

**QUICK HEATING
DOUBLE TETRODE**
**YL1020
QQZ03-20**
Typical operating conditions

f_{out}	200	460	Mc/s
V_a	300	300	V
V_{g2}	250	250	V
$-V_{g1}$	175	175	V
$V_{in(pk)}$	2×205	2×205	V
I_a	2×45	2×45	mA
I_{g2}	2×4.0	2×3.5	mA
I_{g1}	2×3.0	2×2.5	mA
$P_{load} \text{ (driver)}$	3.0	5.0	W
η_a	33	26	%
P_a	2×9.0	2×10	W
P_{out}	9.0	7.0	W
P_{load}	7.0	5.5	W

OPERATING NOTE

I_{g1} and I_{g2} will vary from valve to valve, hence the use of fixed resistors R_{g1} and R_{g2} will result in variation of input and output power. It is therefore recommended that R_{g2} be made adjustable.

CATHODE

Quick heating directly heated filament. 70% P_{out} in less than 0.5 second. ←

* V_f d.c. or r.m.s.	1.6	V
I_f	4.25	A

Frequency of filament supply

Sine wave	max 200	c/s
Square wave	Any	

*The filament has been designed to accept temporary fluctuations of supply voltage of $\pm 15\%$.

CAPACITANCES

C_{out} (two sections in push-pull)	1.5	pF
C_{in} (two sections in push-pull)	4.0	pF

Internally neutralised for push-pull operation.

CHARACTERISTICS (measured at $V_a = 300V$, $V_{g2} = 250V$, $I_a = 40mA$)

g_m	4.0	mA/V
μ_{g1-g2}	9.0	

COOLING

Radiation and Convection cooled

Maximum temperatures ←

Base-seals	180	°C
Anode seal	250	°C
Bulb	250	°C

Anode connectors providing a high degree of heat transfer by radiation or conduction should be used.

YLI020 QQZ03-20

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MOUNTING POSITION

ANY (but see G.O.R's)

PHYSICAL DATA

Weight of valve	$\left\{ \begin{array}{l} 1.8 \\ 50 \end{array} \right.$	oz g
Weight of valve in carton	$\left\{ \begin{array}{l} 9.0 \\ 250 \end{array} \right.$	oz g

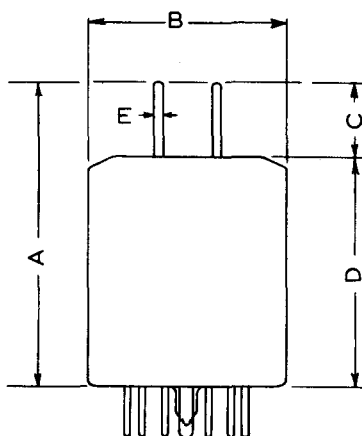
ACCESSORIES

Anode clips	40623
Socket	40202

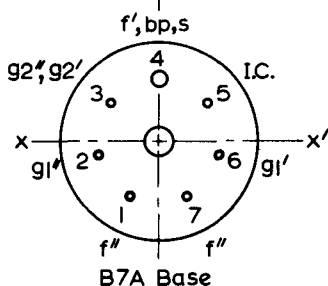
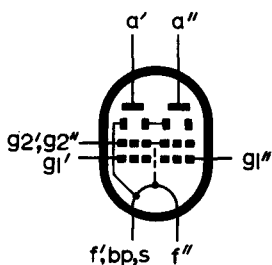
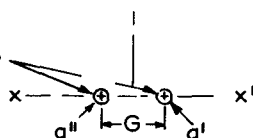
DIMENSIONS

	<i>Inches</i>	<i>Millimetres</i>	
A	2.874	73	max.
B	1.811	46	max.
C	0.650 ± 0.059	16.5 ± 1.5	
D	2.165	55	max.
E	0.079 ± 0.004	2.0 ± 0.1	
F	0.098 ± 0.001	2.5 ± 0.03	
G	0.551 ± 0.001	14 ± 0.03	

Inch dimensions derived from original millimetre dimensions.



Location of
anode pins
within circles
of dia F



Contacts 1 and 7 should be
strapped together externally
to reduce the effective
contact resistance .

B1571