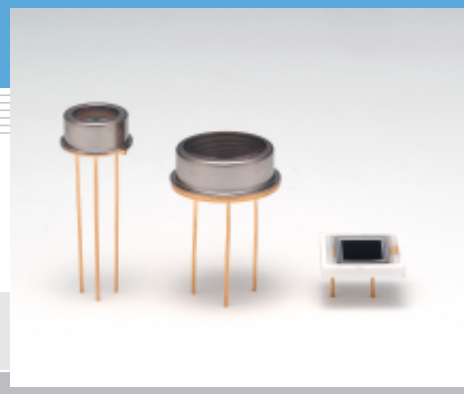




Si APD S8664 series

Short wavelength type APD

Features

- High sensitivity at visible range
- Low noise
- High gain
- Low capacitance

Applications

- Low-light-level measurement
- Analytical equipment

General ratings / Absolute maximum ratings

Type No.	Dimensional outline / Window material *1	Package	Effective *2 active area size (mm)	Effective active area (mm ²)	Absolute maximum ratings	
					Operating temperature Topr (°C)	Storage temperature Tstg (°C)
S8664-02K	①/K	TO-5	φ0.2	0.03	-20 to +60	-55 to +100
S8664-05K			φ0.5	0.19		
S8664-10K			φ1.0	0.78		
S8664-20K			φ2.0	3.14		
S8664-30K	②/K	TO-8	φ3.0	7.0		
S8664-50K			φ5.0	19.6		
S8664-55	③/E	Ceramic	5 × 5	25		-20 to +80

Electrical and optical characteristics (Typ. Ta=25 °C, unless otherwise noted)

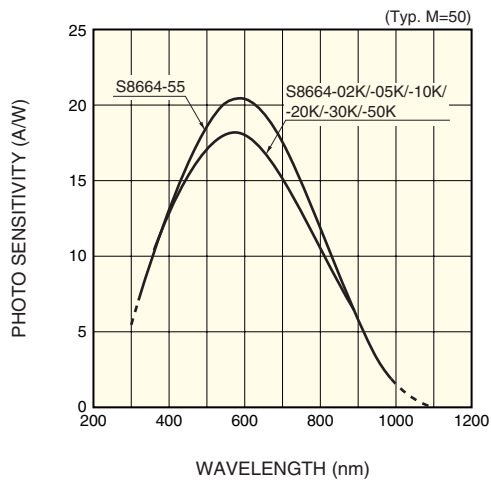
Type No.	Spectral response range λ (nm)	Peak *3 sensitivity wavelength λp (nm)	Photo sensitivity S M=1 λ=420 nm (A/W)	Quantum efficiency QE M=1 λ=420 nm (%)	Breakdown voltage VBR Id=100 μA		Temperature coefficient of VBR (V/°C)	Dark *3 current Id		Cut-off frequency fc (MHz)	Terminal *3 capacitance Ct (pF)	Excess Noise index λ=420 nm	Gain M λ=420 nm
					Typ. (V)	Max. (V)		Typ. (nA)	Max. (nA)				
S8664-02K	320 to 1000	600	0.24	70	400	500	0.78	0.1	1	700	0.8	0.2	50
S8664-05K								0.2	1.5	680	1.6		
S8664-10K								0.3	3	530	4		
S8664-20K								0.6	6	280	11		
S8664-30K								1	15	140	22		
S8664-50K								3	35	60	55		
S8664-55								5	50	40	80		

*1: K: Borosilicate glass E: Epoxy resin

*2: Area in which a typical gain can be obtained.

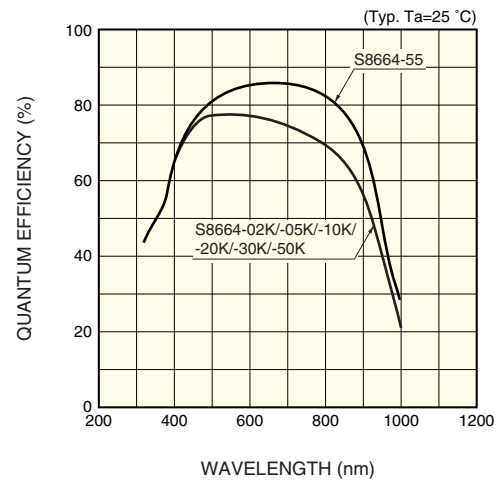
*3: Values measured at a gain listed in the characteristics table.

■ Spectral response



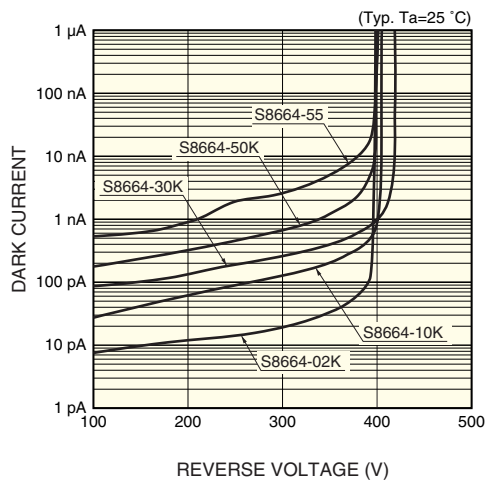
KAPDB0073EA

■ Quantum efficiency vs. wavelength



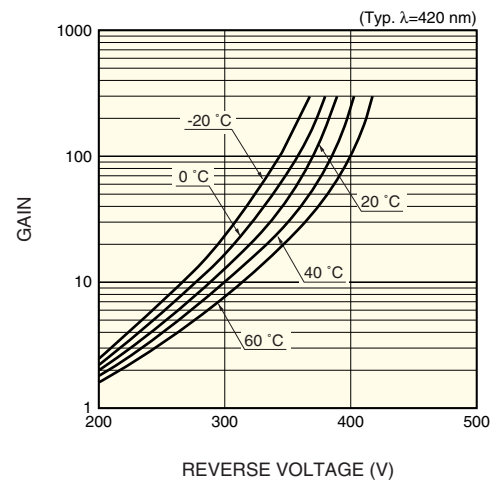
KAPDB0074EA

■ Dark current vs. reverse voltage



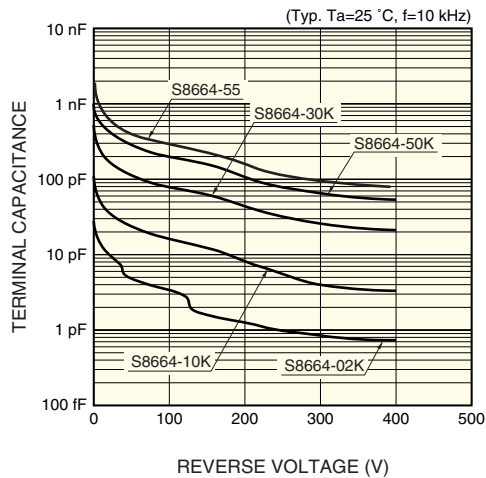
KAPDB0075EA

■ Gain vs. reverse voltage



KAPDB0076EB

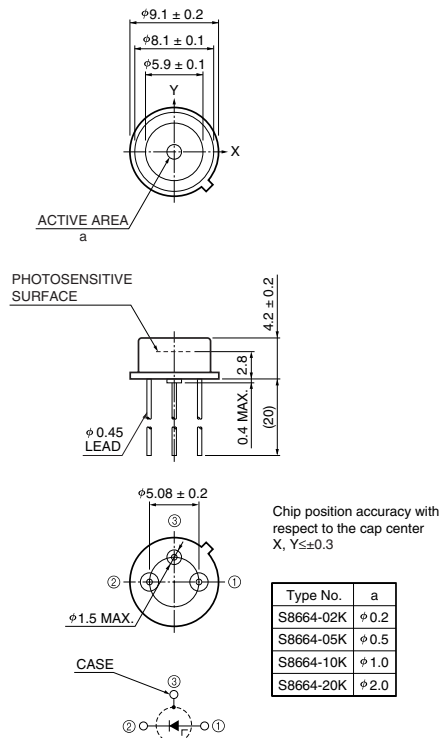
■ Terminal capacitance vs. reverse voltage



KAPDB0077EA

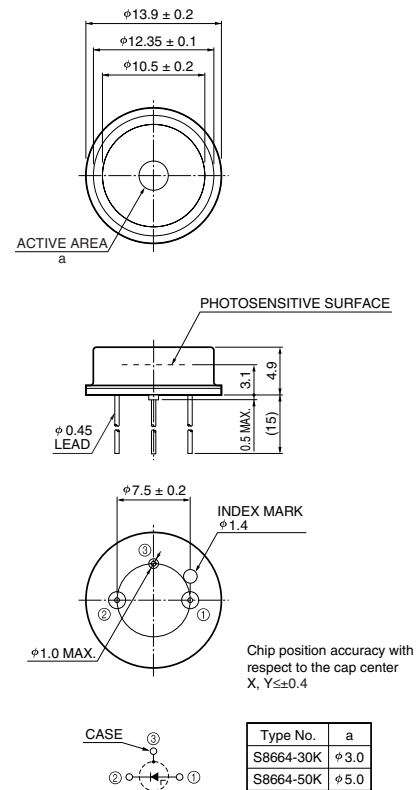
Dimensional outlines (unit: mm)

① S8664-02K/-05K/-10K/-20K



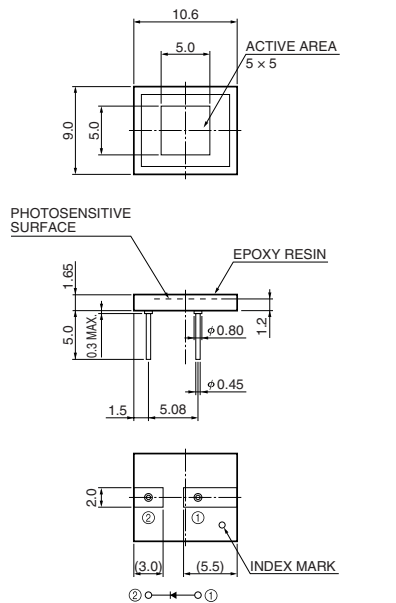
KAPDA0026EA

② S8664-30K/-50K



KAPDA0027EA

③ S8664-55



KAPDA0022EA

HAMAMATSU

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