The 9798B is a 29 mm (1.13") diameter, end window photomultiplier with S20 infra-red sensitive photocathode and 11 high gain, high stability, SbCs dynodes of box and grid design. The 9798QB is a variant for applications requiring uv sensitivity.

- spectroscopy
- So, No, pollution monitoring

- high gain
- low operating voltage
- extended infra-red sensitivity

<table>
<thead>
<tr>
<th>9798B borosilicate</th>
<th>9798QB* fused silica</th>
</tr>
</thead>
<tbody>
<tr>
<td>spectral range**</td>
<td>280 - 850</td>
</tr>
<tr>
<td>refractive index (n)</td>
<td>1.49</td>
</tr>
<tr>
<td>K (ppm)</td>
<td>300</td>
</tr>
<tr>
<td>Th (ppb)</td>
<td>250</td>
</tr>
<tr>
<td>U (ppb)</td>
<td>100</td>
</tr>
</tbody>
</table>

* note that the sidewall of the envelope contains graded seals of high K content
** wavelength range over which quantum efficiency exceeds 1 % of peak

- photocathode: S20
- active diameter
- quantum efficiency at peak %
- luminous sensitivity µA/lm
- with CB filter
- with CR filter
- with IR filter
- dynodes: 11BGSbCs
- anode sensitivity in divider A:
  - nominal anode sensitivity A/lm
  - max. rated anode sensitivity A/lm
  - overall V for nominal A/lm
  - overall V for max. rated A/lm
  - gain at nominal A/lm
  - dark current at 20 ºC:
    - dc at nominal A/lm
    - dc at max. rated A/lm
    - dark count rate s⁻¹
  - pulsed linearity (-5% deviation):
  - divider A
  - rate effect (I₁ for ∆g/g=1%):
  - magnetic field sensitivity:
    - the field for which the output decreases by 50 %
    - most sensitive direction T x 10⁻⁴ °C⁻¹
  - temperature coefficient % ºC ± 0.5
  - timing:
    - single electron rise time ns
    - single electron (fwhm) ns
    - transit time ns
  - weight: g
  - maximum ratings:
    - anode current µA
    - cathode current nA
    - gain x 10⁶
    - sensitivity A/lm
    - temperature °C
    - V (k-a)¹
    - V (k-d)²
    - V (d-d)²
    - ambient pressure (absolute) kPa

¹ subject to not exceeding max. rated sensitivity
² subject to not exceeding max rated V(k-a)

- quantum efficiency %
- wavelength nm

- A/lm
- gain
- Vk-a (kV)
The 9798B meets the specification given in this data sheet. You may order variants by adding a suffix to the type number. You may also order options by adding a suffix to the type number. You may order product with specification options by discussing your requirements with us. If your selection option is for one-off order, then the product will be referred to as 9798A. For a repeat order, ET Enterprises will give the product a two digit suffix after the letter B, for example B21. This identifies your specific requirement.

- **window variants**
  - Q: fused silica

- **options**
  - E: electrostatic shielding
  - S: electromagnetic shielding
  - M: supplied with spectral response calibration

- **specification options**
  - B: as given in data sheet
  - A: single order to selected specification
  - Bnn: repeat order to selected specification

### Voltage Dividers
The standard voltage dividers available for these pmts are tabulated below:

<table>
<thead>
<tr>
<th>k</th>
<th>d1</th>
<th>d2</th>
<th>d3</th>
<th>d4</th>
<th>d5</th>
<th>d6</th>
<th>d7</th>
<th>d8</th>
<th>d9</th>
<th>d10</th>
<th>d11</th>
<th>a</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>C637E 2R</td>
</tr>
</tbody>
</table>

- R = 330 kΩ

* mumetal is a registered trademark of Magnetic Shield Corporation