PDCS60T-XS
Long Wavelength
10 Gb/s Photodiode Chip

Product Description
The PDCS60T-XS is a high speed photodiode chip with a dual-pad layout and an optical aperture with a diameter of 60 μm. The top illuminated photodiode is optimized for single-mode data- and telecom applications up to 12 Gb/s and offers excellent responsivity and a high speed response from 1260 to 1360 nm. Over this wave-length range, an AR coating provides low reflectivity and high return loss. Furthermore, the photodiode is optimized to provide the best trade-off between a large active area and low capacitance and achieves full speed at a bias voltage of only 1.5 V. The pad metallization is optimized for wire-bonding with the pads positioned to enable easy and direct bonding to any TIA layout. In addition, the small chip footprint saves valuable space in small packages such as TO-46.

Highlights
- Large optical aperture: 60 μm
- Large bandwidth: 10 Gbps
- Low capacitance: 220 fF
- Low dark current: 2 nA
- Pad layout allows easy bonding to any TIA layout
- Small chip size for easy assembly on TO headers

Applications
- 10GBase-LRM
- 10 G Ethernet / Fiber Channel
- 10 Gb/s SONET / SDH

Availability
- Volume production

Characteristics (T=25 °C)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Sym</th>
<th>$U_R$</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diameter of optical aperture</td>
<td>$\varnothing$</td>
<td>60</td>
<td>μm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Responsivity $\lambda = 1310 \text{ nm}$</td>
<td>R</td>
<td>2.5 V</td>
<td>0.8</td>
<td>0.9</td>
<td></td>
<td>A/W</td>
</tr>
<tr>
<td>Dark current $T = 25 \degree \text{ C}$</td>
<td>$I_D$</td>
<td>5 V</td>
<td>2</td>
<td>10</td>
<td>200</td>
<td>nA</td>
</tr>
<tr>
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<td>$T = 85 \degree \text{ C}$</td>
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<td></td>
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</tr>
<tr>
<td>Bandwidth</td>
<td>B</td>
<td>2.5 V</td>
<td>8</td>
<td>10</td>
<td></td>
<td>GHz</td>
</tr>
<tr>
<td>Total capacitance</td>
<td>C</td>
<td>2.5 V</td>
<td>220</td>
<td>240</td>
<td></td>
<td>fF</td>
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</table>

For detailed product information visit www.albisopto.com

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