

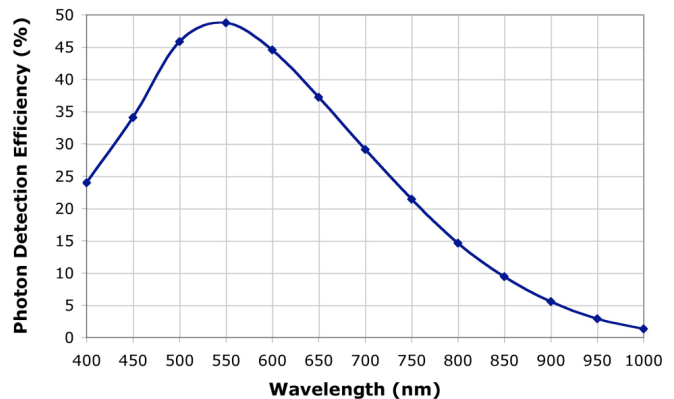
Applications

- Fluorescence detection
- Single molecule detection
- Adaptive Optics
- Quantum Cryptography
- LIDAR and LADAR
- Educational detector for photon counting application



Features

- Available sizes: 20 μ m, 50 μ m, 100 μ m
- Timing resolution < 50ps FWHM
- Detection efficiency 49% @ 550nm
- Robust and low cost
- TE cooling not required (optional)
- Low power consumption
- Easy to use



Product Information

The PDM series photon counting detector modules are all solid-state instruments. They have a photon detection efficiency of 49% at 550nm and generate a TTL output pulse per detected photon. With fast-timing option (additional circuit board installed) they provide better than 50ps FWHM photon timing resolution.

The excellent photon detection efficiency and superior timing resolution is obtained through the use of epitaxial silicon Single Photon Avalanche Diodes (SPAD) and patented integrated Active Quenching Circuits (iAQC), specifically designed and optimized for photon counting applications. Low-noise SPADs and low-power iAQCs make these modules ideal for portable equipment and all applications requiring low power consumption.

A technical contact is available for discussing with the customer how to solve the problem with MPD technology.

Ordering Information

For more information please contact:

Micro Photon Devices
Via Stradivari 4, I-39100 Bolzano
Italy

Email : sales@micro-photon-devices.com

Web : www.micro-photon-devices.com

Tel : +39-0471-051212

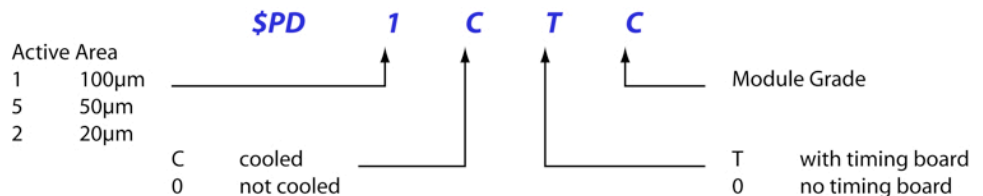
Specifications @ 25°C and 5V overvoltage

	Min	Typ	Max	Units
Photon Detection Efficiency				
@ 400nm	21	24		%
@ 550nm	45	49		
@ 650nm	34	37		
Single Photon Timing Resolution				ps (FWHM)
TTL Counting Output			250	
NIM Timing Output (additional internal circuit board required)		35	50	
After-pulsing probability	0.1		3	%
Dead Time		77		ns
Supply Voltage	unregulated DC, any value 5V ~ 12V			
TTL Output pulse rise and fall times	< 2ns on 10pF load			
Output pulse duration	20ns typical			
Gating input	5V CMOS control (0V gates detector off)			
Supply input connector	Standard 3.5mm supply socket			

PDM Modules are available in **different grades** depending on dark counts specifications.
Very low dark counts modules can be selected in order to meet customer requirements

Grade Active Area Diameter	Dark Counts (c/s) TE Cooled			Dark Counts (c/s) @ 25°C
	A	B	C	A
20µm	< 25			< 250
50µm	< 250	< 100	< 50	< 5k
100µm	< 1k	< 500	< 250	< 20k

Ordering Guide :



Package Outline :

(dimensions in mm)

