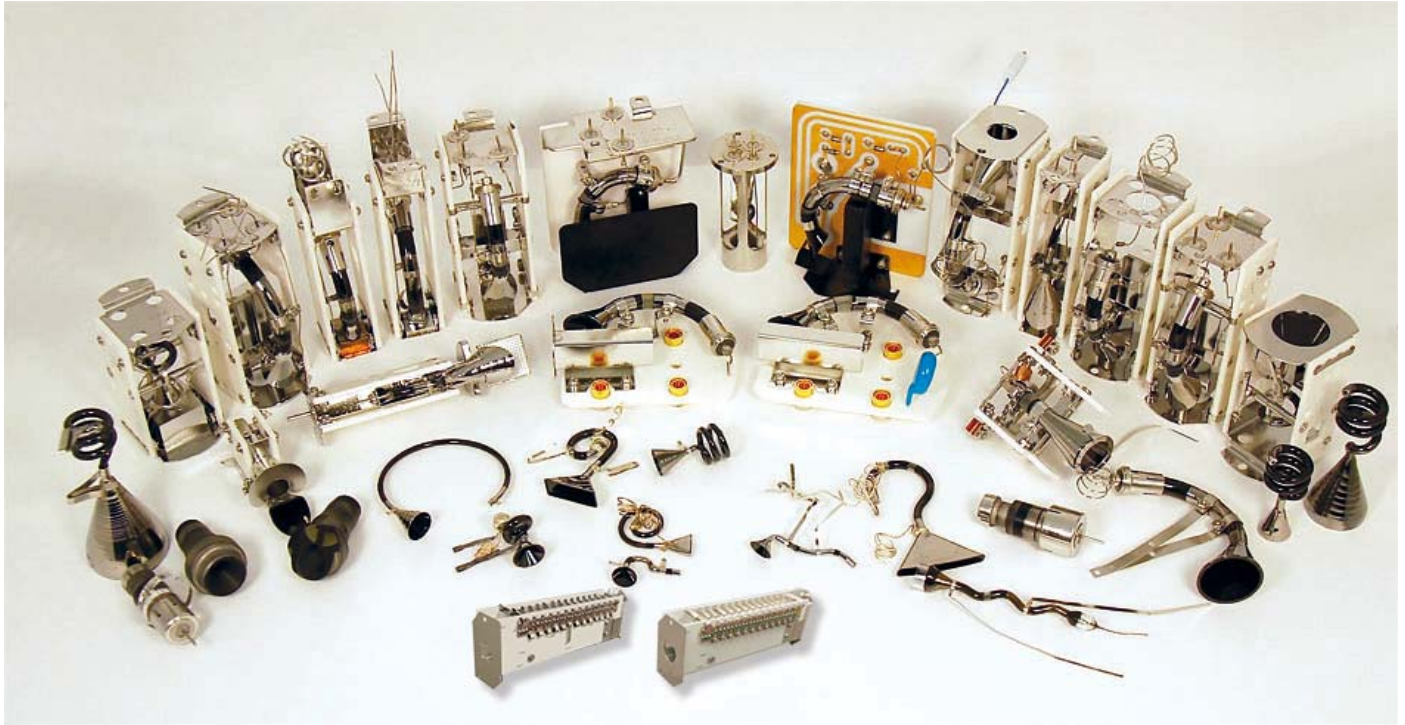


Electron Multiplier, Microchannel Plate And Ion Detector Replacement Guide



Photonis offers a full range of replacement electron multipliers, microchannel plates and ion detectors for mass spectrometers, FIB, SEM, SIMS and residual gas analyzers.

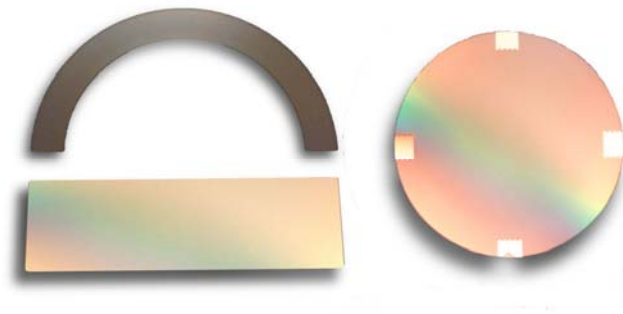
Replacement Channeltron® single channel Electron Multipliers, Microchannel Plates and Advanced Performance Detectors are manufactured and tested to the original performance specifications.

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Advanced Performance, MCP, Time-Of-Flight Detector Replacement Guide

Advanced Performance, MCP and Time-of-Flight Detector Replacement Guide				
Manufacturer	Instrument	Type	MCP or APD	Photonis Part Number
Agilent Technologies	LC-MSD TOF	MALDI	APD	33014
	6220 Accurate Mass	TOF LC/MS	APD	33014
	6530 Accurate Mass	Q-TOF LC/MS	APD	35711
	6230 Accurate Mass	TOF LC/MS	APD	35711
Analytica of Brandford	Corsair	API-TOF	APD	31369
Applied Biosystems	Mariner	TOF	APD	30013
	Voyager	TOF	APD	30035 / 34137
	4800 MALDI TOF/TOF	MALDI	APD	(2) 30035
	API QSTAR-XL Hybrid	LC-MSMS	MCP	33550
	Voyager Linear HCD		MCP	30392
Bruker	Ultraflex TOF/TOF	TOF	MCP	(2) 30300
	Ultraflex MALDI-TOF	MALDI-TOF	APD	30035
	PROTEINEER	TOF	APD	30035
	BIFLEX	TOF	MCP	30300
	Autoflex II	High Productivity TOF	MCP	30300
FEI/Micrion	Vectra Vision, 986, 986+, IET		APD	30011
	9500, 2500, Vectra 980		APD	30009
	Accura 800, 850, xT		APD	34695
IMAGO Scientific Instruments	LEAP	Atom Probe TOF	MCP	30377
ION-TOF GmbH	TOF SIMS5	Secondary Ion MS	MCP	33771
	TOF SIMS300	Secondary Ion MS	MCP	33771
JEOL	AccuTOF	TOF	MCP	31342

Advanced Performance, MCP and Time-of-Flight Detector Replacement Guide				
Manufacturer	Instrument	Type	MCP or APD	Photonis Part Number
Shimadzu Biotech	AXIMA QIT	MALDI TOF	MCP	33793
	AXIMA CFR plus	MALDI TOF	APD	32516
LECO Corporation	Pegasus IV	TOF	APD	33774
	Pegausu I, II, III	TOF	APD	31374
MDS Sciex	API QSTAR	LC-MS	MCP	31345
	API QSTAR-XL Hybrid	LC-MSMS	MCP	33550
	API QSTAR PULSAR		MCP	31345
	API QSTAR PULSAR i		MCP	31345
Metara	Corsair	TOF	APD	31369
Physical Electronics Inc	Trift III	TOF	MCP	33785
Scientific Analysis Instruments Ltd	LaserTOF RS	Bench TOF-MS	MCP	31361
	LaserTOF	Linear TOF-MS	MCP	31361
	LaserTOF TT	TOF TOF	MCP	34447
Sequinome	Bruker BiFlex	Linear TOF	MCP	30300
THERMO Finnigan	Tempus	Fast GC-MS TOF	MCP	30293
Waters Micromass Ltd.	MALDI Micro	TOF	MCP	30300 or 33724
	Q-TOF API-US	LC-MS	MCP	33724
	Q-TOF MICRO	LC-MS	MCP	30300
	Q-TOF ULTIMA	MALDI	MCP	33724
	Q-TOF Premier	TOF	MCP	33724
	LCT	LC-MS	MCP	30300
	Q-TOFP	TOF	APD	33882
	GCT Premier	TOF	MCP	30300
	Q-TOF2		MCP	31343



Channeltron® Electron Multiplier Guide

Channeltron® Channel Electron Multipliers					
Manufacturer	Instrument	Part Number	Style	Model	Photonis Part Number
ABB EXTREL	Benchmark LCMS	Y-61	Pulse	4870E	30139
	C50, ELQ, EOQ 400, MEXM/EXM		Pulse	4879	30145
	Quad	U-1150	Analog Only	4716	30073
	Quad	U-1149	Analog & Pulse	4816	30110M
	QMS Series	U-411	Analog	4770E	30094
	Questor	Y-61	Pulse	4870E	30139
AEI/Shimadzu	Axis	59-030		4800K	30108
	Quad Surface Analysis	59-905	Analog & Pulse	4816	30110M
	MS9, MS30			4780	33958
Agilent (Hewlett Packard)	5970, A, B	1970-0075	Original Standard	4772	30096
		05970-80102	On Circuit Board	5772	30147
			Cartridge	5900 MAGNUM	31308
				5900 Frame	32819
		05971-80103	Cartridge - K&M size	5902 MAGNUM	32336
	5971 / 5972 / 5973	05971-80101	Original Standard	4778	30103
			On Circuit Board	5778	30148
	5975		Cartridge	5900 MAGNUM	31308
			Frame for Cartridge Only	5900 Frame	32819
		05971-80102	Cartridge + Mount	Individual	Individual
		05971-80103	Cartridge - K&M size	5902 MAGNUM	32336
	5985 / 5987 / 5988	05985-60180	Positive + Negative Ions	4770B	30093
	5930 / 5980 / 5980A	1970-0063	Positive Ions	4770	30092
	5981 / 5982 / 5983 / 5984	1970-0063	Positive Ions	4770	30092
	5985 / 5985B / 5987 / 5988	1970-0063	Positive Ions	4770	30092
	5989	05989-80043	W/O HED		
		05989-80002	With HED	4772H	30097
	5992, 5993, 5995	1970-0075	Positive Ions	4772	30096
	5993	05985-60182	Positive + Negative Ions	4770B	30093
		1970-0075	Positive Ions	4772	30096
	GCD		Cartridge	5900 MAGNUM	31308
			Frame for Cartridge Only	5900 Frame	32819
		05971-80102	Cartridge + Mount		Individual
	05971-80103	Cartridge - K&M size	5902 MAGNUM	32336	
1100 LC/MSD		Cartridge	5900 MAGNUM	31308	



5900 MAGNUM

4775

4700

Channeltron® Channel Electron Multipliers					
Manufacturer	Instrument	Part Number	Style	Model	Photonis Part Number
API	5000/4000/3000/150EX			4822B	30118
	3200		mounted	4899	35119
Bear Instruments	Cub 800, Kodak			5904 MAGNUM	33328
Bruker	Ion Trap			5902 MAGNUM	32336
	Esquire			5902 MAGNUM	32336
Cameca	MAC 3			4820	30114
CVC	1100			4700	30189
Dionex	MSQ			5903 MAGNUM	32906
DuPont/CEC	21-103, 21-104, 21-110			4735	33868
	21-490, 21-491, 21-492	299480		4730G	30080
Elan	9000 / 6X00 / DRC	N8125001		Discrete Dynode	39905
Hiden Analytical	RGA (Analog)			4774H	32393
	EPIC Halo, Maxim				30142/33135
Hitachi	LC & GC/MS Ion Trap			4839	30131
	3DQ			5902 MAGNUM	32336
	ICP/MS			4839	30131
	RMU-6D			4839	30131
Inficon (Mass Spec) (Leybold Inficon)	ELS22			4775	30101
	Auditor II			4775	30101
	Hapsite			4799	33959
Inficon (RGA)	Quadrex 100, 200, PPC, QX2000			4775	30101
	Transpector (High Performance)			4775	30101
	XPRII			XPR	32276
	Compact			RGA MARK VII	30043
LKB	9000			4736	33869



5903 MAGNUM

4800

4769M

Channeltron® Channel Electron Multipliers					
Manufacturer	Instrument	Part Number	Style	Model	Photonis Part Number
Mass Analyzer Products	MAP215-50			4869	30135
McCallister Tech	Electron Energy Loss Spect.			4128	33857
Micromass/Waters	PT1/PT2 ICP/MS			4769M	
	Isoprobe			4800 EIC SL	30107
MKS Instruments	PPT Series			4769M	30091
	Orion Compact			4769M	30091
	HPQ2 RGA			4775	30101
MKS-Spectra	Mini-Lab MS			4775	30101
Nermag	R1010			4753G	30083
Omicron	EA125			7013C HC B1	30153
	CMA			4831G COA SFF	30129
	SED			4731G	31585
Orbital	Mass Spec, CAM MK II			4830G	30123
PE / Sciex	ELAN5000 (, 500, 250		unmounted	4816B	30111
	API III LCMS	014032A		4879	30145
	ELAN 5000A	WE02-0328	mounted	4880	30146
	ELAN 250	N810-1069	unmounted	4816B	30111
	ELAN 500	N810-1069	unmounted	4816B	30111
	ELAN 5000	N810-1069	unmounted	4816B	30111
	ELAN 6000 / 6000A / 6100	N810-1069	unmounted	4816B	30111
	API 100, 200, 300, 3000, 4000, 5000	020048B	mounted	4822B	30118
	API 2000, 3200		mounted	4899	35119
4000 QTRAP	020048B	mounted	4822C	39317	
Perkin Elmer	15-255		unmounted	4219 SL	31444
	15-255		mounted	4831G	30129
	20-075			4219 SL	31444
	Q-Mass			4727	33865
	Ion Trap			4715	30071
	3025, 3045, 3067, 3500, 3600, 5500	602914		4831G	30129
	6000, 6300, 6700, 6600, 600	602914		4831G	30129
	25-270 CMA, AES-590, AES-548	602914		4831G	30129
	5000LS	608144		4821G	30117
	3010, 10-155, 15-155	616530		4839	30131
	NexION 300	N8145000		Discrete dynode All instrument models	39702
	NexION 350, 2000	N8145028		Discrete dynode All instrument models	39917
	ELAN 9000 / 6X00 / DRC	N8125001			39905



Channeltron® Channel Electron Multipliers					
Manufacturer	Instrument	Part Number	Style	Model	Photonis Part Number
Pfiffer Vacuum/ Balzers	Prisma			4775	30101
Riber	QX100, QX200, SQ156			4730	30079
Shimadzu	Amicus, ESCA 3200			CEM 4139S C WL/NM MNT	30068
	ESCA 3400			CEM 4870E	30139
	MS9, MS30			4780	33958
	Axis			4800K	30108
	QP5050A		Multiplier Only	4797	34225
	QP8000		Multiplier Only	4797	34225
	QP5000			4797	34225
	QP, 1000, QP2000			4870E	30139
Stanford Research	RGA 100, 200, 300			4220	33929
Teledyne	3DQ			5902 MAGNUM	32336
Thermo Jarrel Ash	ICP/MS POEMS			4870V	30140
Thermo Finnigan	1015 (on axis), 3000	30004-60160		4750G	32102
	1015 (off Axis), 3000	30004-60160		4751G	30081
	3100, 3200, 4000, 4500, 4600	01504-60110		4751G	30081
	Sola ICP			4870V	30140
	PPINICI 4000, 4500, 4600	40007-98020		4752G	30082
	PPINICI 5100	40007-98020		4752G	30082
	PPINICI INCOS 50	40007-98020		4752G	30082
	OWA (before 8/81). 1020, 5100			4750G	32102
	OWA (after 8/81). 1020, 5100		Base	4752G	30082
	CH7, CH8	422097		4733	33866
	ITD 700, 800, ITS40, MAGNUM			4765G	30088
				5905 MAGNUM	34002
	Polaris Q / GCQ / LCQ		Full Assembly	5903 MAGNUM	32906
	GCQ, LCQ, SSQ, TSQ 7000		Replacement element	5903 MAGNUM	32906
	LCQ Deca / Duo		Full Assembly	5905 MAGNUM	34002
	LTQ, LTQ FT			5903 MAGNUM	32906
	LTQ, LTQ FT		Replacement element	5903 MAGNUM	32906
	TSQ Quantum			5903 MAGNUM	32906
	TSQ			5903 MAGNUM	32906
	LC-MSQ		Full Assembly	5905 MAGNUM	34002
TSQ 70 W/20kV Dynode, TSQ 700	94011-60052		4715	30071	
TSQ 70, ITMS	40007-98020		4752G	30082	
Thermo Elemental	Plasma Quad PQ1,			4870V	30140
Thermo Fisher	Escalab 250				36524
Thermo Scientific	Element 1 ICP-MS		Multiplier	MC- Element 1	39409
	Element 2 ICP-MS (Pre March 04)		Multiplier	MC-SEV-ICP II	39410
	Element 2 ICP-MS (Post March 04)		Multiplier	MC-SEV-ICP II V2	39411
	Element XR		Multiplier	MC-SEV-ICP II V2	39411

Channeltron® Channel Electron Multipliers					
Manufacturer	Instrument	Part Number	Style	Model	Photonis Part Number
Torion	Guardion-7		Multiplier	4230	36046
VG Elemental	PQ2+, PQ3 Standard			4870V	30140
Ulvac	Analog			4731G	31585
	Pulse Counting			4831G	30129
UTI (MKS)	Analog - 100C	100C	unmounted	4717	30074
	Analog (mounted) - 100 C			4776	30102
	Pulse Counting RGA - 100C		mounted	4876	30144
Varian	Auger Analyzer			4720	30075
	Saturn I & II		unmounted	4755	32782
	Saturn I, II, III		mounted	4765G	30088
	1200 Triple Quad			5904 MAGNUM	33328
	Saturn (pre 2000)		mounted	4765G	30088
	Saturn 2000			4765GM	32754
	Saturn 2100, 2200			4765GM	32754
Vestec	201 (Off axis)			4782	30105
	201 (on axis) + ion mode			4783	33871
V&F Gas Analysis	CIMS 500			4823G	30121
VG Quadrupoles	Quad Mass Spec (analog)	102-400-880		4774	30099
	Quad Mass Spec (Pulse Counting)				
	QX200, SQ300, SQ400			4771	30095
	SX200, SX300, SQ300	MGR4073B		4774	30099
	ZABIF, 7070, ZAB			4773G	30098
	VG Smart IQ, VGQ			4769	30090
VG Microtech	Clam2 Hemispherical Analyzer		single channel detection	7010	30150M
	Clam2 Hemispherical Analyzer		triple channel detection	4800 C B1 4X19	30106
VG Scientific	ESCA Lab (single)			7010	30150M
	ESCA Lab Mark II (triple)			7010	30150M
	ESCA Lab mark II (Five)			7013C/B1	30155
VG Elemental	Genesis			4870V	30140
	PQ-3			4870V	30140
	PQ-Excel			4870V	30140
VG		X919VL		4800 C WL C1	36452
		X919BL		4800 C WL C1	36452
		B310VL		7012	33872
		X812VL		7013C/B1	30155
		X913VL		4800 C B1 4X19	30106
VSW	Mass Analyst Quad Type			4771	30095

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