27C12
PHOTO-CELL
TENTATIVE

GENERAL
The 27C12 is a vacuum Photo-Cell with a caesium-oxygen-silver cathode surface, having maximum sensitivity in the near infra-red region of the spectrum. It is highly sensitive to incandescent light sources and may be used for machine control, counting applications, etc.

RATING—Absolute values
Maximum working voltage 250 V
Maximum mean cathode current (max averaging time 30 sec) I_{k(\text{av})_{\text{max}}} 10 \mu A
Maximum ambient temperature T_{\text{amb(max)}} 100 ^{\circ}C

INTER-ELECTRODE CAPACITANCE
Anode/Cathode C_{a-k} 1.1 pF

CHARACTERISTICS
Average overall sensitivity (approx) 20* \mu A/L
Maximum dark current I_{\text{dark(max)}} 0.05\uparrow \mu A
Minimum insulation resistance between electrodes 2000 M\Omega
Recommended working voltage 50 V

* Measured at 0.1 lumens with a lamp colour temperature of 2700\^oK and a cell series resistance of 1.0M\Omega. Anode voltage=50V.
\uparrow Measured at 100V and 1.0M\Omega series resistance, zero illumination.

DIMENSIONS
Maximum overall length 54.5 mm
Maximum seated height 47.5 mm
Light centre from seat 19.5 mm
Maximum diameter 19 mm
Minimum cathode width 11.5 mm
Minimum cathode length 22 mm
Minimum projected cathode area 2.6 sq.cm

December, 1961

Associated Electrical Industries Limited
Electronic Components Division
Tel: GERard 9797
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MOUNTING POSITION—Unrestricted

BASE—B7G

Direction of light

Viewed from free end of pins

CONNECTIONS:

<table>
<thead>
<tr>
<th>Pin</th>
<th>Connection</th>
<th>k</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cathode</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Cathode</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Anode</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Anode</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Anode</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Cathode</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Cathode</td>
<td></td>
</tr>
</tbody>
</table>

† The cathode connection should be made to pins 1, 2, 6 and 7 connected together and the anode connection to pins 3, 4 and 5 connected together.
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All dimensions in mm.

DIRECTION OF LIGHT.

VIEW OF FREE END.

February, 1962

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