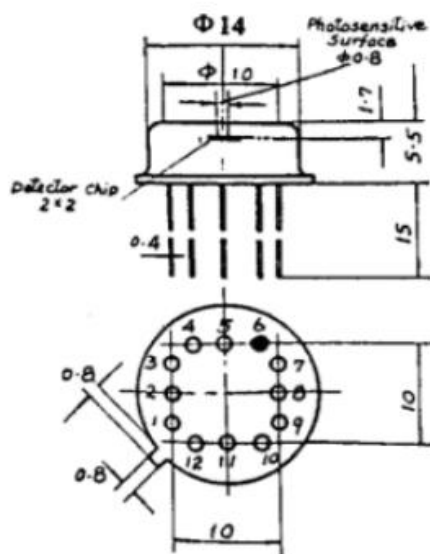


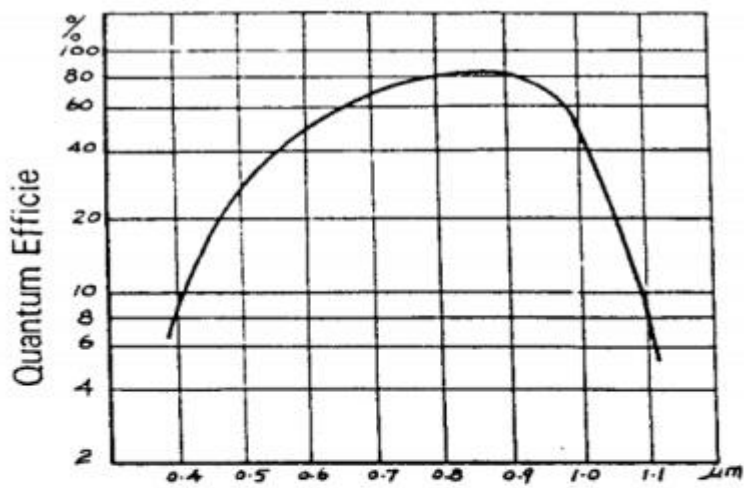
| Parameter |   | Symbol  | Unit            | Numerical Value       |         |      |      |
|-----------|---|---------|-----------------|-----------------------|---------|------|------|
|           |   |         |                 | Min                   | Typical | Max. |      |
| 1         | Photosurface                              | Diam    | $\Phi$          | mm                    |         | 0.8  |      |
|           |   | Area    | A               | mm <sup>2</sup>       |         | 0.5  |      |
| 2         | Spectral Range                            |         |                 | nm                    | 400     |      | 1100 |
| 3         | Dark Current                              |         | $I_d$           | nA                    |         |      | 200  |
| 4         | Working Voltage                           |         | $V_{opt}$       | V                     | 275     |      | 425  |
| 5         | Operating voltage temperature coefficient |         | K               | V/°C                  | 1.0     |      | 2.4  |
| 6         | Voltage Response                          | 1064nm  | $R_v$           | V/W × 10 <sup>6</sup> | 0.6     | 1.0  |      |
|           |   |         | $R_v$           | V/W × 10 <sup>6</sup> |         |      |      |
| 7         | Noise equivalent power                    | 1064nm  | NEP             | PW/Hz <sup>1/2</sup>  |         | 0.19 | 0.29 |
|           |   |         | NEP             | PW/Hz <sup>1/2</sup>  |         |      |      |
| 8         | Response rise time                        |         | $T_r$           | ns                    |         | 7    | 10   |
| 9         | Response fall time                        |         | $T_f$           | ns                    |         | 7    | 10   |
| 10        | Output Impedance                          |         |                 | $\Omega$              |         | 25   | 50   |
| 11        | Output terminal bias voltage              |         |                 | V                     | 0.0     | 0.2  | 1.0  |
| 12        | Amplifier supply voltage                  |         | $V_s$           | V                     |         | ±5.0 |      |
| 13        | Amplifier supply current                  |         | +I <sub>s</sub> | mA                    |         | 20   |      |
| 14        | Amplifier supply current                  |         | -I <sub>s</sub> | mA                    |         | 10   |      |
| 15        | Maximum reverse dark current              |         | $T_a$           | °C                    | -40     |      | +70  |
| 16        | Maximum reverse dark current              |         | $I_b$           | $\mu$ A               |         |      | 0.2  |
| 17        | Maximum photocurrent                      | Average | $I_p$           | mA                    |         |      | 2.5  |
|           |   | Peak    | $I_p$           | mA                    |         |      | 10   |



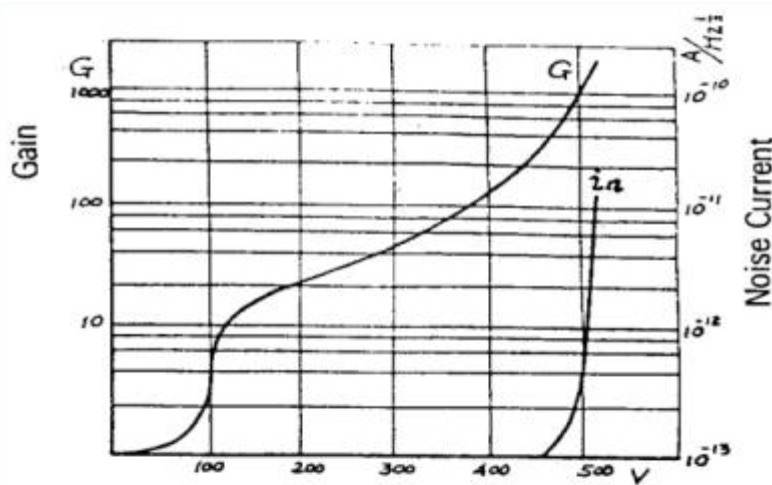
Construction and dimensions

| Pin | Join Methods                            |
|-----|---|
| 1   | Signal Output                           |
| 2   | —                                       |
| 3   | Input Power <b>-5V</b>                  |
| 4   | <b>APD</b> bias voltage                 |
| 5   | —                                       |
| 6   | Pipe shell earthing                     |
| 7   | Load earthing                           |
| 8   | Temperature compensation AD509: anode   |
| 9   | Temperature compensation AD509: cathode |
| 10  | Input Power earthing                    |
| 11  | —                                       |
| 12  | Input Power <b>+5V</b>                  |

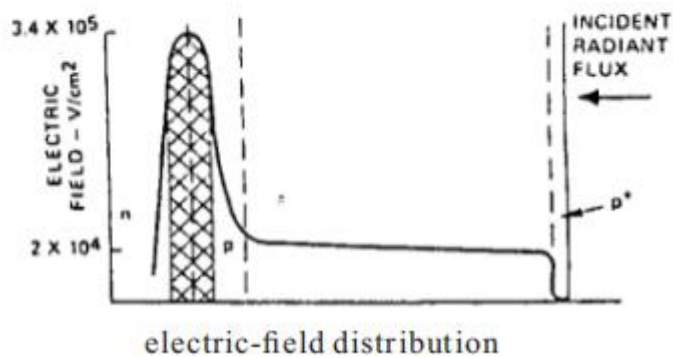
Pin Join Methods



Spectral response curve



$G \sim V_{opt}$ ,  $2n \sim V_{opt}$  curve



electric-field distribution