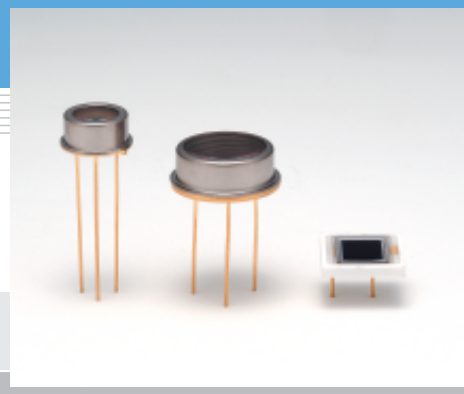


Si APD

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		-20 to +80
S8664-50K			φ5.0	19.6		
S8664-55	③/E	Ceramic	5 × 5	25		

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

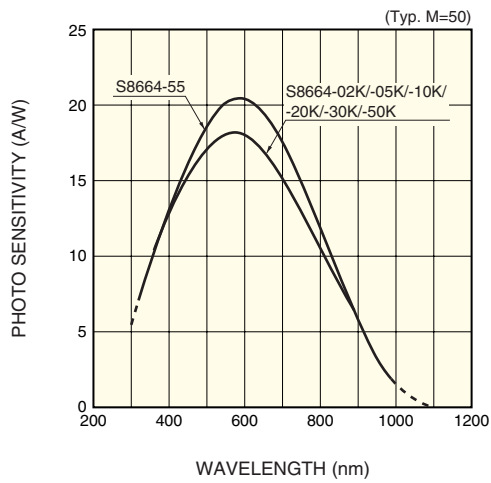
Type No.	Spectral response range λ (nm)	Peak *3 sensitivity wavelength λp (nm)	Photo sensitivity S M=1 λ=420 nm (A/W)	Quantum efficiency QE M=1 λ=420 nm (%)	Breakdown voltage VBR ID=100 μA		Temperature coefficient of VBR (V/°C)	Dark *3 current ID		Cut-off frequency fc (MHz)	Terminal *3 capacitance Ct (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.

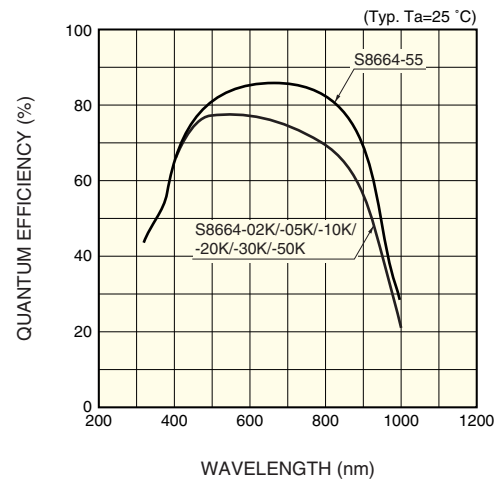
*3: Values measured at a gain listed in the characteristics table.

■ Spectral response



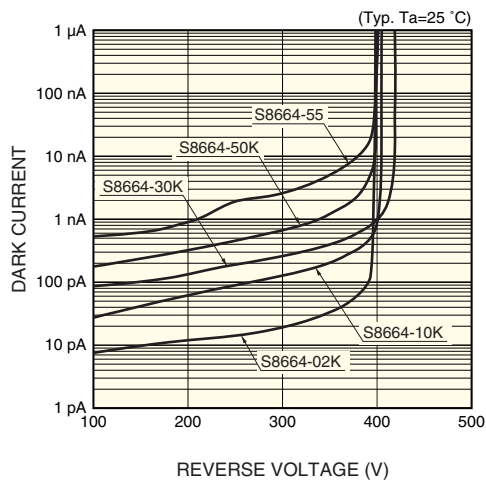
KAPDB0073EA

■ Quantum efficiency vs. wavelength



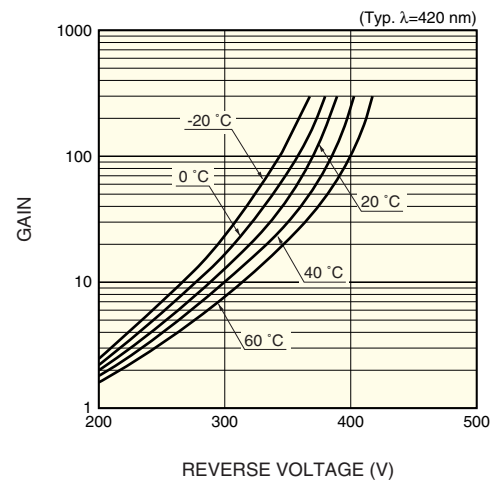
KAPDB0074EA

■ Dark current vs. reverse voltage



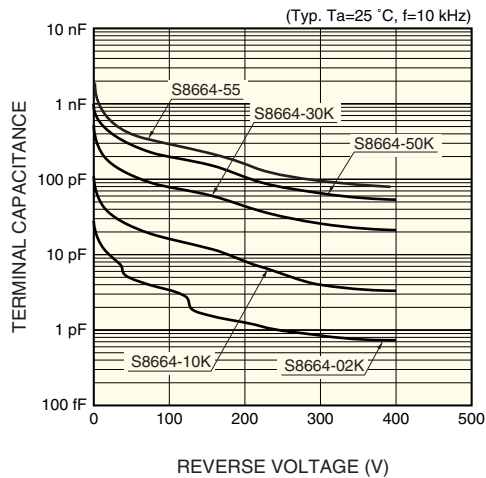
KAPDB0075EA

■ Gain vs. reverse voltage



KAPDB0076EB

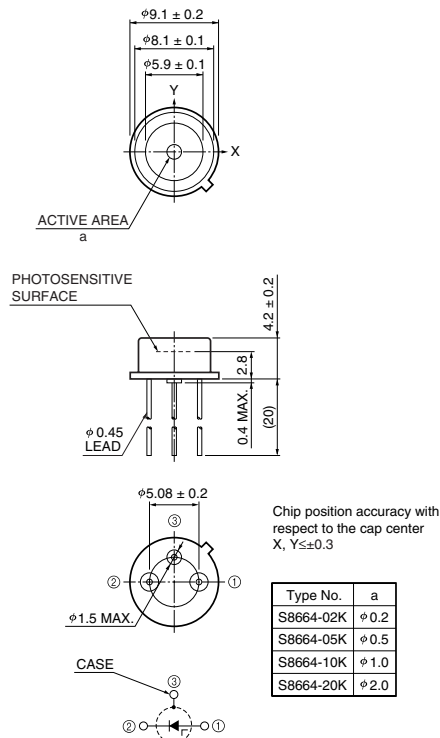
■ Terminal capacitance vs. reverse voltage



KAPDB0077EA

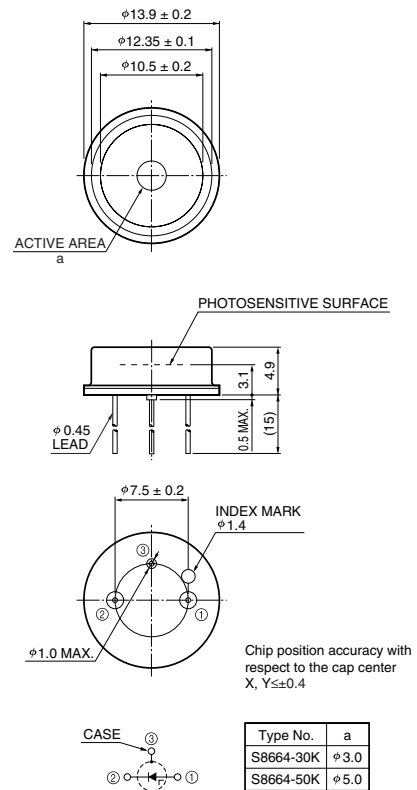
Dimensional outlines (unit: mm)

① S8664-02K/-05K/-10K/-20K



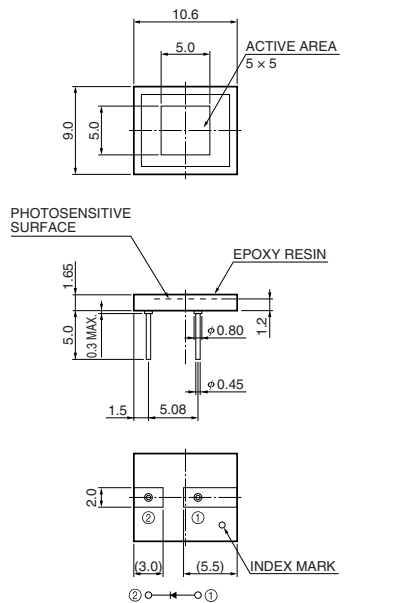
KAPDA0026EA

② S8664-30K/-50K



KAPDA0027EA

③ S8664-55



KAPDA0022EA

HAMAMATSU

HAMAMATSU PHOTONICS K.K., Solid State Division

1126-1 Ichino-cho, Hamamatsu City, 435-8558 Japan, Telephone: (81) 053-434-3311, Fax: (81) 053-434-5184, <http://www.hamamatsu.com>

U.S.A.: Hamamatsu Corporation, 360 Foothill Road, P.O.Box 6910, Bridgewater, N.J. 08807-0910, U.S.A., Telephone: (1) 908-231-0960, Fax: (1) 908-231-1218

Germany: Hamamatsu Photonics Deutschland GmbH, Arzbergerstr. 10, D-82211 Herrsching am Ammersee, Germany, Telephone: (49) 08152-3750, Fax: (49) 08152-2658

France: Hamamatsu Photonics France S.A.R.L.: 8, Rue du Saule Trapu, Parc du Moulin de Massy, 91882 Massy Cedex, France, Telephone: 33-(1) 69 53 71 00, Fax: 33-(1) 69 53 71 10

United Kingdom: Hamamatsu Photonics UK Limited, 2 Howard Court, 10 Tewin Road, Welwyn Garden City, Hertfordshire AL7 1BW, United Kingdom, Telephone: (44) 1707-294888, Fax: (44) 1707-325777

North Europe: Hamamatsu Photonics Norden AB, Smidesvägen 12, SE-171 41 Solna, Sweden, Telephone: (46) 8-509-031-00, Fax: (46) 8-509-031-01

Italy: Hamamatsu Photonics Italia S.R.L.: Strada della Moia, 1/E, 20020 Arese, (Milano), Italy, Telephone: (39) 02-935-81-733, Fax: (39) 02-935-81-741

Information furnished by HAMAMATSU is believed to be reliable. However, no responsibility is assumed for possible inaccuracies or omissions. Specifications are subject to change without notice. No patent rights are granted to any of the circuits described herein. ©2002 Hamamatsu Photonics K.K.