

202 mm (8 inch) Diameter, 10-stage, Hemispherical Window  
Bialkali Photocathode, Head-On Type, Basing Type

**GENERAL**

| Parameter                      |                            | Description / Value | Unit            |
|--------------------------------|----------------------------|---------------------|-----------------|
| Spectral Response              |                            | 300 to 650          | nm              |
| Wavelength of Maximum Response |                            | 420                 | nm              |
| Photocathode Material          |                            | Bialkali            | -               |
| Window Material                |                            | Borosilicate glass  | -               |
| Effective Surface Area         |                            | 380                 | cm <sup>2</sup> |
| Dynode                         | Structure                  | Box & Line          | -               |
|                                | Number of Stages           | 10                  | -               |
| Capacitances                   | Anode to Last Dynode       | approx. 3           | pF              |
|                                | Anode to All Other Dynodes | approx. 7           | pF              |
| Weight                         |                            | approx. 1100        | g               |

**MAXIMUM RATINGS (Absolute Maximum Values)**

| Parameter             |                               | Value      | Unit   |
|-----------------------|-------------------------------|------------|--------|
| Supply Voltage        | Between Anode and Cathode     | 2000       | V      |
|                       | Between Anode and Last Dynode | 300        | V      |
| Average Anode Current |                               | 0.1        | mA     |
| Ambient Temperature   |                               | -30 to +50 | deg. C |

**CHARACTERISTICS (at 25 deg. C )**

| Parameter                                              |                               | Min. | Typ.            | Max. | Unit            |
|--------------------------------------------------------|-------------------------------|------|-----------------|------|-----------------|
| Cathode Sensitivity                                    | Luminous (2856 K)             | 40   | 80              | -    | uA/lm           |
|                                                        | Radiant at 420 nm             | -    | 80              | -    | mA/W            |
|                                                        | Blue Sensitivity Index        | 6    | 10              | -    | -               |
|                                                        | Quantum Efficiency at peak    | -    | 25              | -    | %               |
| Anode Sensitivity                                      | Luminous (2856 K)             | -    | $8 \times 10^2$ | -    | A/lm            |
|                                                        | Radiant at 420 nm             | -    | $8 \times 10^5$ | -    | A/W             |
| Gain                                                   |                               | -    | $1 \times 10^7$ | -    | -               |
| Supply Voltage for Gain of $1 \times 10^7$             |                               | -    | 1500            | 2000 | V               |
| Anode Dark Current (after 30 min. storage in darkness) |                               | -    | 100             | 1000 | nA              |
| Dark Count (after 24 hrs. storage in darkness) *1      |                               | -    | 4000            | 8000 | s <sup>-1</sup> |
| Time Response                                          | Anode Pulse Rise Time         | -    | 3.6             | -    | ns              |
|                                                        | Electron Transit Time         | -    | 54              | -    | ns              |
|                                                        | Transit Time Spread (FWHM) *2 | -    | 2               | -    | ns              |
| P/V (Peak to Valley) Ratio *2                          |                               | 2.0  | 3.0             | -    | -               |
| Pulse Linearity at +/-2% deviation                     |                               | -    | 40              | -    | mA              |
| Pulse Linearity at +/-5% deviation                     |                               | -    | 60              | -    | mA              |
| After Pulse                                            |                               | -    | 6               | 10   | %               |

**NOTES**

\* Anode characteristics are measured with the standard voltage distribution ratio.

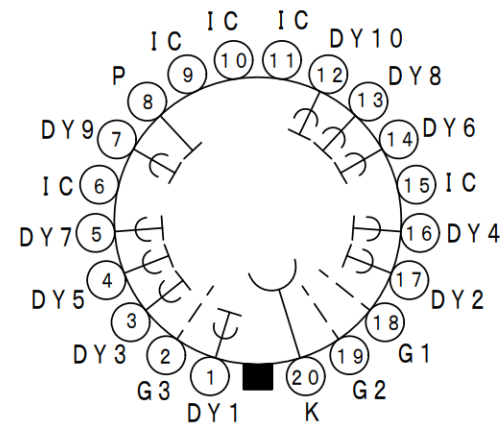
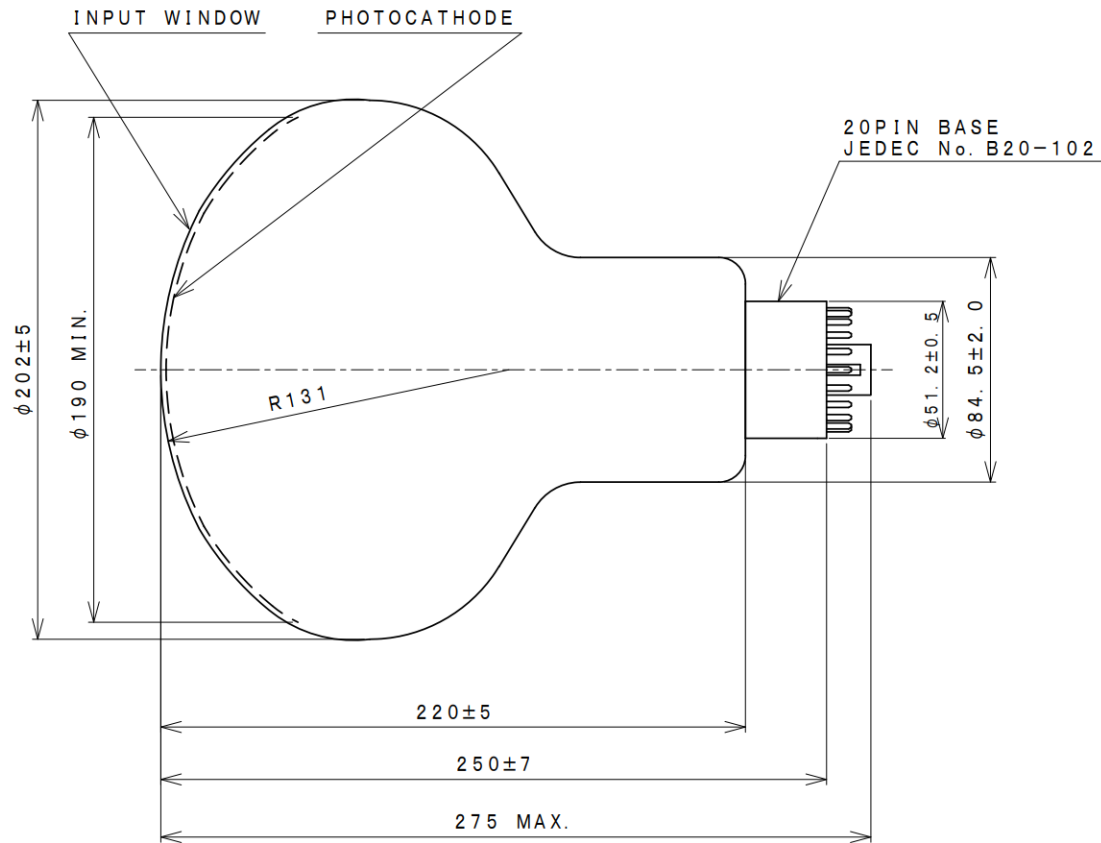
\*1 LLD : 1/4 p.e.

\*2 at single p.e.

**VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE**

| Electrodes       | K    | Dy1 | G2  | G1 | G3  | Dy2 | Dy3  | Dy4  | Dy5 | Dy6 | Dy7 | Dy8  | Dy9  | Dy10 | P |
|------------------|------|-----|-----|----|-----|-----|------|------|-----|-----|-----|------|------|------|---|
| Ratio            | 16.8 | 0   | 0.6 | 0  | 3.4 | 5   | 3.33 | 1.67 | 1   | 1.2 | 1.5 | 2.2  | 3    | 2.4  |   |
| Capacitors in uF |      |     |     |    |     |     |      |      |     |     |     | 0.01 | 0.01 | 0.01 |   |

Supply Voltage 1500 V, K : Cathode, Dy : Dynode, P : Anode, F : Focus



BASING DIAGRAM  
<BOTTOM VIEW>

UNIT : mm

R5912

DATE : 2025/11/11