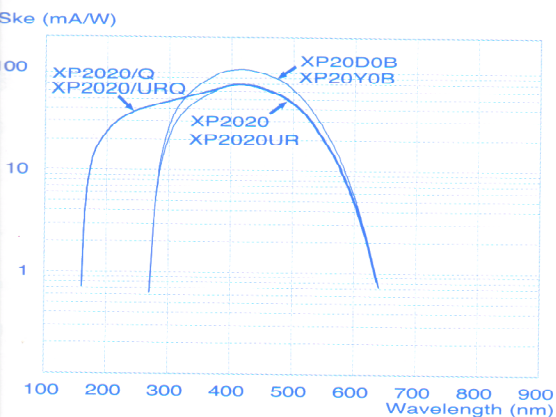


51 mm(2") tubes XP2020 XP2020/Q XP2020/UR XP2020/URQ XP20D0B XP20Y0B

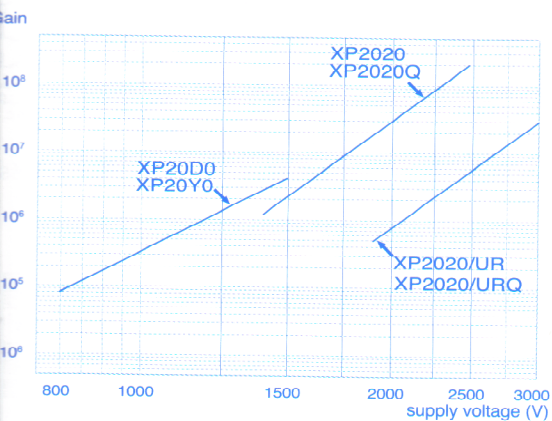
Key features	very fast, high gain, low noise			very fast, high gain, UV sensitive			ultra fast, high gain			ultra fast, high gain, UV sensitive			very fast, high PHR			very fast, high PHR			
	focused/12			focused/12			focused/12			focused/12			focused/8			focused/8			
Dynode structure / number of stages	typ. 70			70			70			70			80			80			
Cathode luminous sensitivity (µA/lm)	min 7.5			7.5			7.5			7.5			10			10			
Cathode blue sensitivity (µA/lmF)	typ. 10			10			10			10			12.5			12.5			
Cathode radiant sensitivity (mA/W)	typ. at (nm)	80 mA/W			80 mA/W			80 mA/W			80 mA/W			100 mA/W			100 mA/W		
		270	420	650	160	420	650	270	420	650	160	420	650	270	420	650	270	420	650
Gain	typ. 3x10 ⁷			3x10 ⁷			3x10 ⁷			3x10 ⁷			2.4x10 ⁸			2.4x10 ⁸			
Supply voltage	typ.	2 000			2 000			3 000			3 000			1 000			1 000		
	min. (V)	1 750			1 750			2 200			2 200			800			800		
	max. (V)	2 600			2 600			3 200			3 200			1 200			1 200		
Anode dark current	typ. (nA)	10			10			20			20			1			1		
	max. (nA)	100			100			100			100			20			20		
Anode dark counts	typ. (cps)	900			900			15 000			15 000			---			---		
	max. (cps)	2 500			2 500			25 000			25 000			---			---		
Max. anode pulse current for linearity 2% (mA)	280			280			70			70			---			---			
Time response	rise (ns)	1.5			1.5			1.4			1.4			2.5			2.5		
	FWHM (ns)	2.4			2.4			2.3			2.3			6			6		
PHR (%)	7.2			7.2			7.2			7.2			3			3			
Maximum ratings	supply voltage (V)	3000			3000			3300			3300			1 500			1 500		
	gain	2x10 ⁸			2x10 ⁸			1x10 ⁸			1x10 ⁸			5x10 ⁸			5x10 ⁸		
	Voltage divider	VD124K/T			VD124K/T			VD127K/T			VD127K/T			---			---		
Accessories	Socket	FE1120			FE1120			FE1120			FE1120			FE1120			FE1120		
Metal-shields	MS172			MS172			MS172			MS172			MS172			MS172			

PHR: for radiation source ¹³⁷Cs, NaI Tl scintillator, Ø 51 mm, h51 mm; XP20Y0 and XP20D0: FWHM with ⁶⁰Co at 1.33 MeV, LaCl₃ scintillator, Ø 25 mm, h25 mm.
 XP2020 (Q): center-edge transit time difference 0.25 ns; transit-time spread σ 0.25 ns (type C divider, 2500 V supply). Both values are down to 0.2 ns for XP2020/UR (Q).

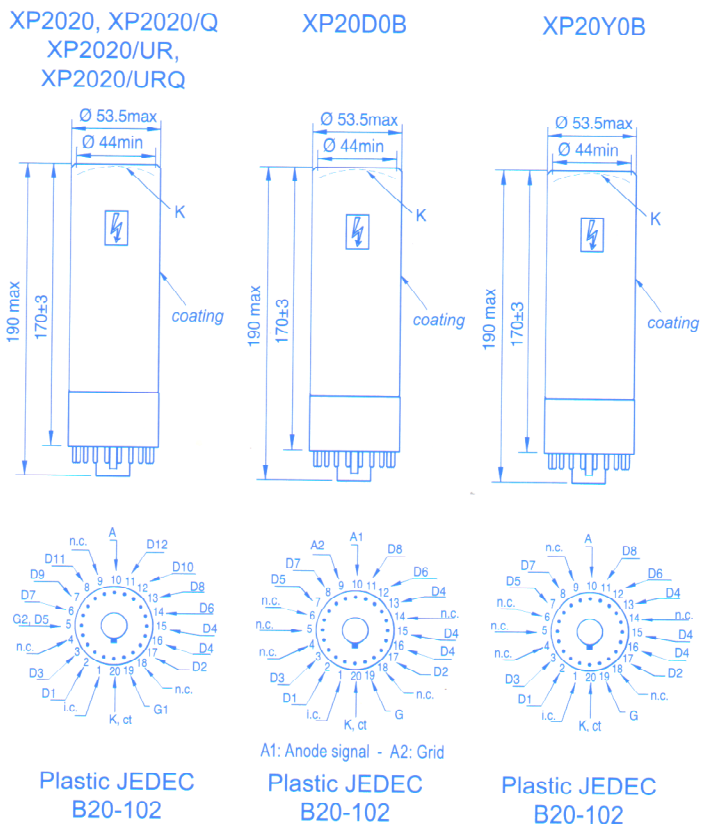
Typical spectral characteristics



Typical gain curves



Dimensions and pinning



Voltage dividers

Tube	A divider type voltage ratios (for maximum gain)								
	K	G	D1	D2	D3	...	Dn	A	
XP2020, XP20D0, XP2020/Q, XP20Y0	1.2	2.8	1.2	1.8	1	...	1	1	
XP2020/UR, XP2020/URQ	2	8	2	1.5	1	1	1	

XP2020 family: two non-inductive resistors of 51 Ω are wired in series with D11 and D12 in the plastic base.