

SPAD(Single Photon Avalanche Diode)

제품 설명

Applications

- Quantum Cryptography
- Optical Time Domain Reflectometry
- Laser Range Finder
- Fundamental Studies in Quantum Physics

Features

- InGaAs/InP Avalanche Photodiode
- Designed for Single Photon Counting Applications
- Optimized for 1000 to 1600nm Wavelength
- 10MHz / 1GHz Gate Operation possible



Specifications

	Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Linear Mode(25°C)	Breakdown Voltage	V_B	$I_d = 100 \mu A$	50	70	90	V
	Capacitance	C	$M = 10, 1 \text{ MHz}$	-	-	0.3	pF
	Temperature Dependence of V_B	γ	Between -40°C and 85°C, linear approximation	-	0.1	-	V/K
Geiger Mode(-40°C)	Detection Efficiency	DE	Repetition Rate = 10 MHz, Pulse Width = 2 ns	10	-	-	%
	Dark Count Probability	DCP	at 20% DE	-	-	10^{-5}	/gate
	Afterpulse(Total)	P_{AP}		-	10	-	%
	Gate Frequency	f_{gate}		10M		1G	Hz

