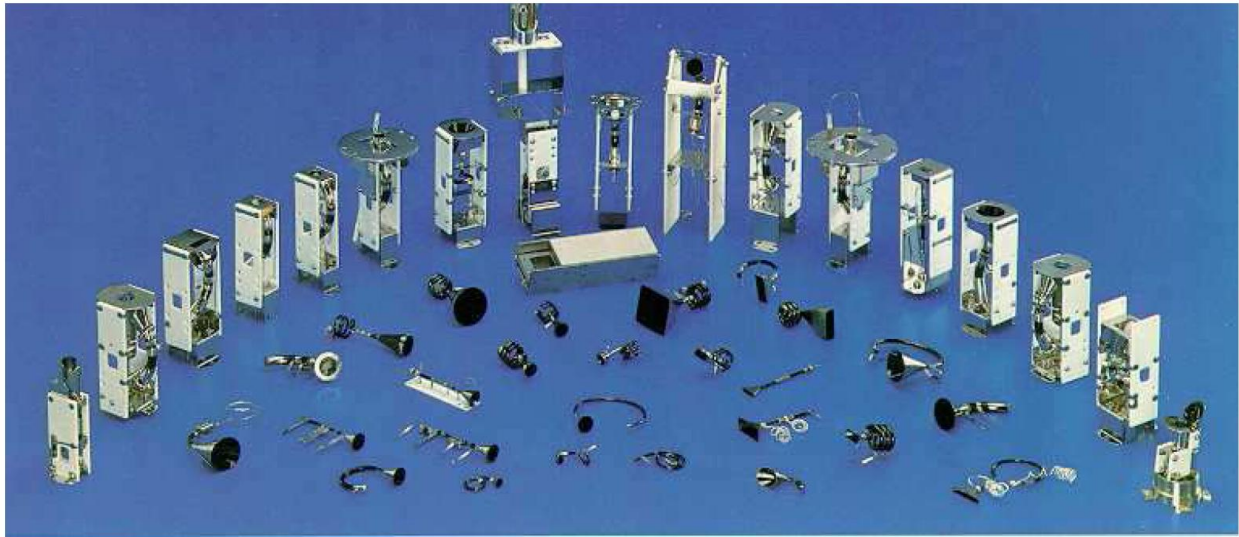


# PHOTONIS

## Electron Multiplier, Microchannel Plate And Ion Detector Replacement Guide

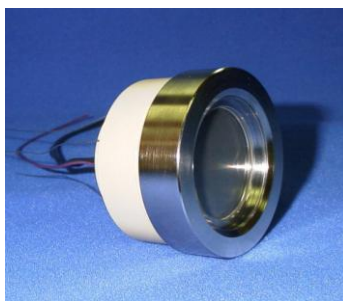


PHOTONIS offers a full range of replacement electron multipliers, microchannel plates and ion detectors for mass spectrometers, FIB, SEM, SIMS and residual gas analyzers.

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

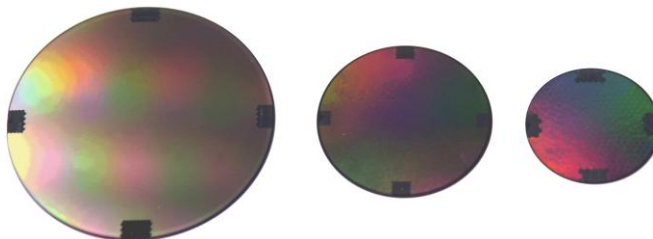
# Advanced Performance, MCP and Time-of-Flight Detector Replacement Guide

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	<a href="#">33014</a>
	6220 Accurate Mass	TOF LC/MS	APD	<a href="#">33014</a>
	6530 Accurate Mass	Q-TOF LC/MS	APD	<a href="#">35711</a>
	6230 Accurate Mass	TOF LC/MS	APD	<a href="#">35711</a>
Analytica of Brandford	Corsair	API-TOF	APD	<a href="#">31369</a>
Applied Biosystems	Mariner	TOF	APD	<a href="#">30013</a>
	Voyager	TOF	APD	<a href="#">30035 / 34137</a>
	4800 MALDI TOF/TOF	MALDI	APD	<a href="#">(2) 30035</a>
	API QSTAR-XL Hybrid	LC-MSMS	MCP	<a href="#">33550</a>
	Voyager Linear HCD		MCP	<a href="#">30392</a>
Bruker	Ultraflex TOF/TOF	TOF	MCP	<a href="#">(2) 30300</a>
	Ultraflex MALDI-TOF	MALDI-TOF	APD	<a href="#">30035</a>
	PROTEINEER	TOF	APD	<a href="#">30035</a>
	BIFLEX	TOF	MCP	<a href="#">30300</a>
	Autoflex II	High Productivity TOF	MCP	<a href="#">30300</a>
FEI/Micrion	Vectra Vision, 986, 986+, IET		APD	<a href="#">30011</a>
	9500, 2500, Vectra 980		APD	<a href="#">30009</a>
	Accura 800, 850, xT		APD	<a href="#">34695</a>
IMAGO Scientific Instruments	LEAP	Atom Probe TOF	MCP	<a href="#">30377</a>
ION-TOF GmbH	TOF SIMS5	Secondary Ion MS	MCP	<a href="#">33771</a>
	TOF SIMS300	Secondary Ion MS	MCP	<a href="#">33771</a>
JEOL	AccuTOF	TOF	MCP	<a href="#">31342</a>



## 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	<a href="#">33793</a>
	AXIMA CFR plus	MALDI TOF	APD	<a href="#">32516</a>
LECO Corporation	Pegasus IV	TOF	APD	<a href="#">33774</a>
	Pegasus I, II, III	TOF	APD	<a href="#">31374</a>
MDS Sciex	API QSTAR	LC-MS	MCP	<a href="#">31345</a>
	API QSTAR-XL Hybrid	LC-MSMS	MCP	<a href="#">33550</a>
	API QSTAR PULSAR		MCP	<a href="#">31345</a>
	API QSTAR PULSAR i		MCP	<a href="#">31345</a>
Metara	Corsair	TOF	APD	<a href="#">31369</a>
Physical Electronics Inc	Trift III	TOF	MCP	<a href="#">33785</a>
Scientific Analysis Instruments Ltd	LaserTOF RS	Bench TOF-MS	MCP	<a href="#">31361</a>
	LaserTOF	Linear TOF-MS	MCP	<a href="#">31361</a>
	LaserTOF TT	TOF TOF	MCP	<a href="#">34447</a>
Sequinome	Bruker BiFlex	Linear TOF	MCP	<a href="#">30300</a>
THERMO Finnigan	Tempus	Fast GC-MS TOF	MCP	<a href="#">30293</a>
Waters Micromass Ltd.	MALDI Micro	TOF	MCP	<a href="#">30300 or 33724</a>
	Q-TOF API-US	LC-MS	MCP	<a href="#">33724</a>
	Q-TOF MICRO	LC-MS	MCP	<a href="#">30300</a>
	Q-TOF ULTIMA	MALDI	MCP	<a href="#">33724</a>
	Q-TOF Premier	TOF	MCP	<a href="#">33724</a>
	LCT	LC-MS	MCP	<a href="#">30300</a>
	Q-TOFP	TOF	APD	<a href="#">35817</a>
	GCT Premier	TOF	MCP	<a href="#">30300</a>
	Q-TOF2		MCP	<a href="#">31343</a>



# Channeltron® Electron Multiplier Replacement Guide

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



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



5903 MAGNUM

4800

4769M

**Channeltron® Channel Electron Multipliers**

Manufacturer	Instrument	Part Number	Style	Model	P/ N
<b>Mass Analyzer Products</b>	MAP215-50			4869	<a href="#">30135</a>
<b>McCallister Tech</b>	Electron Energy Loss Spect.			4128	<a href="#">33857</a>
<b>Micromass/Waters</b>	PT1/PT2 ICP/MS			4769M	
	Isoprobe			4800 EIC SL	<a href="#">30107</a>
<b>MKS Instruments</b>	PPT Series			4769M	<a href="#">30091</a>
	Orion Compact			4769M	<a href="#">30091</a>
	HPQ2 RGA			4775	<a href="#">30101</a>
<b>MKS-Spectra</b>	Mini-Lab MS			4775	<a href="#">30101</a>
<b>Nermag</b>	R1010			4753G	<a href="#">30083</a>
<b>Omicron</b>	EA125			7013C HC B1	<a href="#">30153</a>
	CMA			4831G COA SFF	<a href="#">30129</a>
	SED			4731G	<a href="#">31585</a>
<b>Orbital</b>	Mass Spec, CAM MK II			4830G	<a href="#">30123</a>
<b>PE / Sciex</b>	ELAN5000 (, 500, 250		unmounted	4816B	<a href="#">30111</a>
	API III LCMS	014032A		4879	<a href="#">30145</a>
	ELAN 5000A	WE02-0328	mounted	4880	<a href="#">30146</a>
	ELAN 250	N810-1069	unmounted	4816B	<a href="#">30111</a>
	ELAN 500	N810-1069	unmounted	4816B	<a href="#">30111</a>
	ELAN 5000	N810-1069	unmounted	4816B	<a href="#">30111</a>
	ELAN 6000 / 6000A / 6100	N810-1069	unmounted	4816B	<a href="#">30111</a>
	API 100, 200, 300, 3000, 4000, 5000	020048B	mounted	4822B	<a href="#">30118</a>
	API 2000, 3200		mounted	4899	<a href="#">35119</a>
4000 QTRAP	020048B	mounted	4822C	<a href="#">33440</a>	
<b>Perkin Elmer</b>	15-255		unmounted	4219 SL	<a href="#">31444</a>
	15-255		mounted	4831G	<a href="#">30117</a>
	20-075			4219 SL	<a href="#">31444</a>
	Q-Mass			4727	<a href="#">33865</a>
	Ion Trap			4715	<a href="#">30071</a>
	3025, 3045, 3067, 3500, 3600, 5500	602914		4831G	<a href="#">30129</a>
	6000, 6300, 6700, 6600, 600	602914		4831G	<a href="#">30129</a>
	25-270 CMA, AES-590, AES-548	602914		4831G	<a href="#">30129</a>
	5000LS	608144		4821G	<a href="#">30117</a>
	3010, 10-155, 15-155	616530		4839	<a href="#">30131</a>





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

The information furnished is believed to be accurate and reliable, but is not guaranteed and is subject to change without notice. No liability is assumed by PHOTONIS for its use. Performance data represents typical characteristics as individual product performance may vary. Customers should verify that they have the most current PHOTONIS product information before placing orders. No claims or warranties are made as to the application of PHOTONIS products. Pictures may not be considered as contractually binding. This document may not be reproduced, in whole or in part, without the prior written consent of PHOTONIS.

Channeltron® Channel Electron Multipliers					
Manufacturer	Instrument	Part Number	Style	Model	P/ N
Torion	Guardion-7		Multiplier	4230	<a href="#">36046</a>
VG Elemental	PQ2+, PQ3 Standard			4870V	<a href="#">30140</a>
Ulvac	Analog			4731G	<a href="#">31585</a>
	Pulse Counting			4831G	<a href="#">30129</a>
UTI (MKS)	Analog - 100C	100C	unmounted	4717	<a href="#">30074</a>
	Analog (mounted) - 100 C			4776	<a href="#">30102</a>
	Pulse Counting RGA - 100C		mounted	4876	<a href="#">30144</a>
Varian	Auger Analyzer			4720	<a href="#">30075</a>
	Saturn I & II		unmounted	4755	<a href="#">32782</a>
	Saturn I, II, III		mounted	4765G	<a href="#">30088</a>
	1200 Triple Quad			5904 MAGNUM	<a href="#">33328</a>
	Saturn (pre 2000)		mounted	4765G	<a href="#">30088</a>
	Saturn 2000			4765GM	<a href="#">32754</a>
	Saturn 2100, 2200			4765GM	<a href="#">32754</a>
	Saturn 4000 GC/MS			4765	
Vestec	201 (Off axis)			4782	<a href="#">30105</a>
	201 (on axis) + ion mode			4783	<a href="#">33871</a>
V&F Gas Analysis	CIMS 500			4823G	<a href="#">30121</a>
VG Quadrupoles	Quad Mass Spec (analog)	102-400-880		4774	<a href="#">30099</a>
	Quad Mass Spec (Pulse Counting)				
	QX200, SQ300, SQ400			4771	<a href="#">30095</a>
	SX200, SX300, SQ300	MGR4073B		4774	<a href="#">30099</a>
	ZABIF, 7070, ZAB			4773G	<a href="#">30098</a>
	VG Smart IQ, VGQ			4769	<a href="#">30090</a>
VG Microtech	Clam2 Hemispherical Analyzer		single channel detection	7010	<a href="#">30150M</a>
	Clam2 Hemispherical Analyzer		triple channel detection	4800 C B1 4X19	<a href="#">30106</a>
VG Scientific	ESCA Lab (single)			7010	<a href="#">30150M</a>
	ESCA Lab Mark II (triple)			7010	<a href="#">30150M</a>
	ESCA Lab mark II (Five)			7013C/B1	<a href="#">30155</a>
VG Elemental	Genesis			4870V	<a href="#">30140</a>
	PQ-3			4870V	<a href="#">30140</a>
	PQ-Excel			4870V	<a href="#">30140</a>
VG		X919VL		4800 C WL C1	<a href="#">36452</a>
		X919BL		4800 C WL C1	<a href="#">36452</a>
		B310VL		7012	<a href="#">33872</a>
		X812VL		7013C/B1	<a href="#">30155</a>
		X913VL		4800 C B1 4X19	<a href="#">30106</a>
VSW	Mass Analyst Quad Type			4771	<a href="#">30095</a>