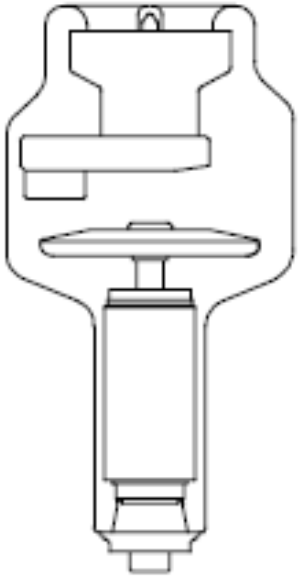
RTM 90 H 0.3/0.6



Tubo N°

CE 0051

El contenido de esta documentación debe ser transmitido al usuario del ensamblaje del tubo

Documentación N°	Versión	Fecha de Edición	Texto original
90_H36	0	05.02.99	Italiano

I.A.E Spa via Fabio Filzi, 53 - 20032 CORMANO (MI) Italy
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Declaración de conformidad
Este tubo cumple con los requerimientos esenciales de la Directiva 93/42/CEE, de acuerdo con la norma EN 60613 (IEC 613) y EN 60336 (IEC 336).

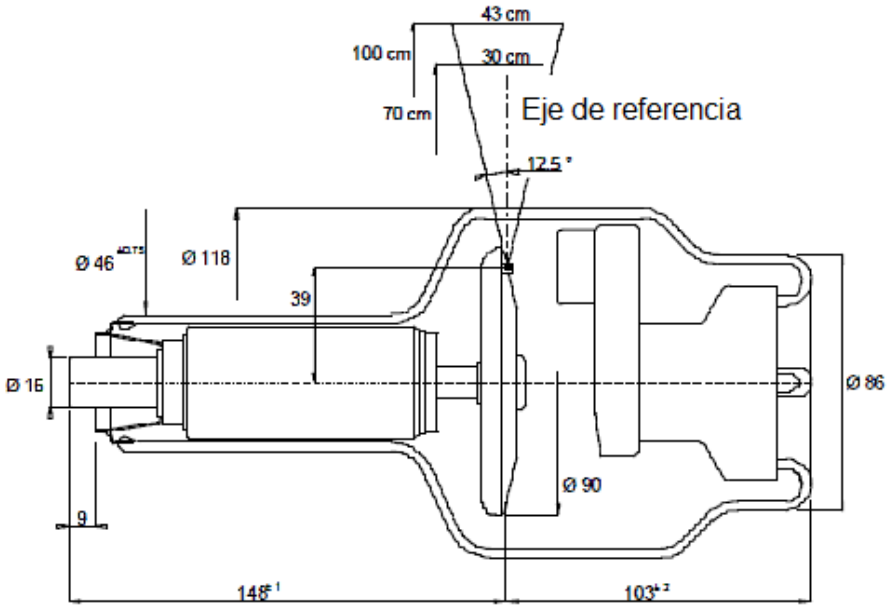
Especificaciones

Punto Focal	0.3 0.6	(IEC 336, EN 60336)
Velocidad del ánodo	3000 min^{-1}	
Potencia nominal de entrada del ánodo	6 kW 20 kW	(IEC 613, EN 60613)
Diámetro del ánodo	90 mm	
Material del ánodo	RTM	
Angulo del ánodo	12.5°	
Campo de radiación	a 70 cm 30 cm a 100 cm 43 cm	
Filtración inherente	0.7 mm Al eq	(IEC 522)
Máximo contenido de calor del ánodo	225 kJ 300 kHU	
Máxima disipación de Calor continua	750 W	
Voltaje Nominal del tubo de Rayos X	150 kV	
Máxima corriente del filamento	5.4 A	

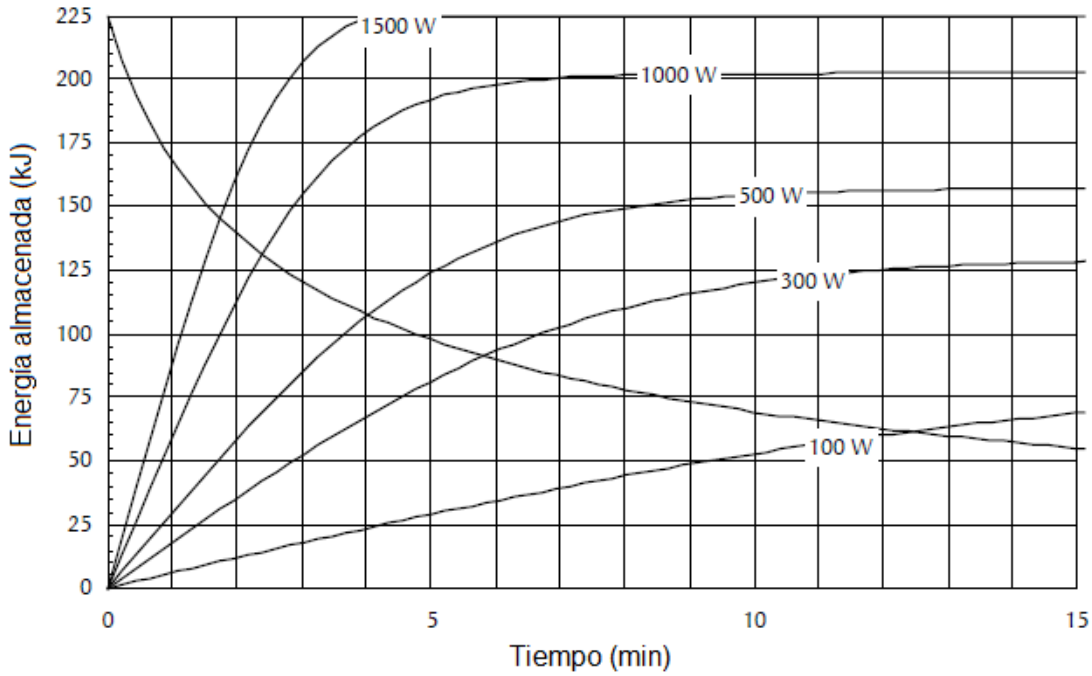
El dato indicado en este documento se refiere a:

Equivalencia de la potencia de entrada del ánodo 100 W = % máximo de contenido de calor 38 %

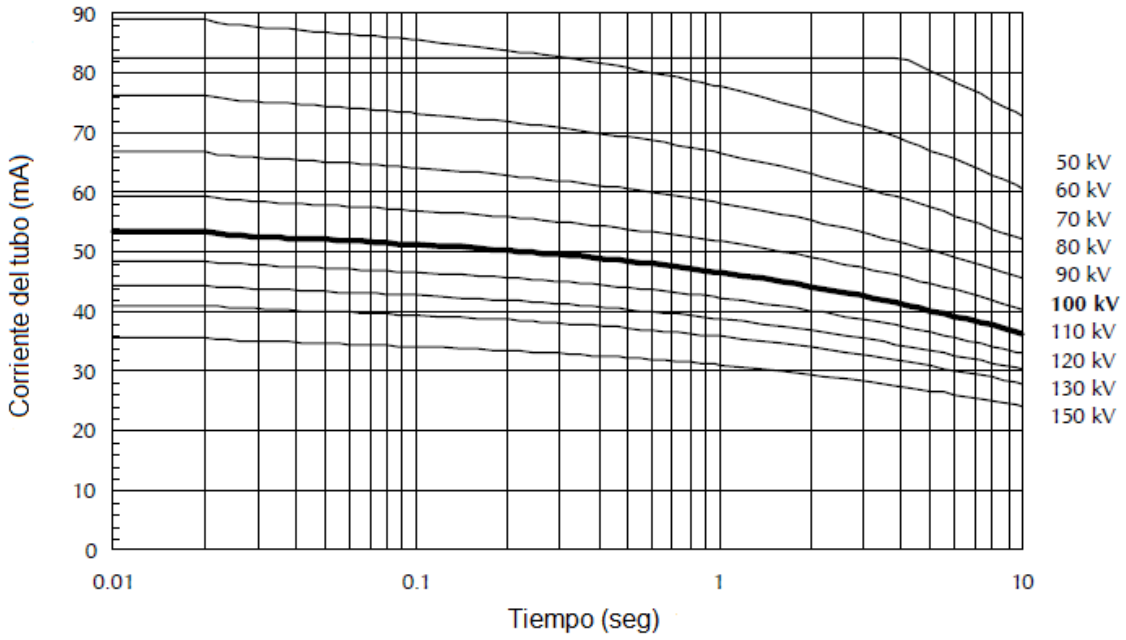
Dimensiones



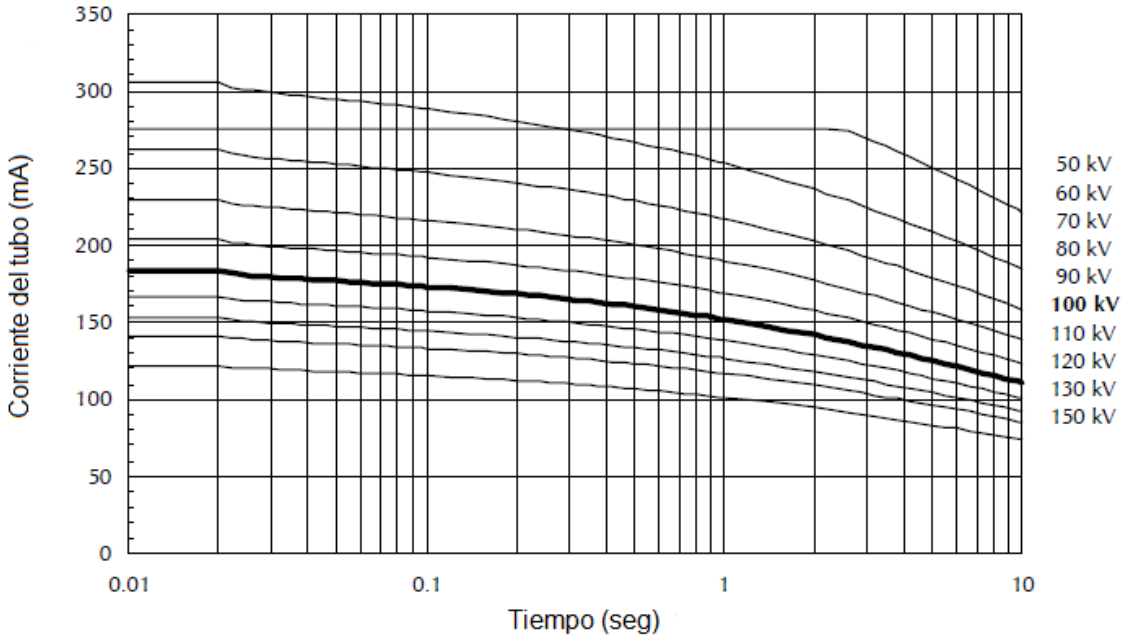
Curva de calentamiento y enfriamiento del ánodo



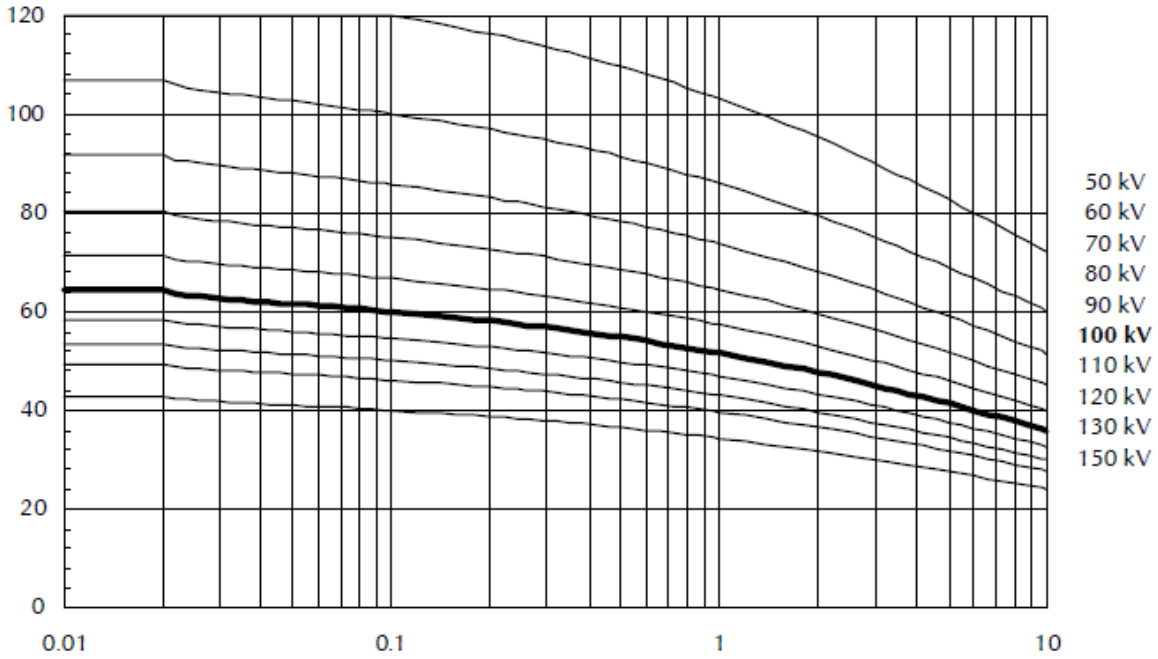
Capacidad de carga individual
▣ 0.3 – 1 ~ 3000 min^{-1}



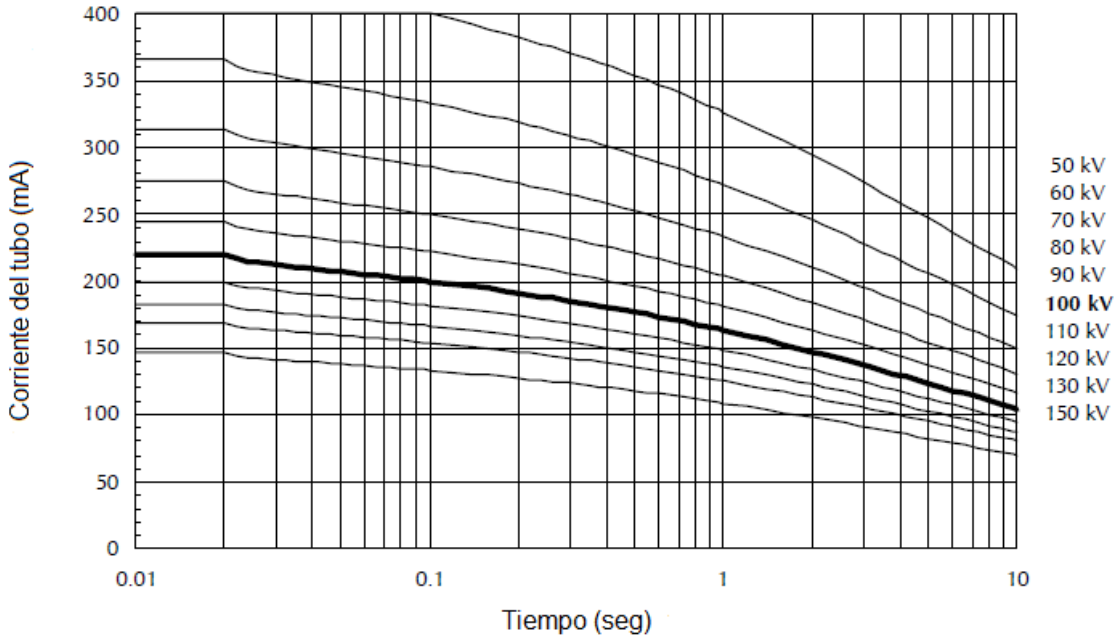
Capacidad de carga individual
■ 0.6 – 1 ~ - 3000 min^{-1}



Capacidad de carga individual
▣ 0.3 – 3 ~ - 3000 min^{-1}



Capacidad de carga individual
■ 0.6 – 3 ~ - 3000 min^{-1}



Serie capacidad de carga

0.3 – 1 ~ - 3000 min^{-1}

Potencia de entrada al ánodo como una función de n (N° de exposiciones en serie), z (tasa de exposición por segundo), tiempo de exposición (seg)

z	0.010	0.020	0.030	0.040	0.050	0.060	0.080	0.100	0.120	0.140	0.160	0.180	0.200	0.220	0.250	n
1	4.2	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	4.0	4.0	3.9	3.9	3.8	
2	4.2	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	
3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	
4	4.2	4.2	4.2	4.1	4.1	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.5	5
5	4.2	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.8	3.7	3.7	3.6	3.6	-	-	
10	4.2	4.2	4.1	4.0	4.0	3.9	3.8	3.7	-	-	-	-	-	-	-	
15	4.2	4.1	4.1	4.0	3.9	3.9	-	-	-	-	-	-	-	-	-	
30	4.2	4.1	4.0	-	-	-	-	-	-	-	-	-	-	-	-	
1	4.2	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	
2	4.2	4.2	4.2	4.1	4.1	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.5	
3	4.2	4.2	4.1	4.1	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.4	3.3	
4	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.2	10
5	4.2	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.6	3.6	3.5	3.4	3.3	-	-	
10	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.6	-	-	-	-	-	-	-	
15	4.2	4.1	4.0	3.9	3.8	3.7	-	-	-	-	-	-	-	-	-	
30	4.1	4.0	3.9	-	-	-	-	-	-	-	-	-	-	-	-	
1	4.2	4.2	4.2	4.1	4.1	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.5	
2	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.2	
3	4.2	4.1	4.1	4.0	4.0	3.9	3.8	3.7	3.6	3.5	3.4	3.3	3.2	3.2	3.1	
4	4.2	4.1	4.1	4.0	3.9	3.9	3.7	3.6	3.5	3.4	3.3	3.2	3.1	3.0	2.9	20
5	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.5	3.4	3.3	3.2	3.1	3.0	-	-	
10	4.2	4.0	3.9	3.8	3.7	3.6	3.5	3.3	-	-	-	-	-	-	-	
15	4.1	4.0	3.9	3.7	3.6	3.5	-	-	-	-	-	-	-	-	-	
30	4.1	3.9	3.7	-	-	-	-	-	-	-	-	-	-	-	-	
1	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.2	
2	4.2	4.1	4.1	4.0	3.9	3.9	3.7	3.6	3.5	3.4	3.3	3.2	3.1	3.0	2.9	
3	4.2	4.1	4.0	3.9	3.8	3.8	3.6	3.5	3.4	3.3	3.1	3.0	2.9	2.9	2.7	
4	4.2	4.1	4.0	3.9	3.8	3.7	3.5	3.4	3.3	3.1	3.0	2.9	2.8	2.7	2.6	40
5	4.2	4.0	3.9	3.8	3.7	3.6	3.5	3.3	3.2	3.0	2.9	2.8	2.7	-	-	
10	4.1	4.0	3.8	3.7	3.5	3.4	3.2	3.0	-	-	-	-	-	-	-	
15	4.1	3.9	3.7	3.6	3.4	3.3	-	-	-	-	-	-	-	-	-	
30	4.0	3.7	3.5	-	-	-	-	-	-	-	-	-	-	-	-	
1	4.2	4.1	4.1	4.0	4.0	3.9	3.8	3.7	3.6	3.5	3.4	3.3	3.2	3.2	3.1	
2	4.2	4.1	4.0	3.9	3.8	3.8	3.6	3.5	3.4	3.3	3.1	3.0	2.9	2.9	2.7	
3	4.2	4.1	4.0	3.9	3.8	3.7	3.5	3.4	3.2	3.1	3.0	2.9	2.8	2.7	2.5	
4	4.1	4.0	3.9	3.8	3.7	3.6	3.4	3.2	3.1	3.0	2.8	2.7	2.6	2.5	2.4	60
5	4.1	4.0	3.9	3.7	3.6	3.5	3.3	3.2	3.0	2.9	2.7	2.6	2.5	-	-	
10	4.1	3.9	3.7	3.6	3.4	3.3	3.0	2.8	-	-	-	-	-	-	-	
15	4.0	3.8	3.6	3.4	3.3	3.1	-	-	-	-	-	-	-	-	-	
30	3.9	3.6	3.4	-	-	-	-	-	-	-	-	-	-	-	-	
1	4.2	4.1	4.1	4.0	3.9	3.9	3.7	3.6	3.5	3.4	3.3	3.2	3.1	3.0	2.9	
2	4.2	4.1	4.0	3.9	3.8	3.7	3.5	3.4	3.3	3.1	3.0	2.9	2.8	2.7	2.6	
3	4.1	4.0	3.9	3.8	3.7	3.6	3.4	3.2	3.1	3.0	2.8	2.7	2.6	2.5	2.4	
4	4.1	4.0	3.9	3.7	3.6	3.5	3.3	3.1	3.0	2.8	2.7	2.6	2.5	2.4	2.2	80
5	4.1	4.0	3.8	3.7	3.5	3.4	3.2	3.0	2.9	2.7	2.6	2.5	2.3	-	-	
10	4.0	3.8	3.6	3.5	3.3	3.2	2.9	2.7	-	-	-	-	-	-	-	
15	4.0	3.7	3.5	3.3	3.2	3.0	-	-	-	-	-	-	-	-	-	
30	3.9	3.6	3.3	-	-	-	-	-	-	-	-	-	-	-	-	
1	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.8	
2	4.2	4.0	3.9	3.8	3.7	3.6	3.5	3.3	3.2	3.0	2.9	2.8	2.7	2.6	2.5	
3	4.1	4.0	3.9	3.7	3.6	3.5	3.3	3.2	3.0	2.9	2.7	2.6	2.5	2.4	2.3	
4	4.1	4.0	3.8	3.7	3.5	3.4	3.2	3.0	2.9	2.7	2.6	2.5	2.3	2.2	2.1	100
5	4.1	3.9	3.8	3.6	3.5	3.4	3.1	2.9	2.8	2.6	2.5	2.3	2.2	-	-	
10	4.0	3.8	3.6	3.4	3.2	3.1	2.8	2.6	-	-	-	-	-	-	-	
15	4.0	3.7	3.5	3.2	3.1	2.9	-	-	-	-	-	-	-	-	-	
30	3.8	3.5	3.2	-	-	-	-	-	-	-	-	-	-	-	-	
1	4.2	4.1	4.0	3.9	3.8	3.7	3.6	3.4	3.3	3.2	3.0	2.9	2.8	2.8	2.6	
2	4.1	4.0	3.9	3.7	3.6	3.5	3.3	3.2	3.0	2.9	2.7	2.6	2.5	2.4	2.3	
3	4.1	3.9	3.8	3.6	3.5	3.4	3.2	3.0	2.8	2.7	2.5	2.4	2.3	2.2	2.0	
4	4.1	3.9	3.7	3.6	3.4	3.3	3.0	2.8	2.7	2.5	2.4	2.2	2.1	2.0	1.9	150
5	4.1	3.8	3.7	3.5	3.3	3.2	2.9	2.7	2.6	2.4	2.2	2.1	2.0	-	-	
10	4.0	3.7	3.5	3.2	3.1	2.9	2.6	2.4	-	-	-	-	-	-	-	
15	3.9	3.6	3.3	3.1	2.9	2.7	-	-	-	-	-	-	-	-	-	
30	3.8	3.4	3.0	-	-	-	-	-	-	-	-	-	-	-	-	
1	4.1	4.0	3.9	3.7	3.6	3.5	3.3	3.2	3.0	2.9	2.7	2.6	2.5	2.4	2.3	
2	4.1	3.9	3.7	3.6	3.4	3.3	3.0	2.8	2.7	2.5	2.4	2.2	2.1	2.0	1.9	
3	4.0	3.8	3.6	3.4	3.3	3.1	2.9	2.6	2.5	2.3	2.2	2.0	1.9	1.8	1.7	
4	4.0	3.7	3.5	3.3	3.2	3.0	2.7	2.5	2.3	2.1	2.0	1.9	1.8	1.7	1.5	300
5	4.0	3.7	3.5	3.2	3.1	2.9	2.6	2.4	2.2	2.0	1.9	1.8	1.6	-	-	
10	3.8	3.5	3.2	2.9	2.7	2.6	2.2	2.0	-	-	-	-	-	-	-	
15	3.8	3.4	3.0	2.8	2.5	2.3	-	-	-	-	-	-	-	-	-	
30	3.6	3.1	2.7	-	-	-	-	-	-	-	-	-	-	-	-	

Serie de capacidad de carga
■ 0.6– 1 ~ - 3000 min^{-1}

Potencia de entrada al ánodo como una función de n (N° de exposiciones en serie), z (tasa de exposición por segundo), tiempo de exposición (seg)

z	0.010	0.020	0.030	0.040	0.050	0.060	0.080	0.100	0.120	0.140	0.160	0.180	0.200	0.220	0.250	n
1	14.5	14.5	14.2	14.1	13.9	13.8	13.7	13.5	13.4	13.3	13.2	13.1	13.0	12.8	12.6	
2	14.4	14.4	14.2	14.1	13.9	13.8	13.7	13.4	13.2	13.0	12.8	12.6	12.4	12.2	11.9	
3	14.3	14.3	14.2	14.0	13.9	13.7	13.4	13.2	12.9	12.7	12.4	12.2	12.0	11.8	11.4	
4	14.3	14.3	14.1	13.9	13.8	13.6	13.3	13.0	12.7	12.4	12.1	11.9	11.6	11.4	11.1	5
5	14.2	14.2	14.0	13.9	13.7	13.5	13.1	12.8	12.5	12.2	11.9	11.6	11.4	-	-	
10	14.2	14.1	13.8	13.6	13.3	13.1	12.6	12.2	-	-	-	-	-	-	-	
15	14.2	14.0	13.7	13.3	13.1	12.8	-	-	-	-	-	-	-	-	-	
30	14.2	13.7	13.3	-	-	-	-	-	-	-	-	-	-	-	-	
1	14.4	14.4	14.2	14.1	13.9	13.8	13.6	13.4	13.2	13.0	12.8	12.6	12.4	12.2	11.9	
2	14.3	14.3	14.1	13.9	13.8	13.6	13.3	13.0	12.7	12.4	12.1	11.9	11.6	11.4	11.1	
3	14.2	14.2	14.0	13.8	13.6	13.4	13.0	12.6	12.3	12.0	11.7	11.4	11.1	10.9	10.5	
4	14.2	14.1	13.9	13.7	13.4	13.2	12.8	12.4	12.0	11.7	11.3	11.0	10.7	10.4	10.0	10
5	14.2	14.1	13.8	13.5	13.3	13.0	12.6	12.2	11.8	11.4	11.0	10.7	10.4	-	-	
10	14.2	13.9	13.5	13.1	12.8	12.5	11.9	11.4	-	-	-	-	-	-	-	
15	14.2	13.7	13.3	12.8	12.5	12.1	-	-	-	-	-	-	-	-	-	
30	14.0	13.3	12.8	-	-	-	-	-	-	-	-	-	-	-	-	
1	14.3	14.3	14.1	13.9	13.8	13.6	13.3	13.0	12.7	12.4	12.1	11.9	11.6	11.4	11.1	
2	14.2	14.1	13.9	13.6	13.4	13.2	12.8	12.4	12.0	11.6	11.3	11.0	10.7	10.4	10.0	
3	14.2	14.0	13.7	13.4	13.2	12.9	12.4	12.0	11.5	11.1	10.8	10.4	10.1	9.8	9.4	
4	14.2	13.9	13.6	13.3	13.0	12.7	12.1	11.6	11.2	10.7	10.3	10.0	9.6	9.3	8.9	20
5	14.2	13.8	13.5	13.1	12.8	12.5	11.9	11.4	10.9	10.4	10.0	9.6	9.3	-	-	
10	14.1	13.5	13.0	12.6	12.2	11.8	11.0	10.4	-	-	-	-	-	-	-	
15	14.0	13.3	12.7	12.2	11.7	11.3	-	-	-	-	-	-	-	-	-	
30	13.7	12.8	12.1	-	-	-	-	-	-	-	-	-	-	-	-	
1	14.2	14.1	13.9	13.6	13.4	13.2	12.8	12.4	12.0	11.6	11.3	11.0	10.7	10.4	10.0	
2	14.2	13.9	13.6	13.3	13.0	12.7	12.1	11.6	11.2	10.7	10.3	10.0	9.6	9.3	8.9	
3	14.2	13.8	13.4	13.0	12.6	12.3	11.7	11.1	10.6	10.1	9.7	9.3	8.9	8.6	8.1	
4	14.1	13.6	13.2	12.8	12.4	12.0	11.3	10.7	10.2	9.7	9.2	8.8	8.4	8.1	7.6	40
5	14.1	13.5	13.0	12.6	12.2	11.7	11.0	10.4	9.8	9.3	8.8	8.4	8.0	-	-	
10	13.8	13.1	12.5	11.9	11.4	10.9	10.0	9.3	-	-	-	-	-	-	-	
15	13.7	12.8	12.1	11.4	10.8	10.3	-	-	-	-	-	-	-	-	-	
30	13.3	12.2	11.3	-	-	-	-	-	-	-	-	-	-	-	-	
1	14.2	14.0	13.7	13.4	13.2	12.9	12.4	12.0	11.5	11.1	10.8	10.4	10.1	9.8	9.2	
2	14.2	13.8	13.4	13.0	12.6	12.3	11.7	11.1	10.6	10.1	9.7	9.3	8.9	8.6	8.1	
3	14.1	13.6	13.1	12.7	12.3	11.9	11.2	10.5	10.0	9.5	9.0	8.6	8.2	7.9	7.4	
4	14.0	13.4	12.9	12.4	12.0	11.5	10.8	10.1	9.5	9.0	8.5	8.1	7.7	7.4	6.9	60
5	13.9	13.3	12.7	12.2	11.7	11.2	10.4	9.7	9.1	8.6	8.1	7.7	7.3	-	-	
10	13.7	12.8	12.1	11.4	10.8	10.3	9.3	8.6	-	-	-	-	-	-	-	
15	13.5	12.5	11.6	10.9	10.2	9.6	-	-	-	-	-	-	-	-	-	
30	13.0	11.8	10.7	-	-	-	-	-	-	-	-	-	-	-	-	
1	14.2	13.9	13.6	13.3	13.0	12.7	12.1	11.6	11.2	10.7	10.3	10.0	9.2	8.4	7.4	
2	14.1	13.6	13.2	12.8	12.4	12.0	11.3	10.7	10.2	9.7	9.2	8.8	8.1	7.4	6.5	
3	14.0	13.4	12.9	12.4	12.0	11.5	10.8	10.1	9.5	9.0	8.5	8.1	7.7	7.0	6.2	
4	13.9	13.3	12.7	12.1	11.6	11.2	10.3	9.6	9.0	8.5	8.0	7.6	7.2	6.8	6.1	80
5	13.8	13.1	12.5	11.9	11.3	10.9	10.0	9.3	8.6	8.1	7.6	7.2	6.8	-	-	
10	13.5	12.6	11.7	11.0	10.4	9.8	8.8	8.0	-	-	-	-	-	-	-	
15	13.3	12.2	11.3	10.4	9.7	9.1	-	-	-	-	-	-	-	-	-	
30	12.8	11.4	10.3	-	-	-	-	-	-	-	-	-	-	-	-	
1	14.2	13.8	13.5	13.1	12.8	12.5	11.9	11.3	10.9	10.4	9.7	8.7	7.8	7.1	6.2	
2	14.1	13.5	13.0	12.6	12.1	11.7	11.0	10.4	9.8	9.3	8.4	7.5	6.7	6.1	5.4	
3	13.9	13.3	12.7	12.2	11.7	11.2	10.4	9.7	9.1	8.6	7.9	7.0	6.3	5.8	5.1	
4	13.8	13.1	12.5	11.9	11.3	10.9	10.0	9.3	8.6	8.1	7.6	6.8	6.2	5.6	4.9	100
5	13.8	13.0	12.3	11.6	11.1	10.5	9.6	8.9	8.2	7.7	7.2	6.7	6.1	-	-	
10	13.4	12.4	11.5	10.7	10.0	9.4	8.4	7.6	-	-	-	-	-	-	-	
15	13.2	12.0	10.9	10.1	9.4	8.7	-	-	-	-	-	-	-	-	-	
30	12.6	11.1	9.9	-	-	-	-	-	-	-	-	-	-	-	-	
1	14.1	13.7	13.2	12.8	12.4	12.1	11.4	10.8	9.9	8.5	7.4	6.6	5.9	5.4	4.7	
2	13.9	13.3	12.7	12.2	11.7	11.2	10.4	9.7	8.1	6.9	6.0	5.4	4.8	4.4	3.9	
3	13.8	13.0	12.4	11.7	11.2	10.7	9.8	8.9	7.5	6.4	5.6	5.0	4.5	4.1	3.6	
4	13.7	12.8	12.1	11.4	10.8	10.3	9.3	8.5	7.1	6.1	5.4	4.8	4.3	3.9	3.4	150
5	13.6	12.6	11.8	11.1	10.5	9.9	8.9	8.1	7.0	6.0	5.2	4.6	4.2	-	-	
10	13.2	12.0	10.9	10.1	9.4	8.7	7.7	6.9	-	-	-	-	-	-	-	
15	12.9	11.5	10.4	9.4	8.7	8.0	-	-	-	-	-	-	-	-	-	
30	12.3	10.5	9.2	-	-	-	-	-	-	-	-	-	-	-	-	
1	13.9	13.3	12.7	12.2	11.7	11.2	10.1	8.1	6.8	5.8	5.1	4.5	4.1	3.7	3.2	
2	13.7	12.8	12.1	11.4	10.8	9.9	7.4	5.9	4.9	4.2	3.7	3.3	3.0	2.7	2.4	
3	13.5	12.5	11.6	10.9	10.2	8.7	6.5	5.2	4.3	3.7	3.2	2.9	2.6	2.4	2.1	
4	13.3	12.2	11.2	10.4	9.7	8.1	6.0	4.8	4.0	3.5	3.0	2.7	2.4	2.2	1.9	300
5	13.2	12.0	10.9	10.1	9.2	7.7	5.8	4.6	3.8	3.3	2.9	2.6	2.3	-	-	
10	12.6	11.1	9.9	8.9	8.1	7.0	5.2	4.2	-	-	-	-	-	-	-	
15	12.3	10.5	9.2	8.2	7.4	6.7	-	-	-	-	-	-	-	-	-	
30	11.5	9.4	8.0	-	-	-	-	-	-	-	-	-	-	-	-	

Serie de capacidad de carga

0.3 – 3 ~ - 3000 min^{-1}

Potencia de entrada al ánodo como una función de n (N° de exposiciones en serie), z (tasa de exposición por segundo), tiempo de exposición (seg)

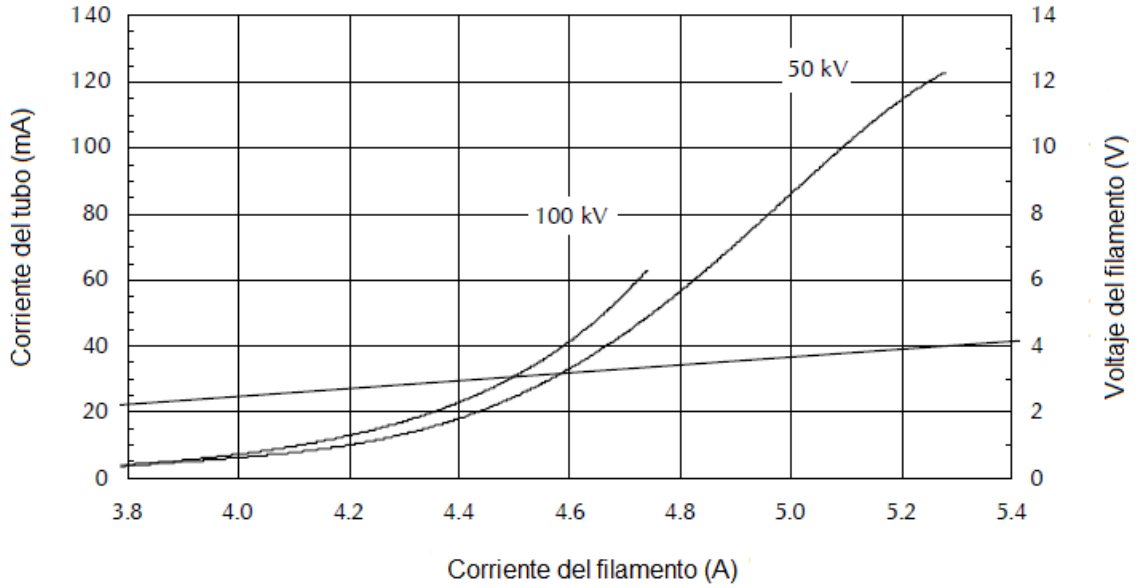
z	0.010	0.020	0.030	0.040	0.050	0.060	0.080	0.100	0.120	0.140	0.160	0.180	0.200	0.220	0.250	n
1	5.1	5.1	5.0	5.0	4.9	4.9	4.8	4.8	4.8	4.7	4.7	4.7	4.6	4.6	4.5	
2	5.1	5.1	5.0	5.0	4.9	4.9	4.8	4.8	4.7	4.6	4.6	4.5	4.4	4.4	4.3	
3	5.0	5.0	5.0	4.9	4.9	4.9	4.8	4.7	4.6	4.5	4.5	4.4	4.3	4.2	4.1	
4	5.0	5.0	5.0	4.9	4.9	4.8	4.7	4.6	4.5	4.5	4.4	4.3	4.2	4.1	4.0	5
5	5.0	5.0	5.0	4.9	4.8	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1	-	-	
10	5.0	5.0	4.9	4.8	4.7	4.7	4.5	4.4	-	-	-	-	-	-	-	
15	5.0	4.9	4.8	4.7	4.7	4.6	-	-	-	-	-	-	-	-	-	
30	5.0	4.9	4.7	-	-	-	-	-	-	-	-	-	-	-	-	
1	5.1	5.1	5.0	5.0	4.9	4.9	4.8	4.8	4.7	4.6	4.6	4.5	4.4	4.4	4.3	
2	5.0	5.0	5.0	4.9	4.9	4.8	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.1	4.0	
3	5.0	5.0	4.9	4.9	4.8	4.8	4.6	4.5	4.4	4.3	4.2	4.1	4.0	4.0	3.8	
4	5.0	5.0	4.9	4.8	4.8	4.7	4.6	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	10
5	5.0	5.0	4.9	4.8	4.7	4.7	4.5	4.4	4.2	4.1	4.0	3.9	3.8	-	-	
10	5.0	4.9	4.8	4.7	4.6	4.5	4.3	4.1	-	-	-	-	-	-	-	
15	5.0	4.8	4.7	4.6	4.5	4.4	-	-	-	-	-	-	-	-	-	
30	4.9	4.7	4.6	-	-	-	-	-	-	-	-	-	-	-	-	
1	5.0	5.0	5.0	4.9	4.9	4.8	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.1	4.0	
2	5.0	5.0	4.9	4.8	4.8	4.7	4.6	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	
3	5.0	4.9	4.9	4.8	4.7	4.6	4.5	4.3	4.2	4.1	3.9	3.8	3.7	3.6	3.5	
4	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.2	4.1	3.9	3.8	3.7	3.6	3.5	3.3	20
5	5.0	4.9	4.8	4.7	4.6	4.5	4.3	4.1	4.0	3.8	3.7	3.6	3.4	-	-	
10	5.0	4.8	4.7	4.5	4.4	4.2	4.0	3.8	-	-	-	-	-	-	-	
15	4.9	4.7	4.6	4.4	4.2	4.1	-	-	-	-	-	-	-	-	-	
30	4.8	4.6	4.4	-	-	-	-	-	-	-	-	-	-	-	-	
1	5.0	5.0	4.9	4.8	4.8	4.7	4.6	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	
2	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.2	4.1	3.9	3.8	3.7	3.6	3.5	3.3	
3	5.0	4.9	4.7	4.6	4.5	4.4	4.2	4.0	3.9	3.7	3.6	3.5	3.3	3.2	3.1	
4	5.0	4.8	4.7	4.6	4.4	4.3	4.1	3.9	3.7	3.6	3.4	3.3	3.2	3.0	2.9	40
5	5.0	4.8	4.6	4.5	4.4	4.2	4.0	3.8	3.6	3.4	3.3	3.2	3.0	-	-	
10	4.9	4.7	4.5	4.3	4.1	4.0	3.7	3.4	-	-	-	-	-	-	-	
15	4.8	4.6	4.3	4.1	3.9	3.8	-	-	-	-	-	-	-	-	-	
30	4.7	4.4	4.1	-	-	-	-	-	-	-	-	-	-	-	-	
1	5.0	4.9	4.9	4.8	4.7	4.6	4.5	4.3	4.2	4.0	3.9	3.8	3.7	3.6	3.5	
2	5.0	4.9	4.7	4.6	4.5	4.4	4.2	4.0	3.9	3.7	3.6	3.5	3.3	3.2	3.1	
3	5.0	4.8	4.7	4.5	4.4	4.3	4.1	3.9	3.7	3.5	3.4	3.2	3.1	3.0	2.8	
4	4.9	4.8	4.6	4.5	4.3	4.2	3.9	3.7	3.5	3.3	3.2	3.0	2.9	2.8	2.6	60
5	4.9	4.7	4.6	4.4	4.2	4.1	3.8	3.6	3.4	3.2	3.0	2.9	2.8	-	-	
10	4.8	4.6	4.3	4.1	3.9	3.8	3.5	3.2	-	-	-	-	-	-	-	
15	4.8	4.5	4.2	4.0	3.7	3.6	-	-	-	-	-	-	-	-	-	
30	4.7	4.2	3.9	-	-	-	-	-	-	-	-	-	-	-	-	
1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.2	4.1	3.9	3.8	3.7	3.6	3.5	3.3	
2	5.0	4.8	4.7	4.6	4.4	4.3	4.1	3.9	3.7	3.6	3.4	3.3	3.2	3.0	2.9	
3	4.9	4.8	4.6	4.5	4.3	4.2	3.9	3.7	3.5	3.3	3.2	3.0	2.9	2.8	2.6	
4	4.9	4.7	4.5	4.4	4.2	4.1	3.8	3.6	3.4	3.2	3.0	2.9	2.7	2.6	2.4	80
5	4.9	4.7	4.5	4.3	4.1	4.0	3.7	3.4	3.2	3.0	2.9	2.7	2.6	-	-	
10	4.8	4.5	4.2	4.0	3.8	3.6	3.3	3.0	-	-	-	-	-	-	-	
15	4.7	4.4	4.1	3.8	3.6	3.4	-	-	-	-	-	-	-	-	-	
30	4.6	4.1	3.8	-	-	-	-	-	-	-	-	-	-	-	-	
1	5.0	4.9	4.8	4.7	4.6	4.5	4.3	4.1	4.0	3.8	3.7	3.6	3.4	3.3	3.2	
2	5.0	4.8	4.6	4.5	4.4	4.2	4.0	3.8	3.6	3.4	3.3	3.2	3.0	2.9	2.7	
3	4.9	4.7	4.6	4.4	4.2	4.1	3.8	3.6	3.4	3.2	3.0	2.9	2.8	2.6	2.5	
4	4.9	4.7	4.5	4.3	4.1	4.0	3.7	3.4	3.2	3.0	2.9	2.7	2.6	2.5	2.3	100
5	4.9	4.6	4.4	4.2	4.0	3.9	3.6	3.3	3.1	2.9	2.7	2.6	2.4	-	-	
10	4.8	4.4	4.2	3.9	3.7	3.5	3.2	2.9	-	-	-	-	-	-	-	
15	4.7	4.3	4.0	3.7	3.5	3.3	-	-	-	-	-	-	-	-	-	
30	4.5	4.0	3.7	-	-	-	-	-	-	-	-	-	-	-	-	
1	5.0	4.8	4.7	4.6	4.5	4.3	4.1	3.9	3.8	3.6	3.5	3.3	3.2	3.1	2.9	
2	4.9	4.7	4.6	4.4	4.2	4.1	3.8	3.6	3.4	3.2	3.0	2.9	2.8	2.6	2.5	
3	4.9	4.6	4.4	4.2	4.1	3.9	3.6	3.4	3.2	3.0	2.8	2.6	2.5	2.4	2.2	
4	4.8	4.6	4.3	4.1	3.9	3.8	3.5	3.2	3.0	2.8	2.6	2.5	2.3	2.2	2.0	150
5	4.8	4.5	4.3	4.0	3.8	3.7	3.3	3.1	2.8	2.6	2.5	2.3	2.2	-	-	
10	4.7	4.3	4.0	3.7	3.5	3.3	2.9	2.6	-	-	-	-	-	-	-	
15	4.6	4.2	3.8	3.5	3.2	3.0	-	-	-	-	-	-	-	-	-	
30	4.4	3.9	3.4	-	-	-	-	-	-	-	-	-	-	-	-	
1	4.9	4.7	4.6	4.4	4.2	4.1	3.8	3.6	3.4	3.2	3.0	2.9	2.8	2.6	2.5	
2	4.8	4.6	4.3	4.1	3.9	3.8	3.5	3.2	3.0	2.8	2.6	2.5	2.3	2.2	2.0	
3	4.8	4.5	4.2	4.0	3.7	3.6	3.2	2.9	2.7	2.5	2.3	2.2	2.1	2.0	1.8	
4	4.7	4.4	4.1	3.8	3.6	3.4	3.0	2.8	2.5	2.3	2.2	2.0	1.9	1.8	1.6	300
5	4.7	4.3	4.0	3.7	3.5	3.3	2.9	2.6	2.4	2.2	2.0	1.9	1.8	-	-	
10	4.5	4.0	3.7	3.3	3.1	2.8	2.5	2.2	-	-	-	-	-	-	-	
15	4.4	3.9	3.4	3.1	2.8	2.6	-	-	-	-	-	-	-	-	-	
30	4.2	3.5	3.0	-	-	-	-	-	-	-	-	-	-	-	-	

Serie de capacidad de carga
■ 0.6 – 3 ~ - 3000 min^{-1}

Potencia de entrada al ánodo como una función de n (N° de exposiciones en serie), z (tasa de exposición por segundo), tiempo de exposición (seg)

z	0.010	0.020	0.030	0.040	0.050	0.060	0.080	0.100	0.120	0.140	0.160	0.180	0.200	0.220	0.250	n
1	17.3	17.3	17.0	16.8	16.6	16.4	16.2	16.0	15.8	15.7	15.5	15.4	15.2	15.0	14.7	
2	17.2	17.2	17.0	16.8	16.6	16.4	16.2	15.8	15.5	15.2	14.9	14.7	14.4	14.2	13.8	
3	17.1	17.1	16.9	16.7	16.5	16.3	15.9	15.5	15.1	14.8	14.5	14.2	13.9	13.6	13.2	
4	17.1	17.1	16.8	16.6	16.3	16.1	15.6	15.2	14.8	14.4	14.1	13.7	13.4	13.1	12.7	5
5	17.0	17.0	16.7	16.4	16.2	15.9	15.4	15.0	14.6	14.2	13.8	13.4	13.1	-	-	
10	17.0	16.8	16.4	16.0	15.7	15.4	14.7	14.2	-	-	-	-	-	-	-	
15	17.0	16.6	16.2	15.7	15.3	14.9	-	-	-	-	-	-	-	-	-	
30	16.9	16.3	15.7	-	-	-	-	-	-	-	-	-	-	-	-	
1	17.2	17.2	17.0	16.8	16.6	16.4	16.2	15.8	15.5	15.2	14.9	14.7	14.4	14.1	13.8	
2	17.1	17.1	16.8	16.5	16.3	16.1	15.6	15.2	14.8	14.4	14.1	13.7	13.4	13.1	12.6	
3	17.0	16.9	16.6	16.3	16.1	15.8	15.3	14.8	14.3	13.9	13.5	13.1	12.7	12.4	11.9	
4	17.0	16.8	16.5	16.2	15.8	15.5	14.9	14.4	13.9	13.4	13.0	12.6	12.2	11.8	11.3	10
5	17.0	16.8	16.4	16.0	15.7	15.3	14.7	14.1	13.6	13.1	12.6	12.2	11.8	-	-	
10	17.0	16.4	15.9	15.4	15.0	14.6	13.8	13.1	-	-	-	-	-	-	-	
15	16.9	16.2	15.6	15.0	14.5	14.0	-	-	-	-	-	-	-	-	-	
30	16.6	15.7	14.9	-	-	-	-	-	-	-	-	-	-	-	-	
1	17.1	17.1	16.8	16.5	16.3	16.1	15.6	15.2	14.8	14.4	14.1	13.7	13.4	13.1	12.6	
2	17.0	16.8	16.5	16.2	15.8	15.5	14.9	14.4	13.9	13.4	13.0	12.6	12.2	11.8	11.3	
3	17.0	16.7	16.3	15.9	15.5	15.1	14.5	13.8	13.3	12.8	12.3	11.8	11.4	11.0	10.5	
4	17.0	16.5	16.1	15.6	15.2	14.8	14.1	13.4	12.8	12.2	11.7	11.3	10.8	10.4	9.9	20
5	17.0	16.4	15.9	15.4	15.0	14.5	13.7	13.0	12.4	11.8	11.3	10.8	10.4	-	-	
10	16.8	16.0	15.3	14.7	14.1	13.6	12.6	11.8	-	-	-	-	-	-	-	
15	16.6	15.7	14.9	14.2	13.5	12.9	-	-	-	-	-	-	-	-	-	
30	16.2	15.0	14.0	-	-	-	-	-	-	-	-	-	-	-	-	
1	17.0	16.8	16.5	16.2	15.8	15.5	14.9	14.4	13.9	13.4	13.0	12.6	12.2	11.8	11.3	
2	17.0	16.5	16.1	15.6	15.2	14.8	14.1	13.4	12.8	12.2	11.7	11.2	10.8	10.4	9.9	
3	16.9	16.3	15.8	15.2	14.8	14.3	13.5	12.7	12.0	11.4	10.9	10.4	10.0	9.5	9.0	
4	16.8	16.2	15.5	14.9	14.4	13.9	13.0	12.2	11.5	10.9	10.3	9.8	9.3	8.9	8.4	40
5	16.8	16.0	15.3	14.7	14.1	13.6	12.6	11.8	11.0	10.4	9.8	9.3	8.8	-	-	
10	16.4	15.4	14.5	13.7	13.0	12.4	11.3	10.4	-	-	-	-	-	-	-	
15	16.2	15.0	14.0	13.1	12.3	11.6	-	-	-	-	-	-	-	-	-	
30	15.7	14.2	12.9	-	-	-	-	-	-	-	-	-	-	-	-	
1	17.0	16.7	16.3	15.9	15.5	15.1	14.5	13.8	13.3	12.7	12.3	11.8	11.4	10.5	9.2	
2	16.9	16.3	15.8	15.2	14.8	14.3	13.5	12.7	12.0	11.4	10.9	10.4	10.0	9.5	8.4	
3	16.8	16.1	15.4	14.8	14.2	13.7	12.8	12.0	11.2	10.6	10.0	9.5	9.1	8.7	8.1	
4	16.7	15.9	15.1	14.5	13.8	13.3	12.3	11.4	10.7	10.0	9.4	8.9	8.4	8.0	7.5	60
5	16.6	15.7	14.9	14.2	13.5	12.9	11.8	11.0	10.2	9.5	8.9	8.4	8.0	-	-	
10	16.2	15.0	14.0	13.1	12.3	11.6	10.4	9.5	-	-	-	-	-	-	-	
15	15.9	14.5	13.4	12.4	11.5	10.8	-	-	-	-	-	-	-	-	-	
30	15.3	13.6	12.2	-	-	-	-	-	-	-	-	-	-	-	-	
1	17.0	16.5	16.1	15.6	15.2	14.8	14.1	13.4	12.8	12.2	11.5	10.2	9.2	8.4	7.4	
2	16.8	16.2	15.5	14.9	14.4	13.9	13.0	12.2	11.5	10.9	10.1	9.0	8.1	7.4	6.5	
3	16.7	15.9	15.1	14.5	13.8	13.3	12.3	11.4	10.7	10.0	9.4	8.6	7.7	7.0	6.2	
4	16.5	15.6	14.8	14.1	13.4	12.8	11.7	10.8	10.0	9.4	8.8	8.3	7.6	6.9	6.1	80
5	16.4	15.4	14.5	13.7	13.0	12.4	11.3	10.3	9.6	8.9	8.3	7.8	7.3	-	-	
10	16.0	14.7	13.6	12.6	11.8	11.0	9.8	8.8	-	-	-	-	-	-	-	
15	15.7	14.2	12.9	11.8	11.0	10.2	-	-	-	-	-	-	-	-	-	
30	15.0	13.1	11.6	-	-	-	-	-	-	-	-	-	-	-	-	
1	17.0	16.4	15.9	15.4	15.0	14.5	13.7	13.0	12.4	11.1	9.7	8.7	7.8	7.1	6.2	
2	16.8	16.0	15.3	14.7	14.1	13.6	12.6	11.8	11.0	9.6	8.4	7.5	6.7	6.1	5.4	
3	16.6	15.7	14.9	14.2	13.5	12.9	11.8	10.9	10.2	9.1	7.9	7.0	6.3	5.8	5.1	
4	16.4	15.4	14.5	13.7	13.0	12.4	11.3	10.3	9.6	8.8	7.7	6.8	6.2	5.6	4.9	100
5	16.3	15.2	14.2	13.4	12.6	12.0	10.8	9.9	9.1	8.4	7.6	6.7	6.1	-	-	
10	15.8	14.4	13.2	12.2	11.3	10.6	9.3	8.4	-	-	-	-	-	-	-	
15	15.5	13.8	12.5	11.4	10.5	9.7	-	-	-	-	-	-	-	-	-	
30	14.8	12.7	11.2	-	-	-	-	-	-	-	-	-	-	-	-	
1	16.9	16.2	15.6	15.0	14.5	14.0	13.1	11.8	9.9	8.5	7.4	6.6	5.9	5.4	4.7	
2	16.6	15.7	14.9	14.2	13.5	12.9	11.8	9.7	8.1	6.9	6.0	5.4	4.8	4.4	3.9	
3	16.4	15.3	14.4	13.6	12.8	12.2	11.0	8.9	7.5	6.4	5.6	5.0	4.5	4.1	3.6	
4	16.2	15.0	14.0	13.1	12.3	11.6	10.4	8.6	7.1	6.1	5.4	4.8	4.3	3.9	3.4	150
5	16.0	14.8	13.7	12.7	11.9	11.2	10.0	8.4	7.0	6.0	5.2	4.6	4.2	-	-	
10	15.5	13.8	12.5	11.4	10.5	9.7	8.4	7.5	-	-	-	-	-	-	-	
15	15.1	13.2	11.7	10.6	9.6	8.8	-	-	-	-	-	-	-	-	-	
30	14.2	12.0	10.3	-	-	-	-	-	-	-	-	-	-	-	-	
1	16.6	15.7	14.9	14.2	13.5	12.9	10.1	8.1	6.8	5.8	5.1	4.5	4.1	3.7	3.2	
2	16.2	15.0	14.0	13.1	11.8	9.9	7.4	5.9	4.9	4.2	3.7	3.3	3.0	2.7	2.4	
3	15.9	14.5	13.4	12.4	10.4	8.7	6.5	5.2	4.3	3.7	3.2	2.9	2.6	2.4	2.1	
4	15.7	14.2	12.9	11.8	9.7	8.1	6.0	4.8	4.0	3.5	3.0	2.7	2.4	2.2	1.9	300
5	15.5	13.8	12.5	11.4	9.2	7.7	5.8	4.6	3.8	3.3	2.9	2.6	2.3	-	-	
10	14.8	12.7	11.2	10.0	8.4	7.0	5.2	4.2	-	-	-	-	-	-	-	
15	14.2	12.0	10.3	9.1	8.1	6.7	-	-	-	-	-	-	-	-	-	
30	13.2	10.6	8.8	-	-	-	-	-	-	-	-	-	-	-	-	

Características de emisión del cátodo
▣ 0.3 -3 ~ - (± 0.2 A)



Características de emisión del cátodo
■ 0.6 – 3 ~ - (± 0.2 A)