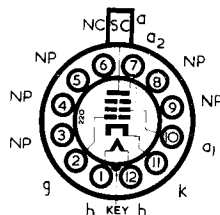


## Replacement Type

TYPE **C21NM**  
**B12A (DUODECAL)**  
 BASE



The BRIMAR C21NM is a rectangular 70° deflection angle Teletube with magnetic focus, a pentode gun incorporating an ion trap, aluminized screen and external conductive coating. The screen colour is white, with a grey glass faceplate with a transmission of approximately 67 per cent.

## RATINGS

|                                         |                    |     |     |     |                   |
|-----------------------------------------|--------------------|-----|-----|-----|-------------------|
| Heater Voltage                          | ...                | ... | ... | ... | 6.3 volts         |
| Heater Current                          | ...                | ... | ... | ... | 0.3 amps.         |
| Final Anode Voltage ( $V_{a3}$ )        | ...                | ... | ... | ... | 18 kilovolts max. |
| First Anode Voltage ( $V_{a3}$ )        | ...                | ... | ... | ... | 12 kilovolts min. |
| First Anode Voltage ( $V_{a1}$ )        | ...                | ... | ... | ... | 500 volts max.    |
| First Anode Voltage ( $V_{a1}$ )        | ...                | ... | ... | ... | 200 volts min.    |
| Pre-focus Anode Voltage ( $V_{a2}$ )    | ...                | ... | ... | ... | 500 volts max.    |
| Pre-focus Anode Voltage ( $V_{a2}$ )    | ...                | ... | ... | ... | —100 volts min.   |
| Grid Voltage ( $V_g$ )                  | ...                | ... | ... | ... | 0 volts max.      |
| Grid Voltage ( $V_g$ )                  | ...                | ... | ... | ... | —150 volts min.   |
| Grid Voltage, Postive Peak              | ...                | ... | ... | ... | 2 volts max.      |
| Heater to Cathode Voltage ( $V_{h-k}$ ) | Cathode Positive   | ... | ... | ... | 180 volts max.    |
| Heater to Cathode Voltage ( $V_{h-k}$ ) | Cathode Positive * | ... | ... | ... | 410 volts max.    |
| Heater to Cathode Voltage ( $V_{h-k}$ ) | Cathode Negative   | ... | ... | ... | 125 volts max.    |
| Grid Circuit Resistance                 | ...                | ... | ... | ... | 1.5 megohms max.  |
| Heater to Cathode Circuit Impedance     | ...                | ... | ... | ... | 10 kilohms max.   |

\* During warm-up, for a period not exceeding 15 seconds.

## OPERATING CHARACTERISTICS

|                                      |     |     |     |     |                   |
|--------------------------------------|-----|-----|-----|-----|-------------------|
| Final Anode Voltage                  | ... | ... | ... | ... | 16 kilovolts      |
| First Anode Voltage                  | ... | ... | ... | ... | 400 volts         |
| Pre-focus Anode Voltage              | ... | ... | ... | ... | 400 volts         |
| Grid Voltage to cut off Beam Current | ... | ... | ... | ... | —53 to —105 volts |
| Field Strength of Ion-Trap Magnet    | ... | ... | ... | ... | 60 gauss approx.  |

## INTER-ELECTRODE CAPACITANCES

|                                 |     |     |     |     |              |
|---------------------------------|-----|-----|-----|-----|--------------|
| Grid to all                     | ... | ... | ... | ... | 7 pF approx. |
| Cathode to all                  | ... | ... | ... | ... | 7 pF approx. |
| Final Anode to External Coating | ... | ... | ... | ... | 750-2,000 pF |

## NOTES:

- No harmful X-ray radiation is produced by this tube when operated at final anode voltages below 16 kV. At voltages above 16 kV some shielding may be necessary to protect against prolonged exposure at close range.  
 (Outline drawing as for C21HM or C21TM.)
- The ion-trap magnet should be adjusted to give the brightest picture. Failure to do this may shorten the life of the tube.

