15	.242 / 6.15	.490 / 12.45	.490 / 12.45
Cathode Defocus "D" (inches / mm)		.014 / .36	.014 / .36	.014 / .36	.014 / .36	.014 / .36	.014 / .36	.014 / .36	.014 / .36
Arc Gap (inches / mm)		.025 / .64	.025 / .64	.025 / .64	.025 / .64	.032 / .81	.032 / .81	.032 / .81	.032 / .64
Window Diameter (inches / mm)		.770 / 19.56	.770 / 19.56	.770 / 19.56	.770 / 19.56	.770 / 19.56	.770 / 19.56	.770 / 19.56	.770 / 19.56
Focused Output (Lumens / Watts)	6mm Aperture	920 / 8.4	-	660 / 6.0	-	1500 / 14.0	-	1100 / 10.0	-
	3mm Aperture	590 / 5.2	-	420 / 3.7	-	1000 / 8.5	-	700 / 6.3	-

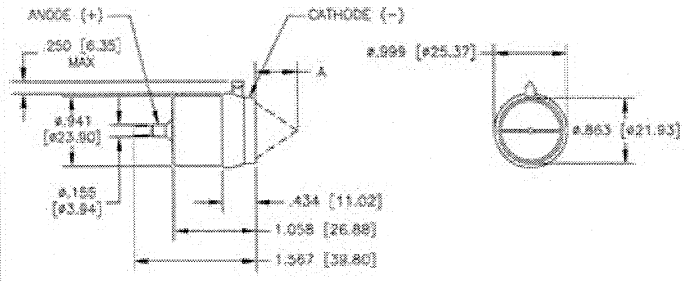
[1] Optimum operating temperature 120-130 (°C). [2] With a PKI approved power supply. [3] Total nominal output from lamp in all directions. [4] Nominal value. All specifications subject to change without notice.



Spectral Output

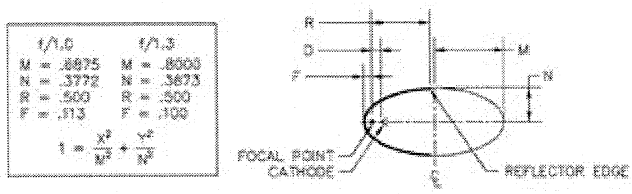


Type A Elliptical Dimensions



DIMENSIONS IN BRACKETS ARE IN MILLIMETERS.

Type A Elliptical Reflector



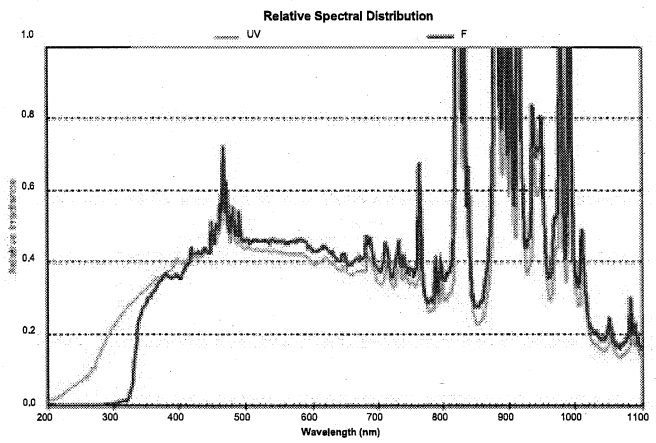
NOTES: A. Lamp must not be operated with window facing upwards within 45° of vertical. **B.** Seal temperature must not exceed 150°C. **C.** Current power regulated power supplies and Excelitas lamp housing units are recommended. **D.** Lamp must be operated within recommended current and power range. Over powering may lead to arc instability, hard starting and premature aging. **E.** Hot mirror assembly is available for filtering the 300W lamps and below. **F.** Cermax® lamps are much safer lamps to use than their quartz xenon arc lamp equivalents. However, caution must be practiced when operating lamps because they are under high pressure, require high voltage, reach temperatures of 200°C and their IR and UV radiation can cause skin burns and eye damage. Read hazard sheet included with each lamp shipment.

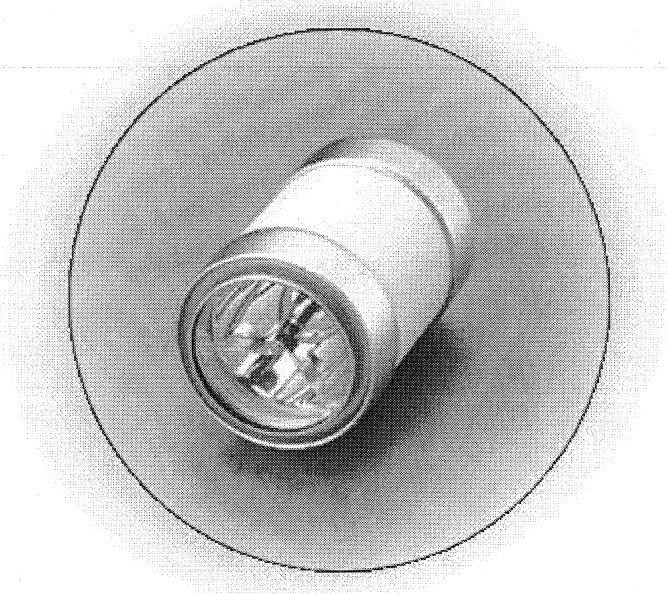
Type B Elliptical

		PE125B-10F	PE125B-10UV	PE175B-10F	PE175B-10UV	PE300B-10F	PE300B-10UV
Power (Watts)	Nominal	125	125	175	175	300	300
	Range	75 - 150	75 - 150	150 - 200	150 - 200	175 - 305	175 - 305
Current (Amps DC)	Nominal	11	11	14	14	22	22
	Range	7 - 14	7 - 14	12 - 16	12 - 16	13 - 23	13 - 23
Voltage (Volts DC)	Nominal	11.0	11.0	12.5	12.5	13.5	13.5
	Range	10.0 - 12.5	10.0 - 12.5	10.5 - 13.5	10.5 - 13.5	11.5 - 15.0	11.5 - 15.0
Maximum Top Ceramic Operating Temperature (°C)[1]		150	150	150	150	150	150
Minimum Ignition Voltage at Lamp (kV)[2]		23	23	23	23	23	23
Minimum Ignition Pulse Duration (nS)		100	100	100	100	100	100
Radiant Output (Watts)[3]		18.5	18.5	34.0	34.0	65.0	65.0
UV Output, <390nm (Watts)[3]		1.1	2.7	1.5	4.9	3.3	8.5
IR Output, >770nm (Watts)[3]		10.3	9.7	18.8	18.0	32.0	30.0
Visible Output, 390-770nm (Lumens)[3]		1570	1400	2740	2460	6900	5850
Color Temperature (Kelvin)[4]		5900	5050	5900	5050	5900	5050
Spot Size at Crossover	@ 50% points[4]	.09 / 2.3	.09 / 2.3	.09 / 2.3	.09 / 2.3	.09 / 2.3	.09 / 2.3
(inches / mm)	@ 10% points[4]	.23 / 5.8	.23 / 5.8	.23 / 5.8	.23 / 5.8	.23 / 5.8	.23 / 5.8
f-Number		1.0	1.0	1.0	1.0	1.0	1.0
Focal Distance "A" (inches / mm)		.550 / 13.97	.550 / 13.97	.550 / 13.97	.550 / 13.97	.550 / 13.97	.550 / 13.97
Cathode Defocus "D" (inches / mm)		.008 / .20	.008 / .20	.008 / .20	.008 / .20	.008 / .20	.008 / .20
Arc Gap (inches / mm)		.038 / .97	.038 / .97	.038 / .97	.038 / .97	.038 / .97	.038 / .97
Window Diameter (inches / mm)		1.00 / 25.4	1.00 / 25.4	1.00 / 25.4	1.00 / 25.4	1.00 / 25.4	1.00 / 25.4
Focused Output	6mm Aperture	1250 / 11	-	1930 / 18.5	-	3500 / 32	-
(Lumens / Watts)	3mm Aperture	650 / 6.4	-	1170 / 9	-	2000 / 20	-

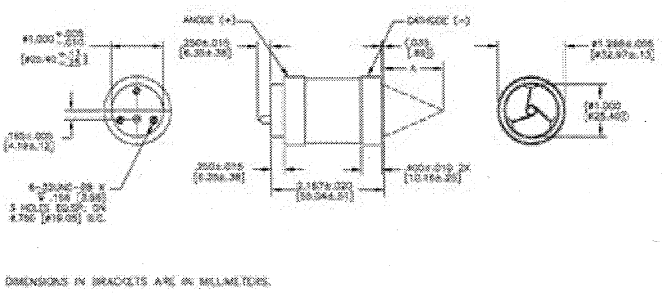
[1] Optimum operating temperature 120-130 (°C). [2] With a PKI approved power supply. [3] Total nominal output from lamp in all directions. [4] Nominal value. All specifications subject to change without notice.

Spectral Output

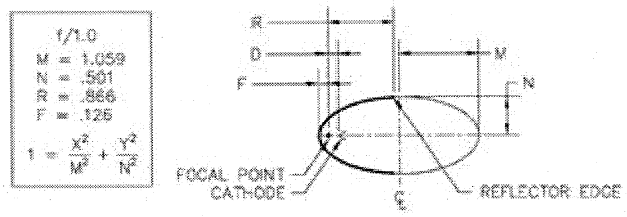




Type B Dimensions



Type B Reflector

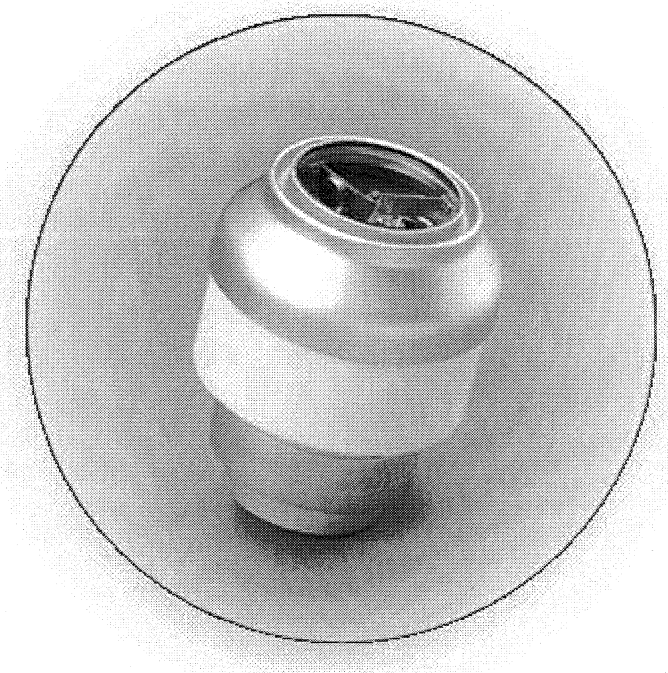


NOTES: A. Lamp must not be operated with window facing upwards within 45° of vertical. **B.** Seal temperature must not exceed 150°C. **C.** Current/power regulated power supplies and Excelitas lamp housing units are recommended. **D.** Lamp must be operated within recommended current and power range. Over powering may lead to arc instability, hard starting and premature aging. **E.** Hot mirror assembly is available for IR filtering for 300W lamps and below. Cermax® lamps are much safer lamps to use than their quartz xenon arc lamp equivalents. However, caution must be practiced when operating lamps because they are under high pressure, require high voltage, reach temperatures up to 200°C, and their IR and UV radiation can cause skin burns and eye damage. Read hazard sheet included with each lamp shipment.

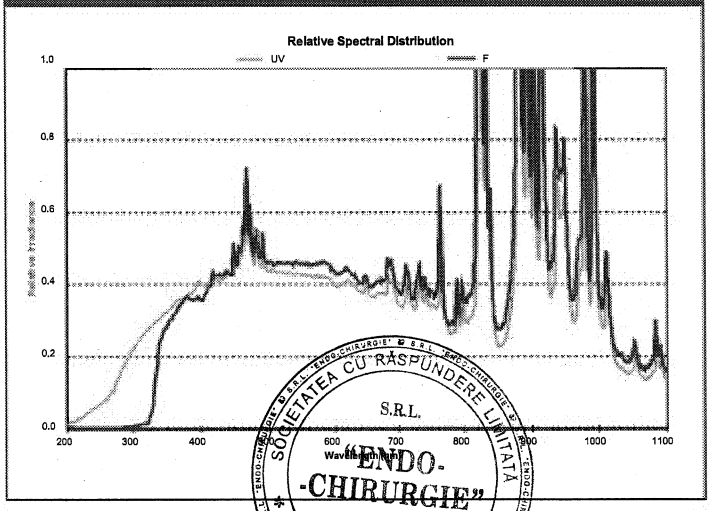
Type C Elliptical

		PE300C-10F	PE300C-10UV	PE300C-13F	PE300C-13UV	PE500C-10F	PE500C-10UV	PE500C-13F	PE500C-13UV
Power (Watts)	Nominal	300	300	300	300	500	500	500	500
	Range	175 - 300	175 - 300	175 - 300	175 - 300	350 - 525	350 - 525	350 - 525	350 - 525
Current (Amps DC)	Nominal	22.0	22.0	22.0	22.0	32.0	32.0	32.0	32.0
	Range	13.0 - 23.0	13.0 - 23.0	13.0 - 23.0	13.0 - 23.0	23.0 - 35.0	23.0 - 35.0	23.0 - 35.0	23.0 - 35.0
Voltage (Volts DC)	Nominal	13.5	13.5	13.5	13.5	15.5	15.5	15.5	15.5
	Range	11.5 - 15.0	11.5 - 15.0	11.5 - 15.0	11.5 - 15.0	14.0 - 16.5	14.0 - 16.5	14.0 - 16.5	14.0 - 16.5
Maximum Top Ceramic Operating Temperature (°C)[1]		150	150	150	150	150	150	150	150
Minimum Ignition Voltage at Lamp (kV)[2]		23	23	23	23	30	30	30	30
Minimum Ignition Pulse Duration (nS)		100	100	100	100	100	100	100	100
Radiant Output (Watts)[3]		75	75	75	75	112	112	112	112
UV Output, <390nm (Watts)[3]		3.8	9.7	3.8	9.7	5.0	10.3	5.0	10.3
IR Output, >770nm (Watts)[3]		37.0	34.5	37.0	34.5	65.0	63.0	65.0	63.0
Visible Output, 390-770nm (Lumens)[3]		7475	6725	7475	6725	10500	9550	10500	9550
Color Temperature (Kelvin)[4]		5900	5050	5900	5050	5900	5050	5900	5050
Spot Size at Crossover (inches / mm)	@ 50% points[4]	.06 / 1.5	.06 / 1.5	.07 / 1.8	.07 / 1.8	.07 / 1.8	.07 / 1.8	.07 / 1.8	.07 / 1.8
	@ 10% points[4]	.21 / 5.3	.21 / 5.3	.23 / 5.8	.23 / 5.8	.21 / 5.3	.21 / 5.3	.23 / 5.8	.23 / 5.8
f-Number		1.0	1.0	1.3	1.3	1.0	1.0	1.3	1.3
Focal Distance "A" (inches / mm)		.75 / 19.1	.75 / 19.1	1.10 / 27.9	1.10 / 27.9	.75 / 19.1	.75 / 19.1	1.10 / 27.9	1.10 / 27.9
Cathode Defocus "D" (inches / mm)		.005 / .13	.005 / .13	.005 / .13	.005 / .13	.005 / .13	.005 / .13	.005 / .13	.005 / .13
Arc Gap (inches / mm)		.045 / 1.14	.045 / 1.14	.045 / 1.14	.045 / 1.14	.045 / 1.14	.045 / 1.14	.045 / 1.14	.045 / 1.14
Window Diameter (inches / mm)		1.00 / 25.4	1.00 / 25.4	1.00 / 25.4	1.00 / 25.4	1.00 / 25.4	1.00 / 25.4	1.00 / 25.4	1.00 / 25.4
Focused Output (Lumens / Watts)	12mm Aperture	-	-	-	-	-	-	-	-
	9mm Aperture	-	-	-	-	-	-	-	-
	6mm Aperture	4500 / 37	-	3100 / 28.5	-	7700 / 75	-	7200 / 70	-
	3mm Aperture	2300 / 23	-	1750 / 17.5	-	4085 / 39	-	3600 / 35	-

[1] Optimum operating temperature 120-130 (°C). [2] With a PKI approved power supply. [3] Total nominal output from lamp in all directions. [4] Nominal value. All specifications subject to change without notice.



Spectral Output

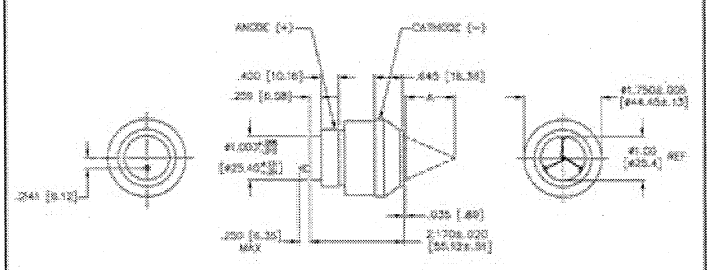


Type C Elliptical

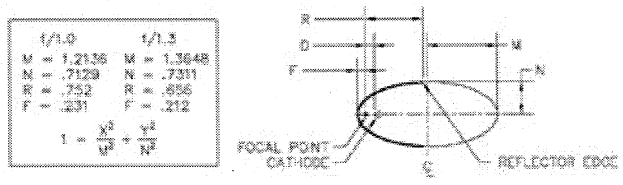
		PE700C-10F	PE700C-10UV	PE700C-13F	PE700C-13UV
Power (Watts)	Nominal	700	700	700	700
	Range	600 - 750	600 - 750	600 - 750	600 - 750
Current (Amps DC)	Nominal	41.5	41.5	41.5	41.5
	Range	35.0 - 46.0	35.0 - 46.0	35.0 - 46.0	35.0 - 46.0
Voltage (Volts DC)	Nominal	16.85	16.85	16.85	16.85
	Range	15.5 - 18.0	15.5 - 18.0	15.5 - 18.0	15.5 - 18.0
Maximum Top Ceramic Operating Temperature (°C)[1]		180	180	180	180
Minimum Ignition Voltage at Lamp (kV)[2]		38	38	38	38
Minimum Ignition Pulse Duration (nS)		100	100	100	100
Radiant Output (Watts)[3]		190	190	190	190
UV Output, <390nm (Watts)[3]		8.5	17.0	8.5	17.0
IR Output, >770nm (Watts)[3]		100.0	97.0	100.0	97.0
Visible Output, 390-770nm (Lumens)[3]		21000	18600	21000	18600
Color Temperature (Kelvin)[4]		5900	5050	5900	5050
Spot Size at Crossover (inches / mm)	@ 50% points[4]	.10 / 2.5	.10 / 2.5	.10 / 2.5	.10 / 2.5
	@ 10% points[4]	.21 / 5.3	.21 / 5.3	.23 / 5.8	.23 / 5.8
f-Number		1.0	1.0	1.3	1.3
Focal Distance "A" (inches / mm)		.75 / 19.1	.75 / 19.1	1.10 / 27.9	1.10 / 27.9
Cathode Defocus "D" (inches / mm)		.005 / .13	.005 / .13	.005 / .13	.005 / .13
Arc Gap (inches / mm)		.045 / 1.14	.045 / 1.14	.045 / 1.14	.045 / 1.14
Window Diameter (inches / mm)		1.00 / 25.4	1.00 / 25.4	1.00 / 25.4	1.00 / 25.4
Focused Output (Lumens / Watts)	12mm Aperture	20000 / 193	17800 / 172	18500 / 180	16500 / 175
	9mm Aperture	18000 / 175	16800 / 162	16500 / 160	14650 / 150
	6mm Aperture	12100 / 117	10850 / 105	11232 / 109	10200 / 109
	3mm Aperture	7300 / 65	6500 / 62	6500 / 60	5700 / 54

[1] Optimum operating temperature 120-130 (°C). [2] With a PKI approved power supply. [3] Total nominal output from lamp in all directions. [4] Nominal value. All specifications subject to change without notice.

Type C Dimensions



Type C Reflector

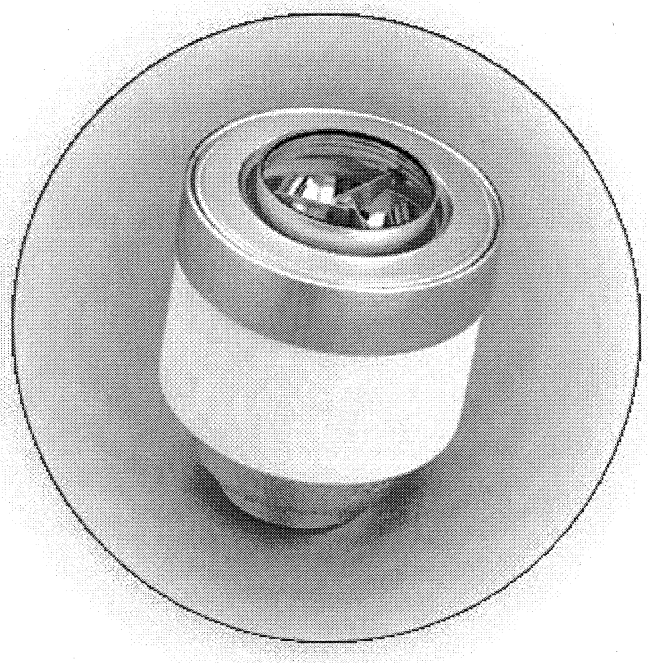


NOTES: A. Lamp must not be operated with window facing upwards within 45° of vertical. **B.** Seal temperature must not exceed 150°C. **C.** Current/power regulated power supplies and Excelitas lamp housing units are recommended. **D.** Lamp must be operated within recommended current and power range. Over powering may lead to arc instability, hard starting and premature aging. **E.** Hot mirror assembly is available for IR filtering for 300W lamps and below. **F.** Cermax® lamps are much safer lamps to use than their quartz xenon arc lamp equivalents. However, caution must be practiced when operating lamps because they are under high pressure, require high voltage, reach temperatures up to 200°C, and their IR and UV radiation can cause skin burns and eye damage. Read hazard sheet included with each lamp shipment.

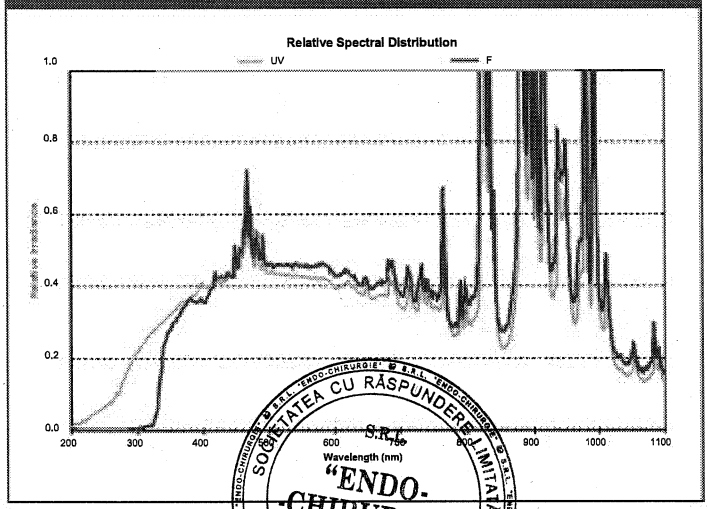
Type D Elliptical

		PE1000D-10F	PE1000D-10UV	PE1000D-13F	PE1000D-13UV	PE1200D-10F	PE1200D-10UV	PE1200D-13F	PE1200D-13UV
Power (Watts)	Nominal	1000	1000	1000	1000	1200	1200	1200	1200
	Range	600 - 1050	600 - 1050	600 - 1050	600 - 1050	950 - 1250	950 - 1250	950 - 1250	950 - 1250
Current (Amps DC)	Nominal	50	50	50	50	63	63	63	63
	Range	30 - 56	30 - 56	30 - 56	30 - 56	45 - 70	45 - 70	45 - 70	45 - 70
Voltage (Volts DC)	Nominal	20.0	20.0	20.0	20.0	19.0	19.0	19.0	19.0
	Range	15.0 - 24.0	15.0 - 24.0	15.0 - 24.0	15.0 - 24.0	17.0 - 22.0	17.0 - 22.0	17.0 - 22.0	17.0 - 22.0
Maximum Top Ceramic Operating Temperature (°C)[1]		150	150	150	150	160	160	160	160
Minimum Ignition Voltage at Lamp (kV)[2]		28	28	28	28	28	28	28	28
Minimum Ignition Pulse Duration (nS)		100	100	100	100	100	100	100	100
Radiant Output (Watts)[3]		245	245	245	245	273	273	273	273
UV Output, <390nm (Watts)[3]		13.0	24.0	13.0	24.0	14.6	37.0	14.6	37.0
IR Output, >770nm (Watts)[3]		135	132	135	132	150	146	150	146
Visible Output, 390-770nm (Lumens)[3]		23500	21000	23500	21000	30000	27000	30000	27000
Color Temperature (Kelvin)[4]		5900	5050	5900	5050	5900	5050	5900	5050
Spot Size at Crossover (inches / mm)	@ 50% points[4]	.14 / 3.5	.14 / 3.5	.15 / 3.8	.15 / 3.8	.15 / 3.8	.15 / 3.8	.16 / 4.1	.16 / 4.1
	@ 10% points[4]	.33 / 8.4	.33 / 8.4	.35 / 8.9	.35 / 8.9	.40 / 10.3	.40 / 10.3	.53 / 13.5	.53 / 13.5
f-Number		1.0	1.0	1.3	1.3	1.0	1.0	1.3	1.3
Focal Distance "A" (inches / mm)		.946 / 24.03	.946 / 24.03	1.389 / 35.28	1.389 / 35.28	.946 / 24.03	.946 / 24.03	1.389 / 35.28	1.389 / 35.28
Cathode Defocus "D" (inches / mm)		.008 / .20	.008 / .20	.008 / .20	.008 / .20	.008 / .20	.008 / .20	.008 / .20	.008 / .20
Arc Gap (inches / mm)		.062 / 1.57	.062 / 1.57	.062 / 1.57	.062 / 1.57	.067 / 1.70	.067 / 1.70	.067 / 1.70	.067 / 1.70
Window Diameter (inches / mm)		1.375 / 34.92	1.375 / 34.92	1.375 / 34.92	1.375 / 34.92	1.375 / 34.92	1.375 / 34.92	1.375 / 34.92	1.375 / 34.92
Focused Output (Lumens / Watts)	12mm Aperture	21000 / 200	18900 / 180	18000 / 163	16200 / 147	23250 / 208	21000 / 187	22000 / 195	19725 / 176
	9mm Aperture	-	-	-	-	19500 / 185	17250 / 164	18750 / 178	16875 / 158
	6mm Aperture	13000 / 120	11700 / 108	12000 / 110	10800 / 99	13500 / 128	12000 / 113	12000 / 108	10800 / 97
	3mm Aperture	4800 / 47	4320 / 42	3500 / 33	3150 / 30	5700 / 54	5100 / 49	4200 / 40	3780 / 36

[1] Optimum operating temperature 120-130 (°C). [2] With a PKI approved power supply. [3] Total nominal output from lamp in all directions. [4] Nominal value. All specifications subject to change without notice.



Spectral Output

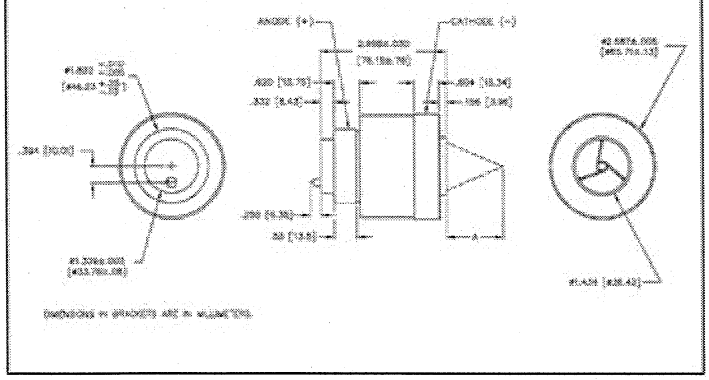


Type D Elliptical

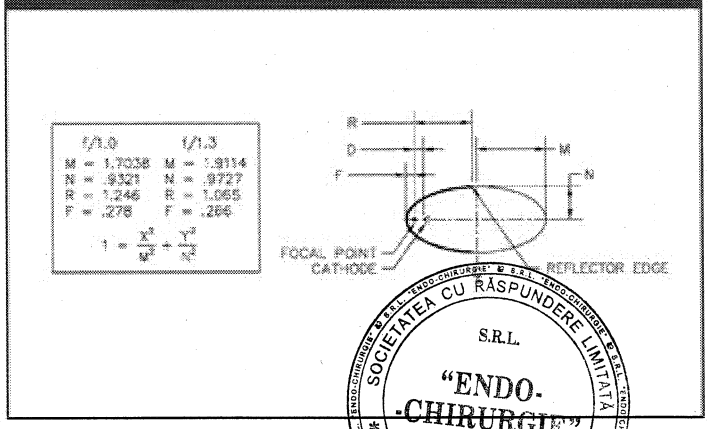
		PE1500D-10F	PE1500D-10UV	PE1500D-13F	PE1500D-13UV
Power (Watts)	Nominal	1500	1500	1500	1500
	Range	900 - 1550	900 - 1550	900 - 1550	900 - 1550
Current (Amps DC)	Nominal	65	65	65	65
	Range	45 - 80	45 - 80	45 - 80	45 - 80
Voltage (Volts DC)	Nominal	18.5	18.5	18.5	18.5
	Range	17.0 - 23.0	17.0 - 23.0	17.0 - 23.0	17.0 - 23.0
Maximum Top Ceramic Operating Temperature (°C)[1]		160	160	160	160
Minimum Ignition Voltage at Lamp (kV)[2]		28	28	28	28
Minimum Ignition Pulse Duration (nS)		100	100	100	100
Radiant Output (Watts)[3]		365	365	365	365
UV Output, <390nm (Watts)[3]		19.5	49.0	19.5	49.0
IR Output, >770nm (Watts)[3]		200	195	200	195
Visible Output, 390-770nm (Lumens)[3]		40000	36000	40000	36000
Color Temperature (Kelvin)[4]		5900	5050	5900	5050
Spot Size at Crossover (inches / mm)	@ 50% points[4]	.15 / 3.8	.15 / 3.8	.16 / 4.1	.16 / 4.1
	@ 10% points[4]	.40 / 10.3	.40 / 10.3	.53 / 13.5	.53 / 13.5
f-Number		1.0	1.0	1.3	1.3
Focal Distance "A" (inches / mm)		.946 / 24.03	.946 / 24.03	1.389 / 35.28	1.389 / 35.28
Cathode Defocus "D" (inches / mm)		.008 / .20	.008 / .20	.008 / .20	.008 / .20
Arc Gap (inches / mm)		.075 / 1.91	.075 / 1.91	.075 / 1.91	.075 / 1.91
Window Diameter (inches / mm)		1.375 / 34.92	1.375 / 34.92	1.375 / 34.92	1.375 / 34.92
Focused Output (Lumens / Watts)	12mm Aperture	31000 / 278	28000 / 250	29000 / 280	26000 / 235
	9mm Aperture	26000 / 247	23000 / 225	25000 / 238	22500 / 211
	6mm Aperture	18000 / 171	16000 / 154	16000 / 145	14400 / 130
	3mm Aperture	7500 / 72	6800 / 65	5600 / 53	5040 / 48

[1] Optimum operating temperature 120-130 (°C). [2] With a PKI approved power supply. [3] Total nominal output from lamp in all directions. [4] Nominal value. All specifications subject to change without notice.

Type D Dimensions



Type D Reflector

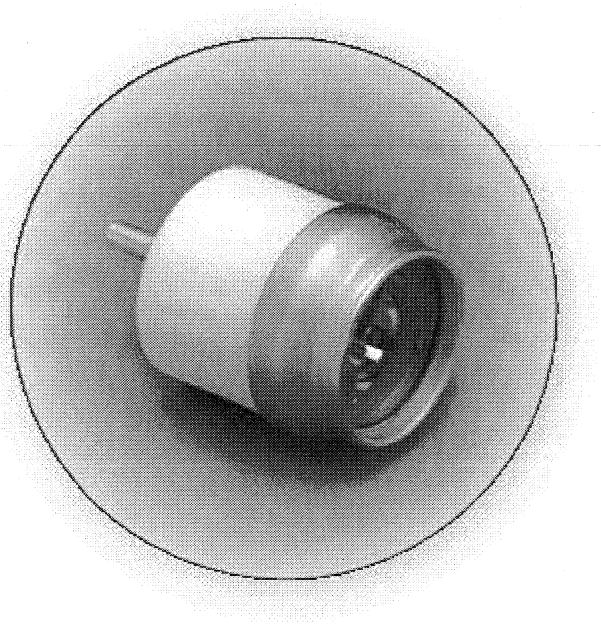


NOTES: A. Lamp must not be operated with window facing upwards within 45° of vertical. **B.** Seal temperature must not exceed 150°C. **C.** Current/power regulated power supplies and Excelitas lamp housing units are recommended. **D.** Lamp must be operated within recommended current and power range. Over powering may lead to arc instability, hard starting and premature aging. **E.** Hot mirror assembly is available for IR filtering for 300W lamps and below. **F.** Cermax® lamps are much safer lamps to use than their quartz xenon arc lamp equivalents. However, caution must be practiced when operating lamps because they are under high pressure, require high voltage, reach temperatures up to 200°C, and their IR and UV radiation can cause skin burns and eye damage. Read hazard sheet included with each lamp shipment.

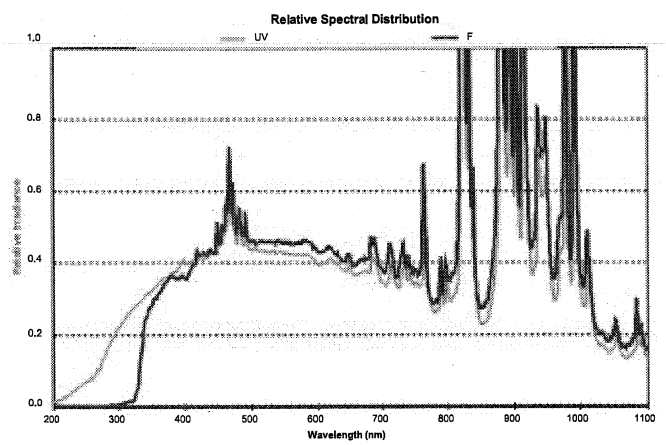
Type A Parabolic

		PE80AF	PE80AUV	PE150AF	PE150AUV
Power (Watts)	Nominal	85	85	150	150
	Range	85 - 100	85 - 100	100 - 150	100 - 150
Current (Amps DC)	Nominal	7.7	7.7	12.5	12.5
	Range	7.0- 10.0	7.0- 10.0	10.0- 14.0	10.0- 14.0
Voltage (Volts DC)	Nominal	11.0	11.0	11.7	11.7
	Range	10.5- 13.5	10.5- 13.5	10.0- 13.6	100 - 13.6
Maximum Top Ceramic Operating Temperature (°C)[1]		120	120	120	120
Minimum Ignition Voltage at Lamp (kV)[2]		28	28	28	28
Minimum Ignition Pulse Duration (nS)		100	100	100	100
Radiant Output (Watts)[3]		6.0	6.0	16.0	16.0
UV Output, <390nm (Watts)[3]		0.3	0.7	0.9	2.0
IR Output, >770nm (Watts)[3]		3.2	2.9	8.0	7.2
Visible Output, 390-770nm (Lumens)[3]		650	580	1350	1210
Color Temperature (Kelvin)[4]		5900	5050	5900	5050
Cathode Defocus "D" (inches / mm)		.014 / .36	.014 / .36	.014 / .36	.014 / .36
Arc Gap (inches / mm)		.025 / .64	.025 / .64	.032 / .81	.032 / .81
Window Diameter (inches / mm)		.770 / 19.56	.770 / 19.56	.770 / 19.56	.770 / 19.56
Focused Output with f/1.0 lens (Lumens / Watts)	6mm Aperture	540 / 4.8	-	900 / 8.0	-
	3mm Aperture	350 / 3.3	-	700 / 5.5	-

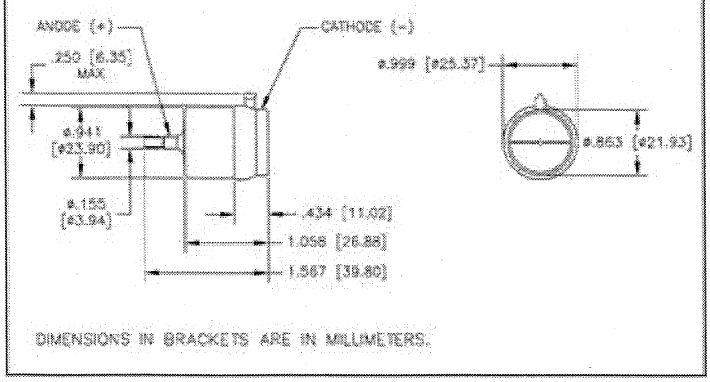
[1] Optimum operating temperature 120-130 (°C). [2] With a PKI approved power supply. [3] Total nominal output from lamp in all directions. [4] Nominal value. All specifications subject to change without notice.



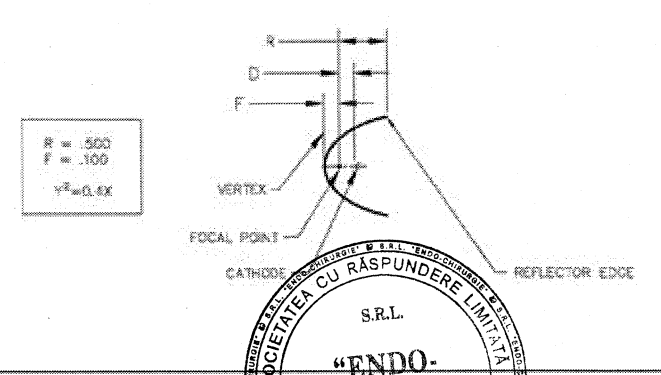
Spectral Output



Type A Parabolic Dimensions



Type A Parabolic Reflector



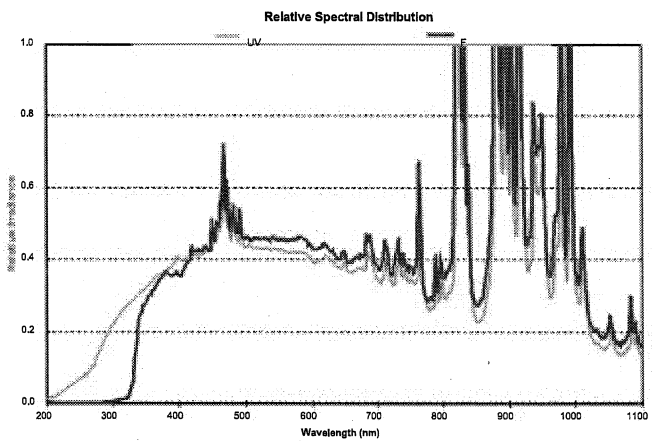
NOTES: A. Lamp must not be operated with window facing upwards within 45° of vertical. **B.** Seal temperature must not exceed 150°C. **C.** Current/power regulated power supplies and Excelitas lamp mounting kits are recommended. **D.** Lamp must be operated within recommended current and power range. Over powering may lead to arc instability, hard starting and premature aging. **E.** Hot mirror assembly is available for IR filtering for 300W lamps and below. Cermax lamps are much safer lamps to use than their quartz xenon arc lamp equivalents. However, caution must be practiced when operating lamps because they are under high pressure, require high voltage, reach temperatures up to 200°C, and their IR and UV radiation can cause skin burns and eye damage. Read hazard sheet included with each lamp shipment.

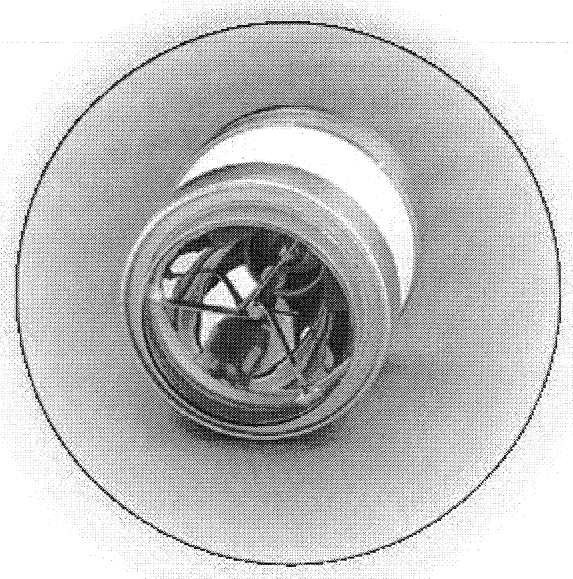
Type B Parabolic

		PE125BF	PE125BUV	PE175BF	PE175BUV	PE300BF	PE300BUV
Power (Watts)	Nominal	125	125	175	175	300	300
	Range	75 - 150	75 - 150	150 - 200	150 - 200	180 - 320	180 - 320
Current (Amps DC)	Nominal	12	12	14	14	21	21
	Range	6 - 14	6 - 14	12 - 16	12 - 16	10 - 22	10 - 22
Voltage (Volts DC)	Nominal	11.0	11.0	12.5	12.5	14.0	14.0
	Range	9.5 - 12.5	9.5 - 12.5	11.0 - 14.0	11.0 - 14.0	13.0 - 16.0	13.0 - 16.0
Maximum Top Ceramic Operating Temperature (°C)[1]		150	150	150	150	150	150
Minimum Ignition Voltage at Lamp (kV)[2]		23	23	23	23	23	23
Minimum Ignition Pulse Duration (nS)							
Peak Intensity (Candelas)		3.0×10^5	2.8×10^5	3.5×10^5	3.3×10^5	5.2×10^5	4.6×10^5
Radiant Output (Watts)[3]		17	17	25	25	50	50
UV Output, <390nm (Watts)[3]		0.8	2.2	1.2	3.5	2.6	6.6
IR Output, >770nm (Watts)[3]		10.0	9.0	14.0	13.0	28.8	26.8
Visible Output, 390-770nm (Lumens)[3]		1500	1350	2200	2000	5000	4500
Color Temperature (Kelvin)[4]		5600	5050	5600	5050	5600	5050
Beam Geometry[5] (Degrees)	@ 1 Hour	4.5	4.5	4.5	4.5	5.0	5.0
	@ 100 Hours	5.0	5.0	5.0	5.0	6.0	6.0
	@ 1000 Hours	6.0	6.0	6.0	6.0	7.0	7.0
Cathode Defocus "D" (inches / mm)		.003 / .08	.003 / .08	.003 / .08	.003 / .08	.003 / .08	.003 / .08
Arc Gap (inches / mm)		.045 / 1.14	.045 / 1.14	.045 / 1.14	.045 / 1.14	.049 / 1.24	.049 / 1.24
Window Diameter (inches / mm)		1.00 / 25.4	1.00 / 25.4	1.00 / 25.4	1.00 / 25.4	1.00 / 25.4	1.00 / 25.4
Focused Output with f/1.0 lens (Lumens / Watts)	8mm Aperture	1050 / 9.5	-	1400 / 13.0	-	3130 / 29.0	-
	6mm Aperture	620 / 5.6	-	830 / 7.8	-	1410 / 14.0	-

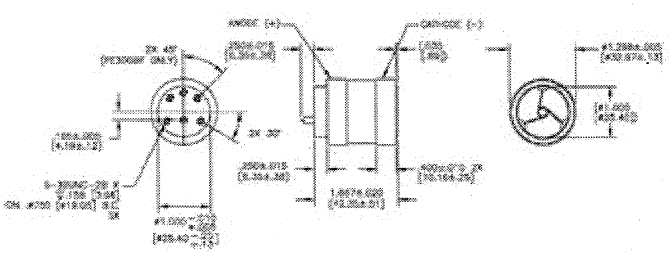
[1] Optimum operating temperature 120-130 (°C). [2] With a PKI approved power supply. [3] Total nominal output from lamp in all directions. [4] Nominal value. [5] Half angle at 10% points. All specifications subject to change without notice.

Spectral Output

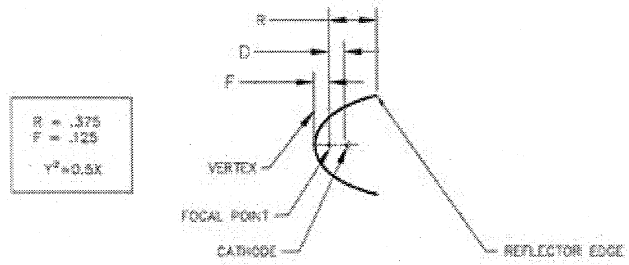




Type B Parabolic Dimensions



Type B Parabolic Reflector

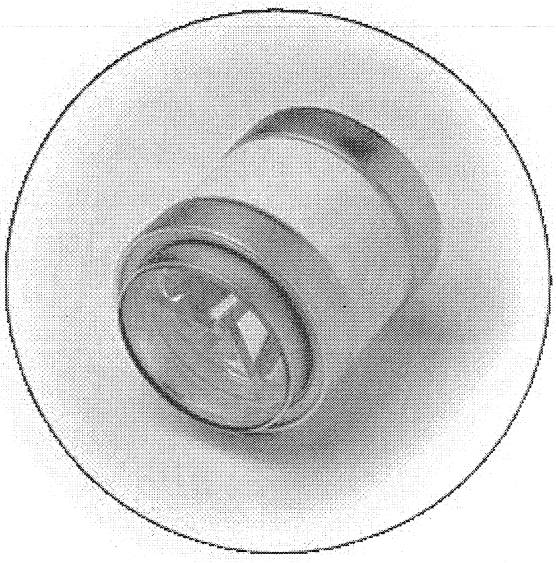


NOTES: A. Lamp must not be operated with window facing upwards within 45° of vertical. **B.** Seal temperature must not exceed 150°C. **C.** Current/power regulated power supplies and Excelitas lamp housing units are recommended. **D.** Lamp must be operated within recommended current and power range. Over powering may lead to arc instability, hard starting and premature aging. **E.** Hot mirror assembly is available for IR filtering for 300W lamps and below. **F.** Ceramic lamps are much safer lamps to use than metal quartz xenon arc lamp equivalents. However, caution must be practiced when operating lamps because they are under high pressure, require high voltage, reach temperatures up to 200°C, and their IR and UV radiation can cause skin burns and eye damage. Read hazard sheet included with each lamp shipment.

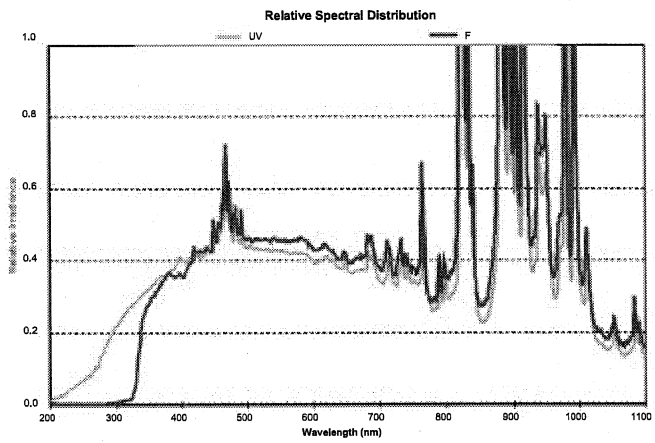
Type D Parabolic

		PE500DF	PE500DUV	PE1000DF	PE1000DUV
Power (Watts)	Nominal	500	500	1000	1000
	Range	340 - 575	340 - 575	850 - 1050	850 - 1050
Current (Amps DC)	Nominal	27	27	51	51
	Range	20 - 32	20 - 32	46 - 54	46 - 54
Voltage (Volts DC)	Nominal	18.5	18.5	19.5	19.5
	Range	16.0- 21.0	16.0- 21.0	18.5- 22.0	18.5- 22.0
Maximum Top Ceramic Operating Temperature (°C)[1]		150	150	150	150
Minimum Ignition Voltage at Lamp (kV)[2]		35	35	35	35
Minimum Ignition Pulse Duration (nS)		100	100	100	100
Peak Intensity (Candelas)		2.4×10^6	1.7×10^6	3.8×10^6	2.7×10^6
Radiant Output (Watts)[3]		112	112	250	250
UV Output, <390nm (Watts)[3]		5.5	11.5	13.0	25.0
IR Output, >770nm (Watts)[3]		65	62	137	133
Visible Output, 390-770nm (Lumens)[3]		10500	9600	24000	22000
Color Temperature (Kelvin)[4]		5600	5050	5600	5050
Beam Geometry[5] (Degrees)	@ 1 Hour	3.0	3.0	4.5	4.5
	@ 100 Hours	4.0	4.0	5.0	5.0
	@ 1000 Hours	5.0	5.0	6.0	6.0
Cathode Defocus "D" (inches / mm)		.008 / .20	.008 / .20	.008 / .20	.008 / .20
Arc Gap (inches / mm)		.090 / 2.29	.090 / 2.29	.090 / 2.29	.090 / 2.29
Window Diameter (inches / mm)		2.00 / 50.8	2.00 / 50.8	2.00 / 50.8	2.00 / 50.8
Focused Output with f/1.0 lens (Lumens / Watts)	6mm Aperture	5200 / 48	-	10400 / 96	-
	3mm Aperture	2300 / 22	-	4600 / 44	-

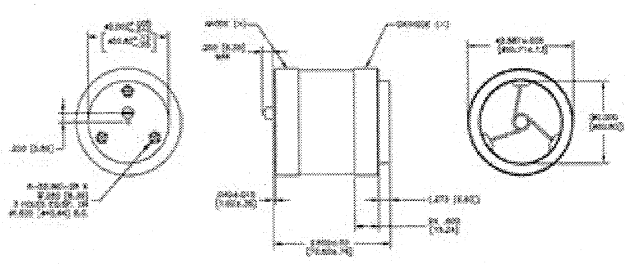
[1] Optimum operating temperature 120-130 (°C). [2] With a PKI approved power supply. [3] Total nominal output from lamp in all directions. [4] Nominal value. [5] Half angle at 10% points.
All specifications subject to change without notice.



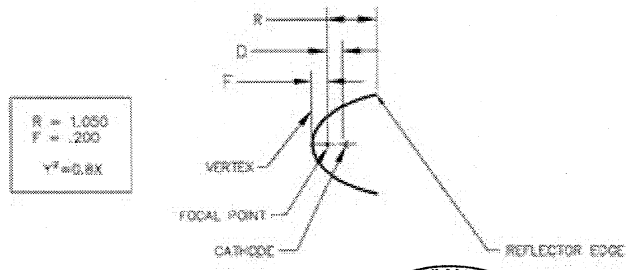
Spectral Output



Type D Parabolic Dimensions

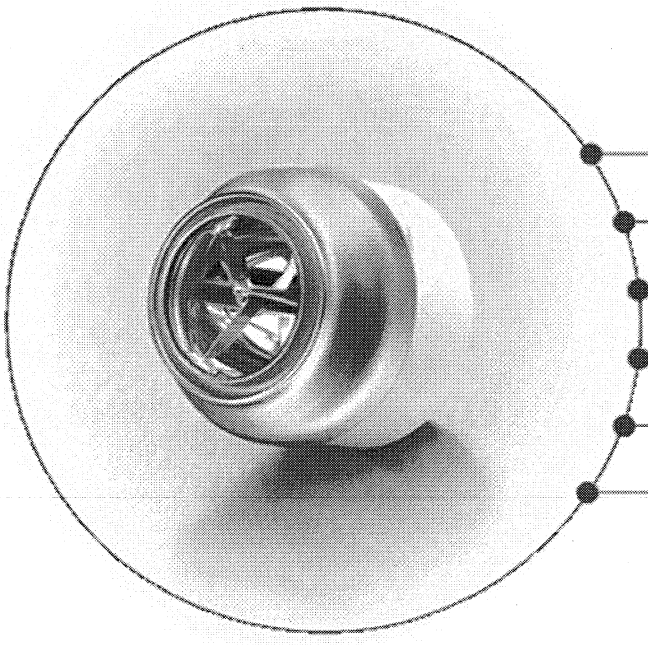


Type D Parabolic Reflector



NOTES: A. Lamp must not be operated with window facing upwards within 45° of vertical. **B.** Seal temperature must not exceed 150°C. **C.** Current/power regulated power supplies and Excelitas lamp housing units are recommended. **D.** Lamp must be operated within recommended current and power range. Over powering may lead to arc instability, hard starting and premature aging. **E.** Hot mirror assembly is available for IR filtering for 300W lamps and below. Fermax® lamps are much safer lamps to use than their quartz xenon arc lamp equivalents. However, caution must be practiced when operating lamps because they are under high pressure, require high voltage, reach temperatures up to 200°C, and their IR and UV radiation can cause skin burns and eye damage. Read hazard sheet included with each lamp shipment.

Video Projection Lighting Products



- High out put Xenon for excellent color stability and reliability
- DC operation for more lumens through smaller apertures Instant on/off capabilities
- One lamp body size for 1,500 - 3,500 lumen projectors Single lamp design eliminating light coupling design issues Small compact low wattage lamp for RPTV

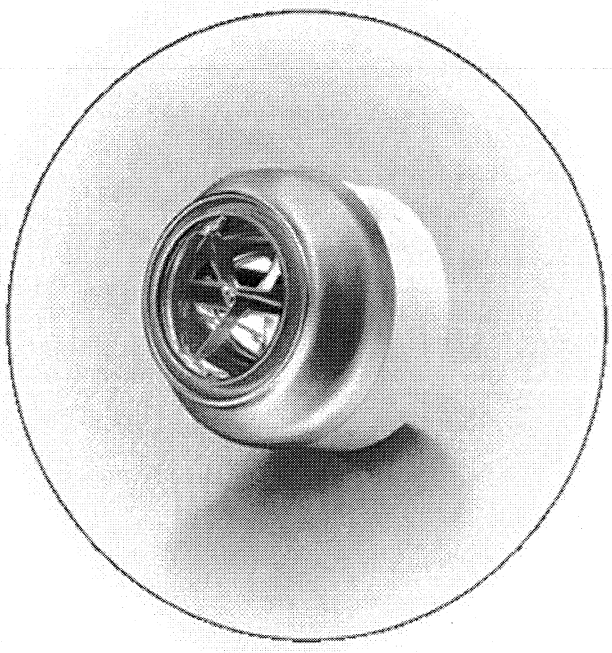
Excelitas Technologies is fueling the digital revolution with its new Cermax® high pressure xenon lamps. These new lamps provide unparallel performance ideal for video projection applications and are a safe and compact alternative to conventional quartz xenon lamps or high pressure mercury lamps currently used in the video market.

Cermax® lamps have been innovatively designed to achieve an unprecedented 4000 hour life rating which, for the first time, makes xenon a viable alternative to high pressure mercury lamps used in RPTV and Home Theatre projector applications. The xenon gas fill provides a balanced D6500 / D5900 color spectrum and true white light to produce the accurate and brilliant colors that consumers expect from the cinema experience. Xenon provides the added benefit of being environmentally friendly as it is an inert gas and non-toxic. Cermax® lamps are also designed with revolutionary performance features: shortest arc gap available in the industry, DC operation to reduce any sequencing and flicker issues, and instant on-off with no warm up or cool down time necessary. Lamp construction is entirely of metal, sapphire and ceramic. No organic (carbon-based) materials, mercury, rare-earth elements, or any other materials with disposal problems are used in its construction.

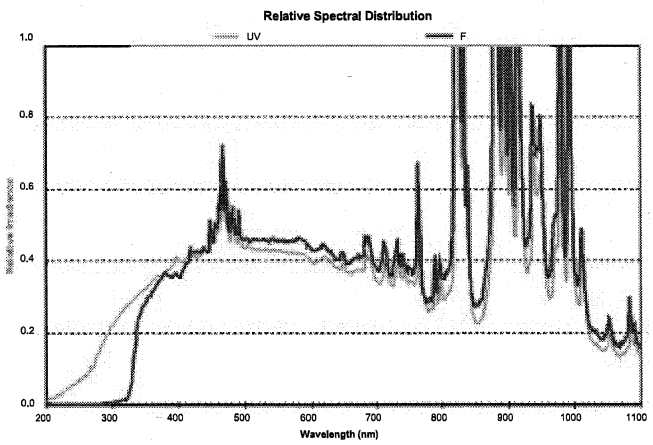
Video Projection

		XE330C-10FH	XE330C-13FH	XE420C-10FH	XE420C-13FH	XE550C-10FH	XE550C-13FH	XE825C-10FH	XE825C-13FH
Power (Watts)	Nominal	330	330	420	420	550	550	825	825
	Range	270 - 390	270 - 390	350 - 420	350 - 420	400 - 575	400 - 575	700 - 750	700 - 750
Current (Amps DC)	Nominal	22.8	22.8	25.8	25.8	34.7	34.7	43.0	43.0
	Range	21.5- 26.5	21.5- 26.5	24.2- 27.6	24.2- 27.6	32.0- 37.5	32.0- 37.5	40.0- 45.0	40.0- 45.0
Voltage (Volts DC)	Nominal	15.5	15.5	15.8	15.8	15.9	15.9	17.4	17.4
	Range	14.5- 16.5	14.5- 16.5	15.0- 16.8	15.0- 16.8	15.0- 17.5	15.0- 17.5	16.0- 18.5	16.0- 18.5
Maximum Top Ceramic Operating Temperature (°C)[1]		160	160	160	160	160	160	160	160
Minimum Ignition Voltage at lamp (kV)[2]		35	35	35	35	35	35	38	38
Minimum Ignition Pulse Duration (nS)		100	100	100	100	100	100	100	100
Radiant Output (Watts)[3]		69	69	83	83	124	124	170	170
UV Output, <390nm (Watts)[3]		3.0	3.0	3.7	3.7	6.0	6.0	7.6	7.6
IR Output, >770nm (Watts)[3]		40	40	48	48	72	72	87	87
Visible Output, 390-770nm (Lumens)[3]		6800	6800	7800	7800	11700	11700	25000	25000
Color Temperature (Kelvin)[4]		5900	5900	5900	5900	5900	5900	5900	5900
Spot Size at Crossover (inches / mm)	@ 50% points[4]	.067 / 1.7	.067 / 1.7	.067 / 1.7	.067 / 1.7	.067 / 1.7	.067 / 1.7	.10 / 2.5	.10 / 2.5
	@ 10% points[4]	.220 / 5.6	.220 / 5.6	.220 / 5.6	.220 / 5.6	.220 / 5.6	.220 / 5.6	.24 / 6.1	.25 / 6.4
f-Number		1.0	1.3	1.0	1.3	1.0	1.3	1.0	1.3
Focal Distance "A" (inches / mm)		.75 / 19.1	1.10 / 27.9	.75 / 19.1	1.10 / 27.9	.75 / 19.1	1.10 / 27.9	.75 / 19.1	1.10 / 27.9
Cathode Defocus "D" (inches / mm)		.008 / .20	.008 / .20	.008 / .20	.008 / .20	.008 / .20	.008 / .20	.008 / .20	.008 / .20
Arc Gap (inches / mm)		.038 / .97	.038 / .97	.038 / .97	.038 / .97	.038 / .97	.038 / .97	.038 / .97	.038 / .97
Window Diameter (inches / mm)		1.00 / 25.4	1.00 / 25.4	1.00 / 25.4	1.00 / 25.4	1.00 / 25.4	1.00 / 25.4	1.00 / 25.4	1.00 / 25.4
Focused Output - XGA/SXGA					Available upon request				

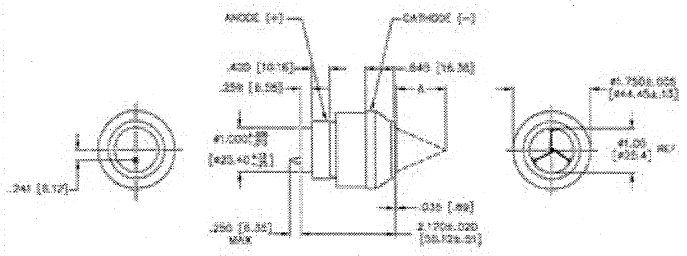
[1] Optimum operating temperature 120-130 (°C). [2] With a PKI approved power supply. [3] Total nominal output from lamp in all directions. [4] Nominal value. All specifications subject to change without notice.



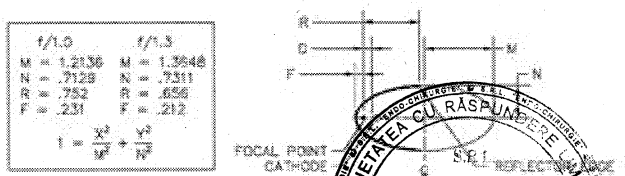
Spectral Output



Type C Dimensions



Type C Reflector

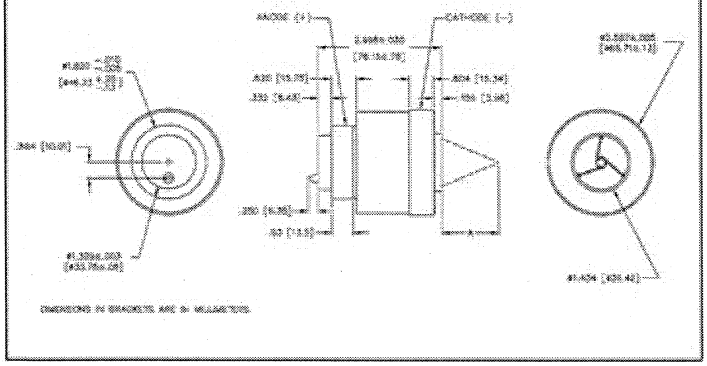


Video Projection

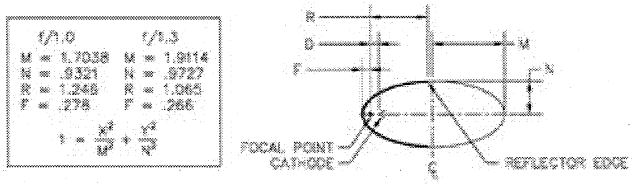
		XE1850D-10FH	XE1850D-13FH	XE2400E-10FH	XE2400E-13FH
Power (Watts)	Nominal	1850	1850	2400	2400
	Range	1400 - 1850	1400 - 1850	1800 - 2700	1800 - 2700
Current (Amps DC)	Nominal	65.0	65.0	104.0	104.0
	Range	60.0 - 95.0	60.0 - 95.0	75.0 - 110.0	75.0 - 110.0
Voltage (Volts DC)	Nominal	20.0	20.0	23.0	23.0
	Range	19.0 - 26.0	19.0 - 26.0	19.0 - 26.0	19.0 - 26.0
Maximum Top Ceramic Operating Temperature (°C)[1]		160	160	160	160
Minimum Ignition Voltage at lamp (kV)[2]		28	28	35	35
Minimum Ignition Pulse Duration (nS)		100	100	100	100
Radiant Output (Watts)[3]		365	365	635	635
UV Output, <390nm (Watts)[3]		19.5	19.5	31.0	31.0
IR Output, >770nm (Watts)[3]		200	200	350	350
Visible Output, 390-770nm (Lumens)[3]		40000	40000	73000	73000
Color Temperature (Kelvin)[4]		5900	5900	5900	5900
Spot Size at Crossover (inches / mm)	@ 50% points[4]	.15 / 3.8	.16 / 4.1	.19 / 4.8	.19 / 4.8
	@ 10% points[4]	.40 / 10.2	.53 / 13.5	.65 / 16.5	.65 / 16.5
f-Number		1.0	1.3	1.0	1.3
Focal Distance "A" (inches / mm)		.946 / 24.03	1.389 / 35.28	.825 / 20.95	1.885 / 47.88
Cathode Defocus "D" (inches / mm)		.008 / .20	.008 / .20	.012 / .30	.012 / .30
Arc Gap (inches / mm)		.053 / 1.35	.053 / 1.35	.075 / 1.91	.075 / 1.91
Window Diameter (inches / mm)		1.375 / 34.93	1.375 / 34.93	2.00 / 50.8	2.00 / 50.8
Focused Output - XGA/SXGA			Available upon request		

[1] Optimum operating temperature 120-130 (°C). [2] With a PKI approved power supply. [3] Total nominal output from lamp in all directions. [4] Nominal value. All specifications subject to change without notice.

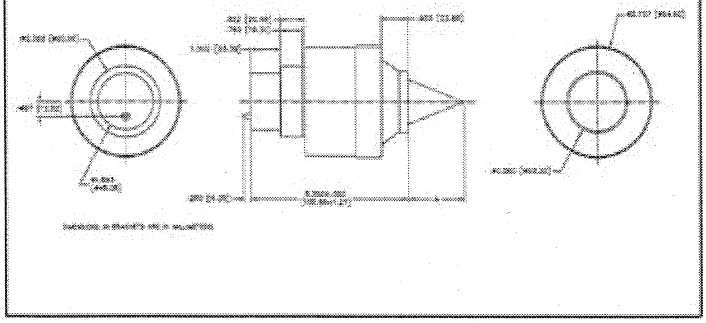
Type D Dimensions



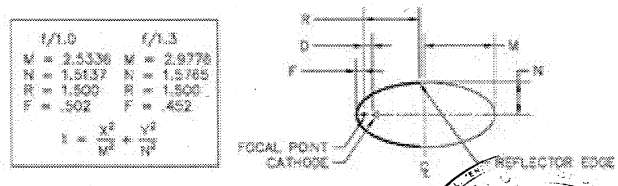
Type D Reflector



Type E Dimensions



Type E Reflector



NOTES: A. Lamp must not be operated with window facing upwards within 45° of vertical. **B.** Seal temperature must not exceed 150°C. **C.** Current/power regulated power supplies and Excelitas lamp housing units are recommended. **D.** Lamp must be operated within recommended current and power range. Over powering may lead to arc instability, hard starting and premature aging. **E.** Hot mirror assembly is available for IR filtering for 300W lamps and below. **F.** Cermax® lamps are much safer lamps to use than their quartz xenon arc lamp equivalents. However, caution must be practiced when operating lamps because they are under high pressure, require high voltage, reach temperatures up to 200°C, and their IR and UV radiation can cause skin burns and eye damage. Safety hazard sheet included with each lamp shipment.

EXCELITAS
TECHNOLOGIES

Excelitas Technologies, 44370 Christy Street, Fremont, CA 94538-3180
P: (510) 979-6500, (800) 775-6786, **F:** (510) 687-1140
www.excelitas.com

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"ENDO-CHIRURGIE"
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REPUBLICA MOLDOVA

Lot: 88;99

HF Monopolar Connecting Cables HF-Monopolar Anschlusskabel

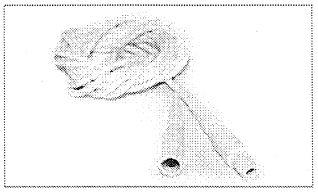
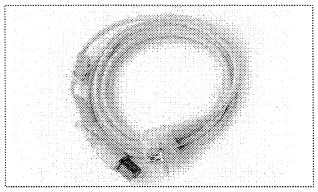
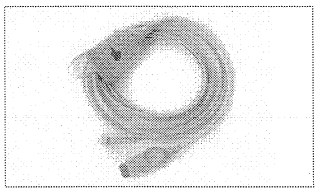
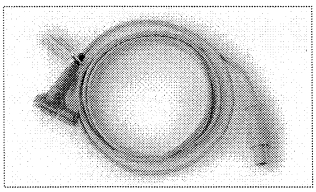
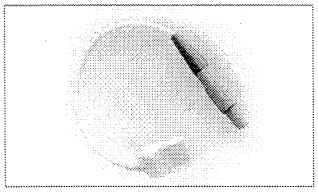
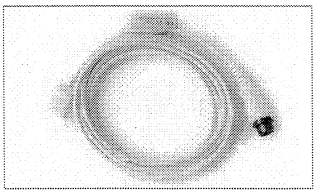
Anschluss Instrument *Connector for instrument*	Anschluss Gerät *Connector for unit*	Länge *Length*	Typen *Types*
WOLF - Resektoskope ***WOLF resectoscopes***	ERBE (ACC / ICC) / BOWA (EU)	3 m	**815.032**
		5 m	**815.052**
	ERBE (T-Serie) *ERBE (T series)*	3 m	**815.132**
		5 m	**815.152**
	Martin (m-Version) / Berchtold / Aesculap	3 m	**815.031**
		5 m	**815.051**
	Bovie / Valleylab / Erbe (Int.) / BOWA (Int.)	3 m	**815.033**
		5 m	**815.053**
	BOWA (Int. / EU) Eschmann und andere Geräte mit 4 mm Stecker *Eschmann and other devices with 4 mm connectors*	3 m	**815.034**
		5 m	**815.054**
WOLF - Instrumente ***WOLF instruments***	ERBE (ACC / ICC) / BOWA (EU)	3 m	**8106.032**
		5 m	**8106.052**
	ERBE (T-Serie) *ERBE (T series)*	3 m	**8106.132**
		5 m	**8106.152**
	Martin (m-Version) / Berchtold / Aesculap	3 m	**8106.031**
		5 m	**8106.051**
	Bovie / Valleylab / Erbe (Int.) / BOWA (Int.)	3 m	**8106.033**
		5 m	**8106.053**
	BOWA (Int. / EU) Eschmann und andere Geräte mit 4 mm Stecker *Eschmann and other devices with 4 mm connectors*	3 m	**8106.034**
		5 m	**8106.054**

10

4 PulsioFlex® - MONITORING PLATFORM

Lot:8

4.6 PulsioFlex® - Cables

	Product description	PULSION article #	MAQUET order #	Purchase quantity
	ProAQT® sensor cable *(included in first shipment of PulsioFlex PC4000)*	PC45810-300	6882750	
	Power cord *(included in first shipment of PulsioFlex PC4000)*	40109X *(X=country specific number)*	Country specific order number stated in Country Kit list*	
	Arterial connection cable for connecting the temperature sensor of the temperature sensor of the PiCCO® catheter to the device *(included in first shipment of PiCCO Module PC4510)*	PC80150	6882742*	
	Injectate sensor cable for clamping to the injectate temperature sensor housing *(included in first shipment of PiCCO Module PC4510)*	PC80109	6882741*	
	Pressure output adapter to external device *(2 pieces included in first shipment of PiCCO Module PC4510)*	PC85200	6882745*	
	Pressure connection cable for connecting the pressure transducer to the device *(2 pieces included in first shipment of PiCCO Module PC4510)* *See 4.7 for further signal transmission cables to third party monitors!*	PMK-206	6882743*	

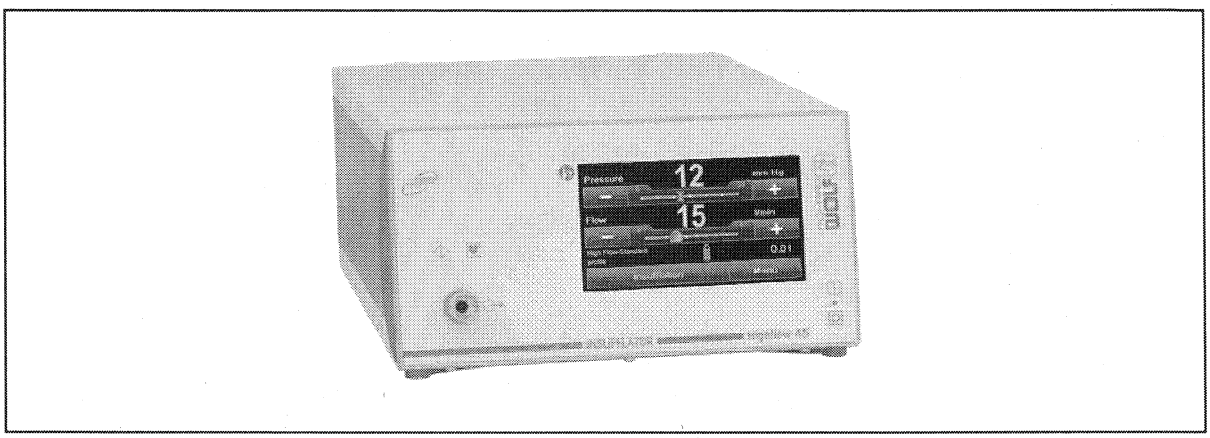
Further accessories are available upon request

* suitable for $PiCCO_2$ monitors

Lot: 87

INSUFFLATOR Highflow 45 BASIC

INSUFFLATOR Highflow 45 BASIC



- *6.5" Color display*
- *Touchscreen*
- *Max. flow rate 45 l / min*
- *Functional and user-friendly design*
- *Optional configurable software modules*

INSUFFLATOR Highflow 45 BASIC Set
consisting of:
INSUFFLATOR Highflow 45 Basic (2235001),
insufflation tube, Ø 5 mm, 2.5 m long (8170.101),
hygiene filter, sterile pack of 10 (4171.111),
power cable 3 m long (2440.03) 22350011

Necessary accessories:
CO_2 pressure tube
length 1.5 m 74021.029
with
Pressure reducer CO_2
DIN 477-1 .....74007.054
DIN EN ISO 407 .....74007.055
ISO 5145 .....74007.056
or
***Connecting tube,** 5 m long*
for central CO_2 gas supply (Dräger) 74021.030
***Connecting tube,** 5 m long*
for central CO_2 gas supply (Air Liquide) 74021035

Optional accessories:
***Insufflation tube,** disposable*
with integrated hygiene filter,
pack of 10, in individual sterile packs 4170.501
High-flow insufflation tube*,
Ø 8 mm, autoclavable 8170.232
**recommended in conjunction with high-flow trocar sleeves*

Optional software module:
***Software module CAN-BUS,** integrated **core** 2235101*
***Software module BABY-MODE** 2235102*
***Software module VIDEO-DISPLAY** 2235103*

- 6,5" Farbdisplay
- Touchscreen
- Max. Flowrate 45 l / min
- Funktionelles und anwenderfreundliches Design
- Optional konfigurierbare Software-Module

INSUFFLATOR Highflow 45 BASIC Set
bestehend aus:
INSUFFLATOR Highflow 45 Basic (2235001),
Insufflationsschlauch, Ø 5 mm, 2,5 m lang (8170.101),
Hygiene-Filter, 10 Stück, steril verpackt (4171.111),
Netzkabel 3 m lang (2440.03) 22350011

Erforderliches Zubehör:
CO_2-Druckschlauch
Länge 1,5 m 74021.029
mit
Druckminderer CO_2
DIN 477-1 .....74007.054
DIN EN ISO 407 .....74007.055
ISO 5145 .....74007.056
oder
Verbindungsschlauch, 5 m lang,
für zentrale CO_2-Gasversorgung (Dräger) 74021.030
Verbindungsschlauch, 5 m lang,
für zentrale CO_2-Gasversorgung (Air Liquide).....74021035

Optionales Zubehör:
Insufflationsschlauch, zum Einmalgebrauch
mit integriertem Hygienefilter,
VE = 10 Stück, einzeln steril verpackt 4170.501
High-Flow-Insufflationsschlauch*,
Ø 8 mm, autoklavierbar 8170.232
*in Verbindung mit High-Flow-Trokarhülsen empfohlen

Optionale Software-Module:
Softwaremodul CAN-BUS, integriert in **core** 2235101
Softwaremodul BABY-MODE 2235102
Softwaremodul VIDEOEINBLENDUNG 2235103

15

Overview of the range

Lot:89

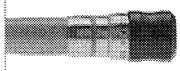
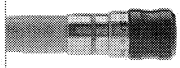
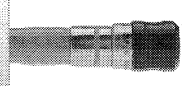
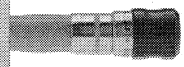
RICHARD WOLF

spirit of excellence

Light Cables in new design

Set bestehend aus:
Fiber Lichtleiter, Adapter projektorseitig (8095.07) und Adapter endoskopseitig (809509)

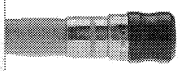
* Die Lichtleiter können auch ohne Adapter bestellt werden. Adapter zum Anschluss an Fremdprodukte bieten wir separat an (siehe unten).

Fiber Light Cable Set	Color identification, endoscope-side	Ø Fiber bundle and color code	Length	Order number	Order number without adapter
		1,6 mm	1,8 m	806616181	80661618*
			2,3 m	806616231	80661623*
			3,0 m	806616301	80661630*
		2,5 mm	1,8 m	806625181	80662518*
			2,3 m	806625231	80662523*
			3,0 m	806625301	80662530*
		3,5 mm	1,8 m	806635181	80663518*
			2,3 m	806635231	80663523*
			3,0 m	806635301	80663530*
			3,5 m	806635351	80663535*
		5,0 mm	2,3 m	806650231	80665023*
			3,0 m	806650301	80665030*
			3,5 m	806650351	80665035*

Fused *fusion* light cables, resistant to high temperatures

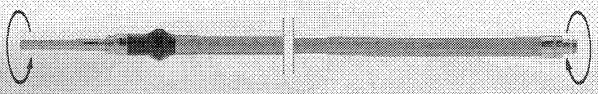
Set comprises:
Fiber Light Cable, adapter projector-light source-end (8095.07) and adapter endoscope-end (809509)

***The *fusion* light cables can also be ordered without adapters and they are compatible with the same adapters.**

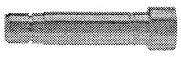
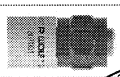
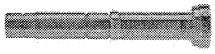
fusion Light Cable Set	Color identification, endoscope-side	Ø Fiber bundle and color code	Length	Order number	Order number without adapter
		5,0 mm	2,3 m	806550231	80655023*
			3,0 m	806550301	80655030*
			3,5 m	806550351	80655035*

Adapters for light cables

for connection to **light sources** from the following manufacturers:



for connection to **endoscopes** from the following manufacturers:

Wolf, Stryker.....8095.07			**Wolf.....809509**
Storz	no adapter necessary		**Storz, Stryker, Olympus.....807001**
Olympus.....8096.811			**Olympus, Circon, Henke-Sass-Wolf.....807002**

Specifications subject to change without notice.

A 669 XI.17 en.3

Richard Wolf GmbH
Pforzheimer Straße 32
75438 Knittlingen, Germany

Tel.: +49 7043 35-0
Fax: +49 7043 35-4300
info@richard-wolf.com

Co-CEOs:
Jürgen Pfab
Jürgen Steinbeck

Trade Register: Mannheim HRB 510031
VAT no.: DE144521586
Tax no.: 48020/0017

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richard-wolf.com

Lot:90

RICHARD WOLF

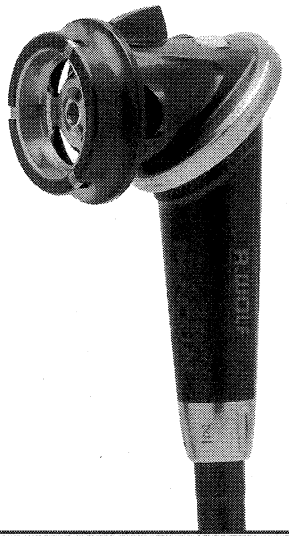
ENDOCAM
ENDOCAM

Pendual Camera Head
ENDOCAM **Logic *HD***

Pendual Kamerakopf
ENDOCAM **Logic *HD***

HD High Definition

1



reddot design award

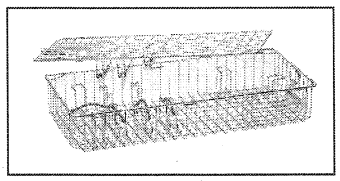
- *1/3 inch sensor, 5 : 4*
- *Dual mode operation through twistable camera head body: 1-pendulum head, 2-straight head*
- *Integrated lens f = 17 mm*
- *Freely rotating snap-on lock with lock function*
- *Digital image processing and digital signal transfer*
- *2 programmable camera head buttons*
- *Camera cable can be exchanged by technician in the hospital*
- *Immersible and gas sterilisable*
- *Suitable for STERIS and STERRAD NX*

- 1/3 Zoll Bildsensor, 5 : 4
- Abwinkelbares Gehäuse für zwei Betriebsmodi: 1-Pendelkamerakopf, 2-gerader Kamerakopf
- Integriertes Objektiv f = 17 mm
- Frei rotierender Snap-On-Verschluss mit Feststellfunktion
- Digitale Bildverarbeitung und digitale Signalübertragung
- 2 programmierbare Kamerakopftasten
- Kamerakabel durch Techniker in der Klinik ersetzbar
- Einleg- und Gassterilisierbar
- Geeignet für STERIS und STERRAD NX

Pendual Camera Head ENDOCAM* Logic *HD
Cable length 3 m *5525933*

Pendual Kamerakopf ENDOCAM Logic *HD*
Kabellänge 3 m 5525933

Processing basket
(L x W x H) 445 x 200 x 73 mm *38047111*

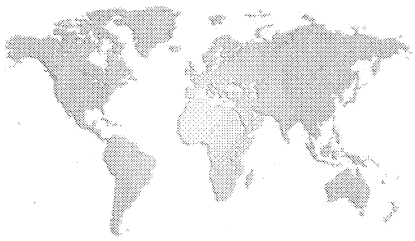


Aufbereitungskorb
(L x B x H) 445 x 200 x 73 mm 38047111

System integration:
***ENDOCAM* Logic *HD* Controller**
see page A 14

Systemeinbindung:
ENDOCAM Logic *HD* Controller
siehe Seite A 14

CERTIFICATE



EN ISO 13485:2016

DEKRA Certification GmbH hereby certifies that the company

Richard Wolf GmbH

Scope of certification:

Design and development, production, distribution, installation and service of systems, active medical devices (sterile, non-sterile), non-active medical devices (sterile, non-sterile) for human medicine, in particular for endoscopy and extracorporeal shockwave application

Design and development, production, and distribution of non-active implants in urology and surgery as well as accessories for processing (cleaning, disinfection, sterilization)

Certified location:

Pforzheimer Straße 32, 75438 Knittlingen, Germany

(further locations see annex)

has established and maintains a quality management system according to the above mentioned standard. The conformity was adduced with audit report no. 50593-Z6Ü1-00.

This certificate is valid from 2019-04-01 to 2020-05-16

Registration No.: 50593-14-00

DEKRA Certification GmbH Stuttgart Handwerkstraße 15

DEKRA

Ruth Delbeck-Bayer
DEKRA Certification GmbH Stuttgart, 2019-04-01

DAkkS
Deutsche Akkreditierungsstelle
D-ZM-16029-08-00

SOCIETATEA CU RĂSPUNDERE LIMITATĂ "ENDO-CHIRURGIE" S.R.L. IDNO 1009600033242 REPUBLICA MOLDOVA

Annex to the Certificate No. 50593-14-00

Revision status: 0

valid from 2019-04-01 to 2020-05-16

The following locations belong to the certificate above:

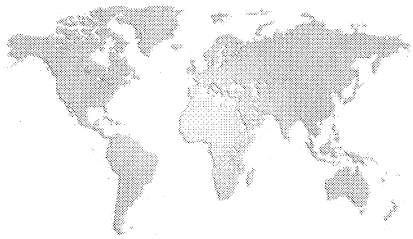
	Headquarters	Certified location	Scope of certification
	Richard Wolf GmbH	Pforzheimer Straße 32 D-75438 Knittlingen, Germany	Design and development, production, distribution, installation and service of systems, active medical devices (sterile, non-sterile), non-active medical devices (sterile, non-sterile) for human medicine, in particular for endoscopy and extracorporeal shockwave application Design and development, production, and distribution of non-active implants in urology and surgery as well as accessories for processing (cleaning, disinfection, sterilization)
	Subsidiaries	**Certified locations**	**Scope of certification**
1.	Richard Wolf GmbH	Reuchlinstraße 10-11 D-10553 Berlin, Germany	Manufacture of flexible and rigid endoscopes

Ruth Delbeck-Bayer
DEKRA Certification GmbH, Stuttgart, 2019-04-0

SOCIETATEA CU RĂSPUNDERE LIMITATĂ S.R.L. "ENDO-CHIRURGIE" IDNO 1009600033242 REPUBLICA MOLDOVA

EC CERTIFICATE

for the Quality Assurance System



according the Directive 93/42/EEC, Annex II excluding section (4)

As a Notified Body of the European Union, DEKRA Certification GmbH certifies, that the company

Richard Wolf GmbH

Pforzheimer Straße 32, 75438 Knittlingen, Germany

Certified location:

Pforzheimer Straße 32, 75438 Knittlingen, Germany

applies a quality assurance system according to the Directive 93/42/EEC Annex II for the medical devices listed in the annex. The approval is based on the result of the re-certification audit report no. 50593-Z6-00, the decision dated 2017-05-17 and is only valid in connection with the successful performance of the annual surveillance audits.

This certificate is valid from 2017-05-17 to 2020-05-16

Registration No.: 50593-16-04

DEKRA Certification GmbH Stuttgart, Handwerkstraße 15

DEKRA

Ruth Delbeck-Bayer
DEKRA Certification GmbH Stuttgart; 2017-05-17
Notified Body ID-number: 0124

Benannt durch/Designated by
Zentralstelle der Länder für Gesundheitsschutz bei Arzneimitteln und Medizinprodukten
www.zlg.de
ZLG-BS-20[illegible]0.02

SOCIETATEA CU RĂSPUNDERE LIMITATĂ S.R.L. "ENDO-CHIRURGIE" IDNO 1009600033242 REPUBLICA MOLDOVA

Annex to the EC Certificate No. 50593-16-04

Revision status: 0

Valid from 2017-05-17 to 2020-05-16

Devices/device categories included in the certificate:

Class I s:

For the products listed below, review of the Quality Assurance System refers exclusively to aspects of manufacture concerned with securing and maintaining sterile conditions.

- Suction system filter, plume particulate

Class I m:

For the products listed below, the review of the Quality System refers exclusively to the aspects of manufacture concerned with the conformity of the products with the metrological requirements.

- Robotic surgical navigation system application software

Class II a:

- Basic endotracheal tube, reusable
- Basic roller pump
- Bone punch
- Bronchoscopy tube
- Cannulated surgical drill, reusable
- Endoscope assembly adaptor
- Endoscope leak tester, mechanical
- Endoscopic electrosurgical handpiece/electrode, bipolar, reusable
- Endoscopic electrosurgical handpiece/electrode, monopolar, reusable
- Endoscopic irrigation/aspiration pump
- Endoscopic needle, general-purpose, reusable
- ENT probe
- Flexible fibreoptic bronchoscope
- Flexible fibreoptic choledochoscope
- Flexible fibreoptic cystourethroscope
- Flexible fibreoptic hysteroscope
- Flexible fibreoptic nasopharyngoscope
- Flexible fibreoptic ureterorenoscope
- Flexible video bronchoscope, reusable
- Flexible video cystoscope, reusable
- Flexible video ureterorenoscope
- Fluted surgical drill, reusable
- Fluted surgical drill, single use, sterile
- General-purpose suction system, line-powered
- Haemorrhoid ligator
- High-pressure medical gas tubing
- Laparoscopic multi-instrument access port, reusable
- Laparoscopic multi-instrument access port, single-use
- Laparoscopic sleeve
- Laser lithotripsy system
- Line-powered surgical drilling system motor

SOCIETATEA CU RĂSPUNDERE LIMITATĂ S.R.L. "ENDO-CHIRURGIE" IDNO 1009600033242 REPUBLICA MOLDOVA

Annex to the EC Certificate No. 50593-16-04

Revision status: 0

Valid from 2017-05-17 to 2020-05-16

Devices/device categories included in the certificate:

Class II a:

- Medical air low pressure tubing
- Microbial medical gas filter, sterile, single-use
- Operating room audiovisual data/device management system application software
- Orthopaedic burr, reusable
- Orthopaedic burr, single use
- Oscillating surgical saw blade, reusable
- Oscillating surgical saw blade, single use
- Particulate water purification filter
- Proctoscope, reusable
- Rectoscope
- Resectoscope
- Rigid bronchoscope
- Rigid cystourethroscope
- Rigid endoscopic cannula, reusable
- Rigid endoscopic cannula, single use
- Rigid endoscopic grasping forceps, reusable
- Rigid endoscope sheath
- Rigid endoscope telescope
- Rigid endoscope working guide
- Rigid hysteroscope
- Rigid intubation laryngoscope
- Rigid mediastinoscope
- Rigid nephroscope
- Rigid oesophagoscope
- Rigid optical laparoscope
- Rigid ureterorenoscope
- Rigid video laparoscope
- Sagittal surgical saw blade, reusable
- Sagittal surgical saw blade, single use
- Self-retaining surgical retraction system ring
- Spring-loaded pneumoperitoneum needle, reusable
- Stereotactic surgery system probe, reusable
- Suction cannula, reusable
- Suction system tubing
- Surgical drill chuck
- Surgical fluid/smoke waste management system suction unit
- Surgical gouge
- Surgical irrigation/aspiration handpiece, reusable
- Surgical irrigation/aspiration tubing set
- Surgical irrigation tubing set, single-use
- Surgical power tool system control unit, line-powered
- Surgical power tool system handpiece, rotary, pneumatic
- Surgical utensil washer/decontaminator
- Tissue extraction bag
- Tissue morcellation system
- Uterine manipulator

SOCIETATEA CU RĂSPUNDERE LIMITATĂ S.R.L. "ENDO-CHIRURGIE" IDNO 1009600033242 REPUBLICA MOLDOVA

Annex to the EC Certificate No. 50593-16-04

Revision status: 0

Valid from 2017-05-17 to 2020-05-16

Devices/device categories included in the certificate:

Class II b:

- Clip, surgical, suture
- Electrohydraulic lithotripsy system
- Electromechanical orthopaedic extracorporeal shock wave therapy system
- Electrosurgical system generator
- Endoscopic electrosurgical electrode, bipolar, single-use
- Endoscopic electrosurgical electrode, monopolar, reusable
- Endoscopic electrosurgical electrode, monopolar, single-use
- Endoscopic electrosurgical handpiece/electrode, bipolar, reusable
- Endoscopic electrosurgical handpiece/electrode, monopolar, reusable
- Endoscopic electrosurgical handpiece/electrode, monopolar, single-use
- Gastrointestinal endoscopic insufflator
- Hysteroscopic irrigation/insufflation system
- Laser lithotripsy system
- Nasal snare, reusable
- Operating room audiovisual data/device management system
- Operating room audiovisual data/device management system application software
- Piezoelectric lithotripsy system
- Polymeric ureteral stent
- Ultrasonic lithotripsy system
- Ureteral stent-placement set

DEKRA Certification GmbH, Stuttgart, Handwerkstraße 15

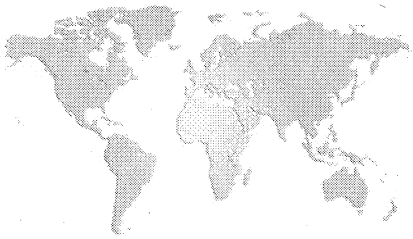
DEKRA

Ruth Delbeck-Bayer
DEKRA Certification GmbH, Stuttgart, 2017-05-17
Notified Body ID-number: 0124

SOCIETATEA CU RĂSPUNDERE LIMITATĂ S.R.L. "ENDO-CHIRURGIE" IDNO 1009600033242 REPUBLICA MOLDOVA

EC CERTIFICATE

for the Quality Assurance System



according the Directive 93/42/EEC, Annex V

As a Notified Body of the European Union, DEKRA Certification GmbH certifies, that the company

Richard Wolf GmbH

Pforzheimer Straße 32, 75438 Knittlingen, Germany

Certified location:

Pforzheimer Straße 32, 75438 Knittlingen, Germany

applies a quality assurance system according to the Directive 93/42/EEC Annex V for the medical devices listed in the annex. The approval is based on the result of the re-certification audit report no. 50593-Z6-00, the decision dated 2017-05-17 and is only valid in connection with the successful performance of the annual surveillance audits.

This certificate is valid from 2017-05-17 to 2020-05-16

Registration No.: 50593-17-03

DEKRA Certification GmbH Stuttgart, Handwerkstraße 15

Ruth Delbeck-Bayer
DEKRA Certification GmbH Stuttgart, 2017-05-17
Notified Body ID-number: 0124

Benannt durch/Designated by
Zentralstelle der Länder für Arzneimittel und Medizinprodukte
ZLG-BS-295.10.02

SOCIETATEA CU RĂSPUNDERE LIMITATĂ "ENDO-CHIRURGIE" S.R.L. IDNO 1009600033242 REPUBLICA MOLDOVA

Annex to the EC Certificate No. 50593-17-03

Revision status: 0

Valid from 2017-05-17 to 2020-05-16

Devices/device categories included in the certificate:

Class I s:

For the products listed below, review of the Quality Assurance System refers exclusively to aspects of manufacture concerned with securing and maintaining sterile conditions.

- Endoscope assembly adaptor
- Endoscope inflation bulb
- Flexible bronchoscopic biopsy forceps, reusable
- Flexible endoscopic cytology brush, single-use
- General-purpose ureteral catheter
- Proctoscope, single-use
- Rigid endoscope sheath
- Ureteropelvic balloon catheter
- Urinary stone retrieval basket, single-use

Class II a:

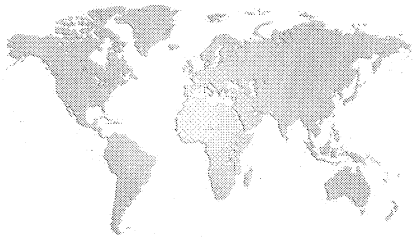
- Catheter introducer
- Endoscopic antifog solution
- Endoscopic needle, general-purpose, single-use
- Flexible bronchoscopic biopsy forceps, reusable
- General-purpose non-vascular guidewire

DEKRA Certification GmbH Stuttgart, Handwerkstraße 15 DEKRA

Ruth Delbeck-Bayer
DEKRA Certification GmbH, Stuttgart, 2017-05-17
Notified Body ID-number: 0124

SOCIETATEA CU RĂSPUNDERE LIMITATĂ S.R.L. "ENDO-CHIRURGIE" IDNO 1009600023242 REPUBLICA MOLDOVA

CERTIFICATE



ISO 9001:2015

DEKRA Certification GmbH hereby certifies that the company

Richard Wolf GmbH

Scope of certification:

Design and development, production, distribution, sales, installation and service of systems, active medical devices (sterile, non sterile), non-active medical devices (sterile, non sterile), non-active Implants, accessories for processing (cleaning, disinfection, sterilization, care) as well as endoscopes and accessories for industrial applications.

Certified location:

D-75438 Knittlingen, Pforzheimer Straße 32

Scope of certification:

Production of rigid endoscopes

Certified location:

D-10553 Berlin, Reuchlinstr. 10-11

has established and maintains a quality management system according to the above mentioned standard. The conformity was adduced with audit report no. A18071064.

This certificate is valid from 2018-09-12 to 2020-05-16

Certificate registration no.: 90714422/2

DEKRA Certification GmbH Stuttgart, Handwerkstraße 15

Lothar Weihofen
DEKRA Certification GmbH Stuttgart; 2018-09-12

Deutsche Akkreditierungsstelle D-ZM-16029-01-01

CERTIFICATE

Number: 2238851

The management system of the organization(s) and locations mentioned on the addendum belonging to:

Richard Wolf GmbH

Pforzheimer Str. 32
75438 Knittlingen
Germany

Manufacturer DUNS 315304071

Conforms with the following standard and regulatory requirements:

ISO 13485:2016

Australia:	Therapeutic Goods (Medical Devices) Regulations, 2002 and Schedule 3 Part 1 (excluding Part 1.6) - Full Quality Assurance Procedure
Brazil:	RDC ANVISA N. 16/2013, 23/2012 and 67/2009
Canada:	Medical Devices Regulations - Part 1- SOR 98/282
Japan:	MHLW Ministerial Ordinance 169, Article 4 to Article 68 and PMD Act
United States:	21 CFR 803, 21 CFR 806, 21 CFR 807 - Subparts A to D and 21 CFR 820

Scope:
Design and development, production, distribution, installation and service of systems, active medical devices (sterile, non-sterile), non-active medical devices (sterile, non-sterile) for human medicine, in particular for endoscopy and extracorporeal shockwave application.
Design and development, production, and distribution of non-active implants in urology and surgery as well as accessories for processing (cleaning, disinfection, sterilization).

Certificate expiry date:	2022-07-01
Certificate effective date:	2019-07-11
Certified since:	2019-07-11

This certificate is valid for the organization(s) and/or locations mentioned on the addendum.
DEKRA Certification B.V.

B.T.M. Holtus
Managing Director

J.A. van Vugt
Certification Manager

The validation of the validity of this certificate can be checked through DEKRA's website using the following link:
https:/www.dekra-product-safety.com/en/certified-organizations

DEKRA Certification B.V. is recognized under the Medical Devices Single Audit Program.

MDSAP
MEDICAL DEVICE SINGLE AUDIT PROGRAM

SOCIETATEA CU RĂSPUNDERE LIMITATĂ "ENDO-CHIRURGIE" S.R.L. IDNO 1009600033242 REPUBLICA MOLDOVA

ADDENDUM

To certificate: 2238851

The management system of the organization(s) and/or location(s) of:

Richard Wolf GmbH

Pforzheimer Str. 32
75438 Knittlingen
Germany

Certified organization(s) and/or locations:

	Different scope
Richard Wolf GmbH Reuchlinstr. 10-11 10553 Berlin Germany DUNS 315079765	Manufacture of flexible and rigid endoscopes.

Addendum expiry date: 2022-07-01
Addendum effective date: 2019-07-11

SOCIETATEA CU RĂSPUNDERE LIMITATĂ
S.R.L.
"ENDO-CHIRURGIE"
REPUBLICA MOLDOVA