The ID230 delivers reliable and robust telecom-wavelength single-photon detection, with the performance and versatility of a semiconductor system.

With the ID230, unwanted detector noise is uniquely low. Thanks to an advanced cooling system and best-in-class device control electronics, the temperature of the ID230’s InGaAs/InP avalanche photodiode can be cooled stably to -90°C, giving detector dark counts as low as <50 Hz.

Specially designed for application with asynchronous detection, this single-photon counting module can detect up to 25% of all photons arriving through its optical fibre-couple input (MMF or SMF), with a user-definable detector deadtime of 2 μs to 100 μs.

Ideal for applications with very low optical signals, or very broad coincidence windows, from deep-tissue imaging, lifetime imaging of long-lived optical transitions, to prototyping of bleeding-edge quantum information technologies.

Get the most out of your ultra-sensitive photonic experiments and applications with the ID230 Infrared Single-Photon Detector today.

### Key Features
- Self-contained single-photon detection module
- High detection efficiency: up to 25%
- Ultra-low noise: as low as <50 Hz dark count rate
- Superb precision: <200 ps timing jitter, typ. <150 ps
- Broadband NIR detection: 900—1700 nm light
- Reliable and robust performance, with worldwide round-the-clock technical support included

### Applications
- QKD and quantum communication
- Quantum optics and computing
- Single-photon source characterisation
- Fluorescence lifetime measurements
- Deep tissue imaging
- Failure analysis of integrated circuits
- VIS, NIR and MIR spectroscopy

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**TIME CONTROLLER SERIES BUNDLE**

Take your experiment to the next level. Use the Time Controller to register single-photon pulses and control your experiment, within a combined time-tagger, pulse generator, delay generator package. All with advanced on-board logic for real-time four-fold coincidence measurements.
Specifications

**ID230 Infrared Single-Photon Detector**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wavelength range</strong></td>
<td>900 nm to 1700 nm</td>
</tr>
<tr>
<td><strong>Deadtime</strong></td>
<td>2 μs to 100 μs, in 1 μs steps</td>
</tr>
<tr>
<td><strong>Output pulses</strong></td>
<td>LVTTL, 100 ns width</td>
</tr>
<tr>
<td><strong>Optical coupling</strong></td>
<td>Optical fibre (SMF or MMF62.5)</td>
</tr>
<tr>
<td><strong>Efficiency range</strong></td>
<td>10%, 15%, 20%, 25%</td>
</tr>
<tr>
<td><strong>Timing jitter at 25% efficiency level</strong></td>
<td>Maximum 200 ps (150 ps typical)</td>
</tr>
<tr>
<td><strong>Noise performance @ efficiency level</strong></td>
<td>10% &lt; 80 Hz (as low as &lt; 50 Hz)</td>
</tr>
<tr>
<td>?</td>
<td>20% &lt; 200 Hz (as low as &lt; 100 Hz)</td>
</tr>
</tbody>
</table>

**Max. dark count rate**

**Dimensions**

60 cm x 27 cm x 25 cm

**Weight**

30 kg

**Control interface**

USB 2.0

**Operating temperature**

+10°C to +25°C, max. 60% humidity

**Power supply**

90-264 VAC, 127-327 VDC (50-60 Hz)

Max current @ 115 VAC: 5.6 A

Max. current @ 2.75 VAC: 2.75 A

Supplied Accessories:

- Optical fibre patch cable, SMF or MMF as ordered
- Optical fibre cleaner
- Region-adapted power supply cable
- USB thumb drive
- USB cable

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**Need something smaller?**

Consider the ID Qube NIR Series of single-photon detectors:

- Compact & cost-effective
- High detection efficiency (up to 35%)
- Low noise (<800 Hz dark counts)

**Only the best will do?**

Consider the ID281 Superconducting Nanowire Series:

- Ultra-high detection efficiency: up to >90%
- Ultra-low noise: as low as <1 Hz dark counts
- Superb precision, as low as <30 ps timing jitter
- Up to 16 built-in detectors