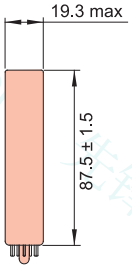
red/infra-red sensitive trialkali 19 to 38mm (¾" to 1½") diameter

	Characteristics				Photocathode sensitivity								Photomultiplier performance					
type	diameter nominal mm	active diameter nominal mm	number & type of dynodes	dynode surface	QE (%) peak typical	QE Curve	uA/Lm min	uA/Lm typical	CB typical	CR typical	IR min	IR typical	nominal A/Lm	Vk-a typical	Vk-a max	gain X10^6	dark current typical nA	dark current max nA
9079B	19	15	10 LF	SbCs	21	B - f	80	120	9	40	-	2	50	1000	1200	0.4	0.1	2
9079QB	19	15	10 LF	SbCs	21	Q - f	80	120	9	40	-	2	50	1000	1200	0.4	0.1	2
9113B	25	22	10 CF	SbCs	21	B - f	80	160	9	60	-	5	50	1100	1300	0.3	0.5	5
9113FLB	25	22	10 CF	SbCs	21	B - f	80	160	9	60	-	5	50	1100	1300	0.3	0.5	5
9113WB	25	22	10 CF	SbCs	21	W - f	80	160	9	60	-	5	50	1100	1300	0.3	0.5	5
9130/100B	29	2.5	11 LF	BeCu	21	B - f	80	150	8	60	-	6	200	1550	1800	1.3	0.05	1
9130/350B	29	9	11 LF	BeCu	21	B - f	80	150	8	60	-	6	200	1400	1800	1.3	0.2	2
9136B	29	25	11 LF	SbCs	21	B - f	130	170	8	80	-	7	200	900	1100	1	2	10
9670B	29	special	9 LF	BeCu	21	B - f	80	150	7	70	-	7	3	900	-	0.02	1	100
9798B	29	25	11 BG	SbCs	21	B - f	130	170	8	80	-	9	200	900	1100	1.2	2	10
9798QB	29	25	11 BG	SbCs	21	Q - f	130	170	8	80	-	9	200	900	1100	1.2	2	10
9828B	29	25	11 BG	SbCs	21	B - g	-	220	8	100	6	12	200	850	1100	0.9	2	10
9828WB	29	25	11 BG	SbCs	21	W - g	-	220	8	100	6	12	200	850	1100	0.9	2	10
9972B	38	32	10 LF	SbCs	21	B - f	130	180	8	80	-	10	20	850	1100	0.1	0.2	2
9972KB	38	32	10 LF	SbCs	21	B - f	130	180	8	80	-	10	20	850	1100	0.1	0.2	2

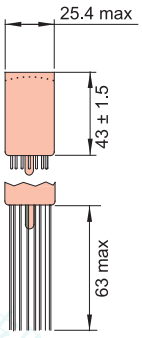
Comprehensive data sheets for all of the above types are available on request, or can be downloa

Outline drawings mm

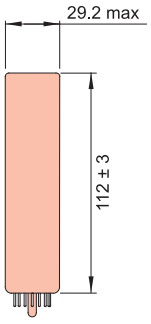
(add 0.8mm to diameter when insulating sleeving is specified)



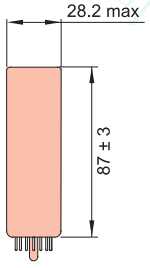
19 mm 9079B 9079QB



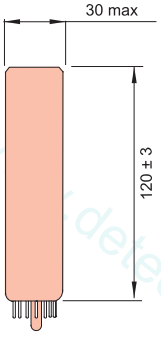
25 mm 9113B 9113FLB 9113WB



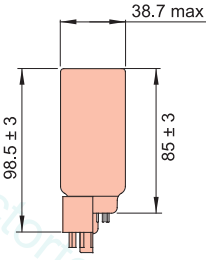
29 mm 9130/100B 9130/350B 9798B 9798QB 9828B 9828WB



29 mm 9136B



29 mm 9670B

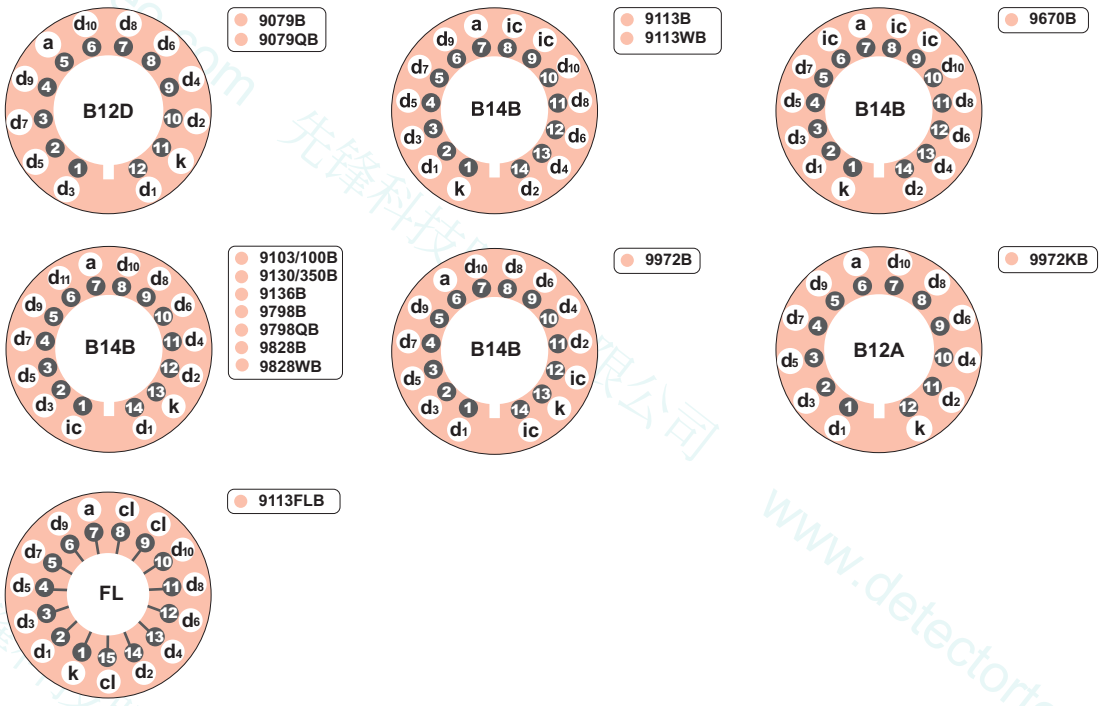


38 mm 9972B 9972KB

					Special features	Accessories			
dark rate typical s^{-1}	max rated A/Lm (gain)	pulse rise time ns	pulse fwhm ns	type		Socket	Shield	Voltage divider series	
								passive	active
1000	200	1.8	2.7	9079B	red sensitive variant of 9078B, fast, high gain, good overall performance.	B12D	MS19A	C669	-
1000	200	1.8	2.7	9079QB	red sensitive variant of 9079B with UV sensitivity to 165nm.	B12D	MS19A	C669	-
3000	500	1.8	3.1	9113B	red sensitive variant of 9111B, compact, fast response time.	B14B	MS25A	C673	C6002
3000	500	1.8	3.1	9113FLB	variant of 9113B with flexible leads.	wires	MS25A	C651	C6002
3000	500	1.8	3.1	9113WB	variant of 9113B with UV sensitivity to 185nm.	B14B	MS25A	C673	C6002
40	2000	3.5	5	9130/100B	photon counting pmt, 2.5 mm effective diameter, very low afterpulse rate.	B14B	MS30B	C637	-
300	2000	3.5	5	9130/350B	photon counting pmt, 9 mm effective diameter, very low afterpulse rate.	B14B	MS30B	C637	-
5000	2000	4.5	7.5	9136B	red sensitive variant of 9107B, length 87mm	B14B	MS30A	C637	-
-	(1x 10^6)	5	10	9670B	Position sensitive type - 120mm long.	B14B	MS30B	C615	-
5000	2000	15	30	9798B	red sensitive sensitive variant of the 9924B.	B14B	MS30B	C637	C686
5000	2000	15	30	9798QB	variant of 9798B with UV sensitivity to 165nm.	B14B	MS30B	C637	C686
5000	2000	15	30	9828B	variant of 9798B, prismatic window giving enhanced red and IR sensitivity.	B14B	MS30B	C637	C686
5000	2000	15	30	9828WB	variant of 9828B with UV sensitivity to 185nm.	B14B	MS30B	C637	C686
7000	200	3	6	9972B	red sensitive variant of 9902B, high gain, fast response and good linearity.	B14B	MS38A	C646	C6004
7000	200	3	6	9972KB	variant of 9972B with capped base.	B12A	MS38A	C674	C6004

Base configurations

(Viewed from below)



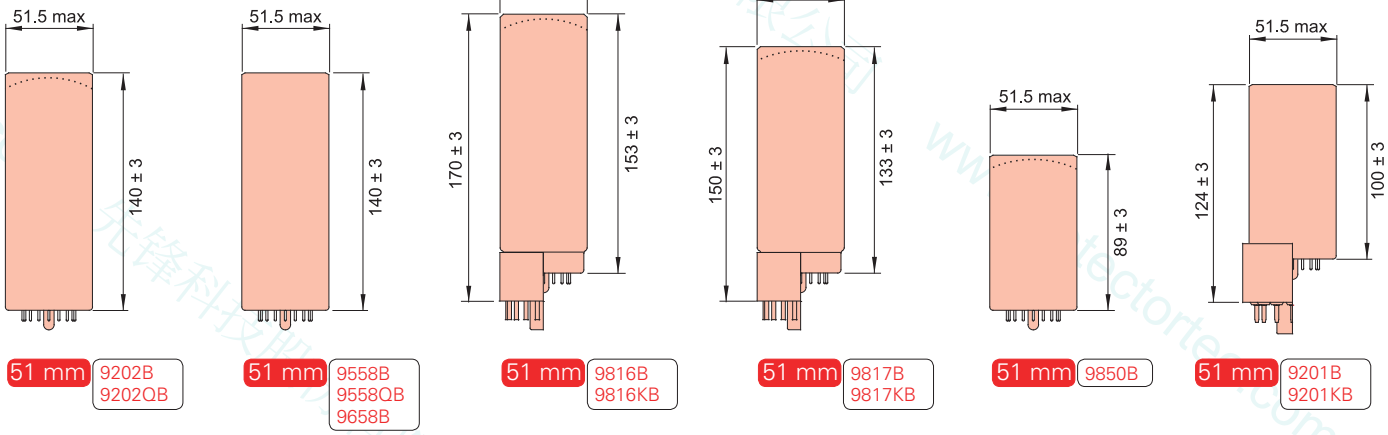
red/infra-red sensitive trialkali 51mm (2") diameter

	Characteristics				Photocathode sensitivity								Photomultiplier performance					
type	diameter nominal mm	active diameter nominal mm	number & type of dynodes	dynode surface	QE (%) peak typical	QE Curve	uA/Lm min	uA/Lm typical	CB typical	CR typical	IR min	IR typical	nominal A/Lm	Vk-a typical	Vk-a max	gain X10^6	dark current typical nA	dark current max nA
9201B	51	46	10 LF	BeCu	21	B - f	150	200	9	90	-	12	50	1200	1600	1	1	10
9201KB	51	46	10 LF	BeCu	21	B - f	150	200	9	90	-	12	50	1200	1600	1	1	10
9202B	51	46	11 LF	SbCs	21	B - f	-	250	9	120	7	12	200	1050	1500	0.8	2	20
9202QB	51	46	11 LF	SbCs	21	Q - f	-	250	9	120	7	12	200	1050	1500	0.8	2	20
9558B	51	46	11 VB	SbCs	21	B - f	-	200	9	90	7	13	200	1050	1500	1	2	20
9558QB	51	46	11 VB	SbCs	21	Q - f	-	200	9	90	7	13	200	1050	1500	1	2	20
9658B	51	46	11 VB	SbCs	21	B - g	-	250	9	130	12	18	200	950	1400	0.8	2	20
9816B	51	46	14 LF	BeCu	21	B - f	120	200	9	90	-	12	5000	2200	2500	25	50	500
9816KB	51	46	14 LF	BeCu	21	B - f	120	200	9	90	-	12	5000	2200	2500	25	50	500
9817B	51	46	12 LF	BeCu	21	B - f	120	200	9	90	-	12	500	2000	2400	2.5	10	100
9817KB	51	46	12 LF	BeCu	21	B - f	120	200	9	90	-	12	500	2000	2400	2.5	10	100
9850B	51	46	6 LF	BeCu	21	B - f	150	220	9	100	-	13	1	800	1100	0.005	0.1	1

Comprehensive data sheets for all of the above types are available on request, or can be downloa

Outline drawings mm

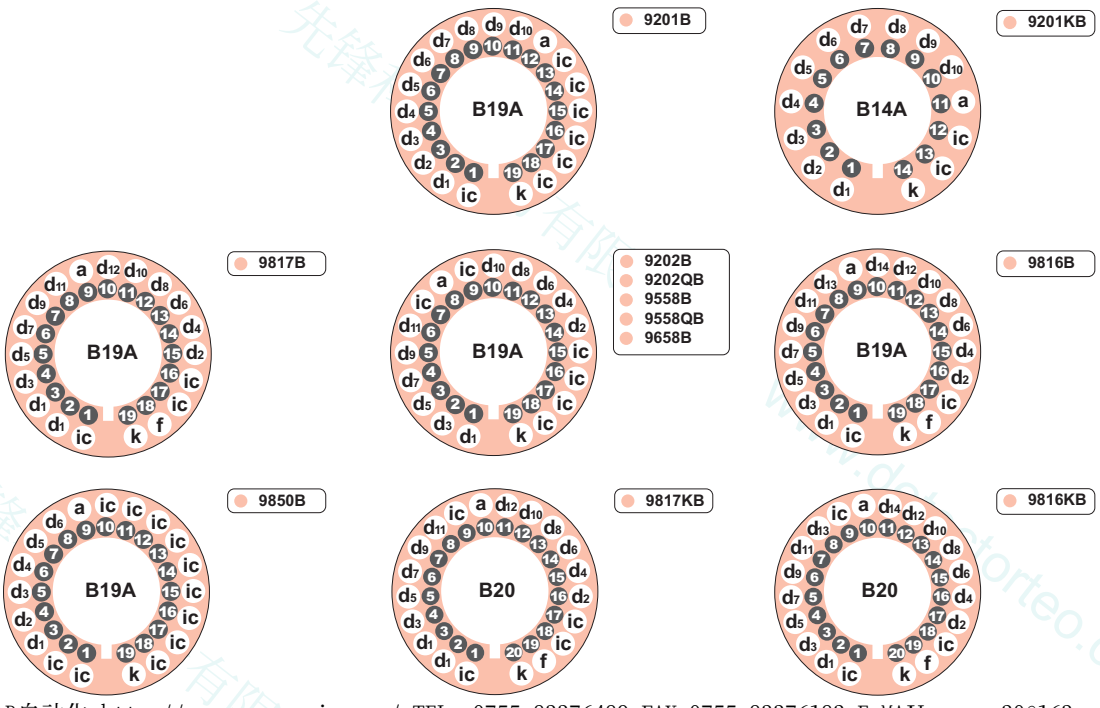
(add 0.8mm to diameter when insulating sleeving is specified)



					Special features	Accessories			
dark rate typical s^{-1}	max rated A/Lm (gain)	pulse rise time ns	pulse fwhm ns	type		Socket	Shield	Voltage divider series	
								passive	active
15000	200	4	6.5	9201B	variant of 9266B.	B19A	MS52A(F)	C647	-
15000	200	4	6.5	9201KB	variant of 9201B with capped base.	B14A	MS52E	C636	-
15000	2000	3.5	5	9202B	fast, pin compatible version of 9558B, high gain and good linearity.	B19A	MS52C(F)	C625	-
15000	2000	3.5	5	9202QB	variant of 9202B with UV sensitivity to 165nm.	B19A	MS52C(F)	C625	-
15000	2000	10	22	9558B	established high gain venetian blind type, superseded by 9202B.	B19A	MS52C(F)	C625	-
15000	2000	10	22	9558QB	variant of 9558B with UV sensitivity to 165nm.	B19A	MS52C(F)	C625	-
15000	2000	10	22	9658B	variant of 9558B, prismatic window giving enhanced red and IR sensitivity.	B19A	MS52B(F)	C625	-
15000	10000	2	3	9816B	variant of 9817B with 14 dynodes for high gain capability.	B19A	MS52C(F)	C638	-
15000	10000	2	3	9816KB	variant of 9816B with capped base.	B20	MS52C	C643	-
15000	2000	2	3	9817B	12 stage fast linear focused type with good linearity.	B19A	MS52B(F)	C638	-
15000	2000	2	3	9817KB	variant of 9817B with capped base.	B20	MS52B	C640	-
	5	3	4.5	9850B	6 stage fast pmt for high light level applications.	B19A	MS52A(F)	C626	-

Base configurations

(Viewed from below)



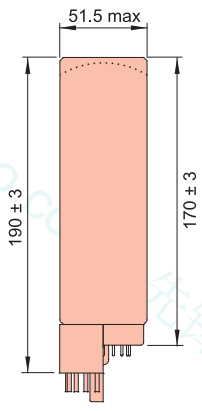
red/infra-red sensitive trialkali 51 to 130mm (2″ to 5″) diameter

	Characteristics				Photocathode sensitivity								Photomultiplier performance					
type	diameter nominal mm	active diameter nominal mm	number & type of dynodes	dynode surface	QE (%) peak typical	QE Curve	uA/Lm min	uA/Lm typical	CB typical	CR typical	IR min	IR typical	nominal A/Lm	Vk-a typical	Vk-a max	gain X10^6	dark current typical nA	dark current max nA
9863/100B	51	2.5	14 LF	BeCu	21	B - f	125	180	9	75	-	6	5000	2200	2500	30	0.5	5
9863/100KB	51	2.5	14 LF	BeCu	21	B - f	125	180	9	75	-	6	5000	2200	2500	30	0.5	5
9863/350B	51	9	14 LF	BeCu	21	B - f	125	180	9	75	-	6	5000	2000	2500	30	2	20
9863/350KB	51	9	14 LF	BeCu	21	B - f	125	180	9	75	-	6	5000	2000	2500	30	2	20
9879B	51	46	12 LF	BeCu	21	B - f	110	200	9	90	-	12	500	1750	2200	2.5	10	100
9311FLB	78	70	10 LF	SbCs	23	B - f	120	220	10	95	-	10	50	800	1400	0.25	2	20
9311KB	78	70	10 LF	SbCs	23	B - f	120	220	10	95	-	10	50	800	1400	0.25	2	20
9307B	90	80	6 LF	SbCs	23	B - f	150	180	8	80	-	10	1	700	1300	0.006	0.2	3
9312KB	130	115	10 LF	SbCs	21	B - f	90	150	9	60	-	6	50	1100	1500	0.33	10	100
9312WKB	130	115	10 LF	SbCs	21	W - f	90	150	9	60	-	6	50	1100	1500	0.33	10	100

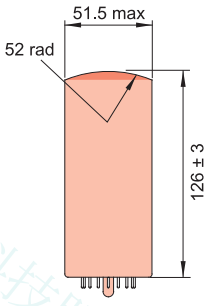
Comprehensive data sheets for all of the above types are available on request, or can be downloa

Outline drawings mm

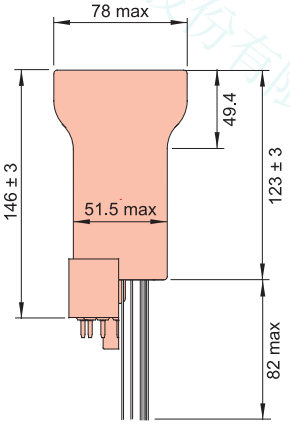
(add 0.8mm to diameter when insulating sleeving is specified)



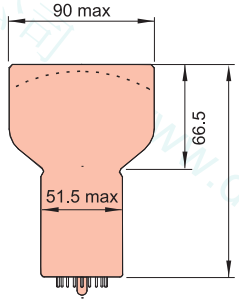
51 mm 9863/100B 9863/100KB 9863/350B 9863/350KB



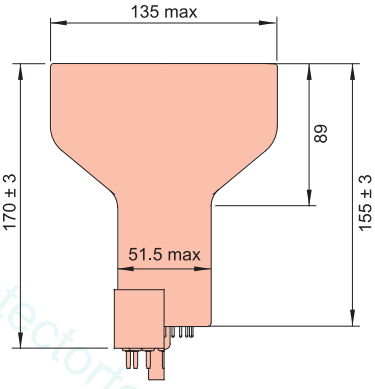
51 mm 9879B



78 mm 9311FLB 9311KB



90 mm 9307B



130 mm 9312KB 9312WKB

					Special features	Accessories			
dark rate typical s^{-1}	max rated A/Lm (gain)	pulse rise time ns	pulse fwhm ns	type		Socket	Shield	Voltage divider series	
								passive	active
40	10000	2.5	3.5	9863/100B	variant of 9816B, 2.5 mm effective diameter, low dark count and afterpulse.	B19A	MS52D(F)	C638	-
40	10000	2.5	3.5	9863/100KB	variant of 9863/100B with capped base.	B 20	MS52D	C641	-
300	10000	2.5	3.5	9863/350B	variant of 9816B, 9mm effective diameter, low dark count and afterpulse.	B19A	MS52D(F)	C638	-
300	10000	2.5	3.5	9863/350KB	variant of 9863/350B with capped base.	B20	MS52D	C641	-
15000	2000	2	3	9879B	variant of 9807B, thin blown window, shot blasted for enhanced sensitivity.	B21	MS52B(E)	C628	-
35000	200	7.5	15	9311FLB	S20 version of 9305FLB	wires	-	C655	-
35000	200	7.5	15	9311KB	variant of 9311FLB with capped base.	B 20	-	C636	-
-	5	4.6	14.5	9307B	90mm diameter variant of 9821, S20, 6 dynodes for high light levels.	B19A	MS75/90	C627	-
-	200	13	25	9312KB	S20 version of 9390KB. Was D753KB.	B14A	MS130B	C636	-
-	200	13	25	9312WKB	variant of 9312KB with UV sensitivity to 185nm. Was D753WKB.	B14A	MS130B	C636	-

Base configurations

(Viewed from below)