Superconducting Nanowire Single-Photon Detectors

Key Features:

- Quantum Opus nanowires provide high-efficiency, low-noise detection while operating at temperatures < 2.5 K
- Devices are self-aligned to optical fiber for high-efficiency coupling
- High system detection efficiency at custom wavelengths
- Broadband and other custom response curves available
- Multi-element and other nanowire architectures upon request
- Available with or without low-loss fiber pigtail
- Ask about mid-infrared optimized devices!

<table>
<thead>
<tr>
<th>System Detection Efficiency</th>
<th>850 nm</th>
<th>950 nm</th>
<th>1310 nm</th>
<th>1550 nm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dark Rate</td>
<td>≥90%</td>
<td>≥90%</td>
<td>≥80%</td>
<td>≥80%</td>
</tr>
<tr>
<td>Jitter</td>
<td>&lt;1 Hz</td>
<td>&lt;1 Hz</td>
<td>10 Hz</td>
<td>100 Hz*</td>
</tr>
<tr>
<td>Nominal Pulse Height</td>
<td>500 mV</td>
<td>500 mV</td>
<td>300 mV</td>
<td>300 mV</td>
</tr>
<tr>
<td>Recovery Time</td>
<td>50 ns</td>
<td>50 ns</td>
<td>50 ns</td>
<td>50 ns</td>
</tr>
</tbody>
</table>

*Dependent on proper black-body filtering; contact us to achieve this performance in your cryostat.

Typical dimensions shown. All dimensions in millimeters.

Copyright © 2017 by Quantum Opus, LLC
**Sample Narrowband Response**

![Graph showing Typical Detector Efficiency, Optimal Polarization with different wavelengths (1550 nm, 1310 nm, 1040 nm, 940 nm, 840 nm)]

**Sample Wideband Response**

![Graph showing Typical Detector Efficiency, Optimal Polarization with broadband ranges (1300-1600 nm, 1000-1300 nm)]