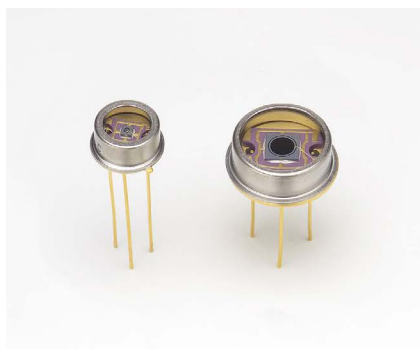


S17353 series



High sensitivity from short wavelength to 800 nm

These are APDs with improved sensitivity from short wavelength to 800 nm range. They offer high gain, high sensitivity, and low noise in the wide wavelength range. They are suitable for applications such as low-light-level measurement and analytical instrument.

Features

- **High sensitivity and low noise from short wavelength to 800 nm**

Applications

- **Low-light-level measurement**
- **Analytical instrument**

Structure / Absolute maximum ratings

Type no.	Dimensional outline/ Window material*1	Package	Effective*2 photosensitive area size (mm)	Absolute maximum ratings			
				Operating temperature*3 Topr (°C)	Storage temperature*3 Tstg (°C)	Reverse current IR max (μA)	Forward current IF max (mA)
S17353-02K	①/K	TO-5	φ0.2	-20 to +60	-55 to +100	200	10
S17353-05K			φ0.5				
S17353-10K			φ1.0				
S17353-20K			φ2.0				
S17353-30K	②/K	TO-8	φ3.0				
S17353-50K			φ5.0				

*1: K=borosilicate glass

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

*3: No dew condensation.

When there is a temperature difference between a product and the surrounding area in high humidity environments, dew condensation may occur on the product surface. Dew condensation on the product may cause deterioration in characteristics and reliability.

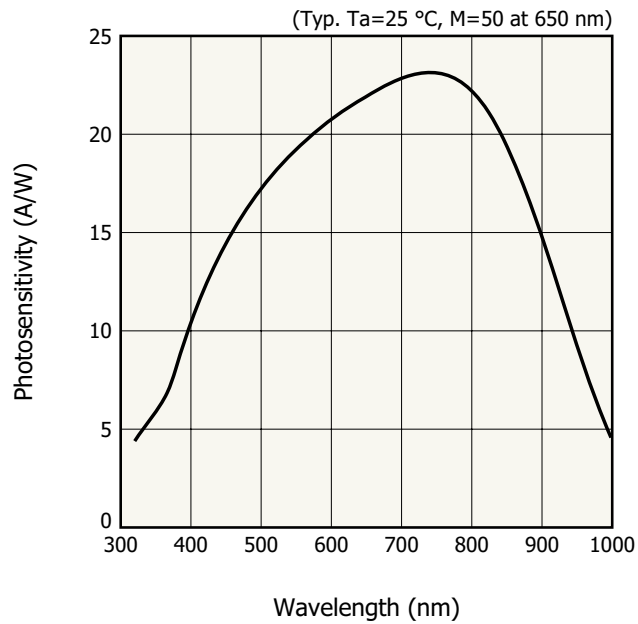
Note: Exceeding the absolute maximum ratings even momentarily may cause a drop in product quality. Always be sure to use the product within the absolute maximum ratings.

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

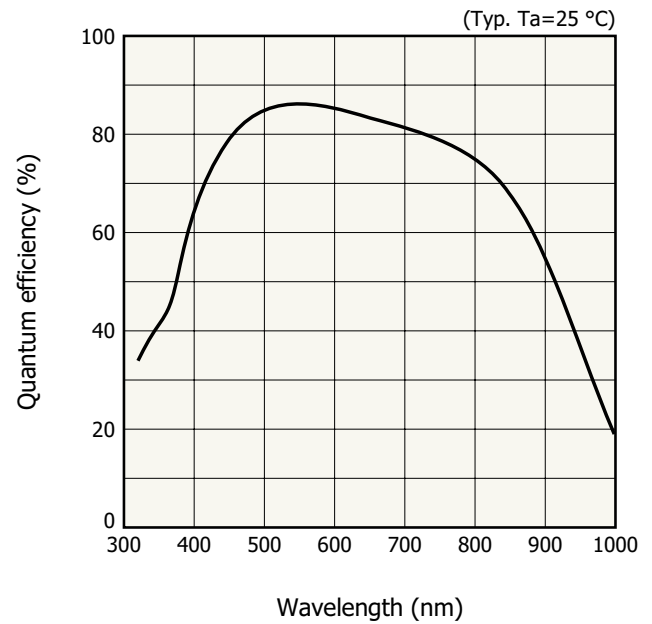
Type no.	Spectral response range λ (nm)	Peak sensitivity wavelength*4 λp (nm)	Photosensitivity S M=1 λ=650 nm (A/W)	Quantum efficiency QE M=1 λ=650 nm (%)	Breakdown voltage VBR ID=100 μA			Temp. coefficient of VBR (V/°C)	Dark current*4 ID		Cutoff frequency*4 fc RL=50 Ω (MHz)	Terminal capacitance*4 Ct (pF)	Excess noise figure*4 x λ=650 nm	Gain M λ=650 nm
					Min. (V)	Typ. (V)	Max. (V)		Typ. (nA)	Max. (nA)				
S17353-02K	320 to 1000	750	0.44	83	300	400	500	0.55	1	5	1000	1	0.28	50
S17353-05K									1.5	8	900	2.2		
S17353-10K									2	10	500	5.5		
S17353-20K									5	25	200	15		
S17353-30K									10	50	90	35		
S17353-50K									25	130	35	85		

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

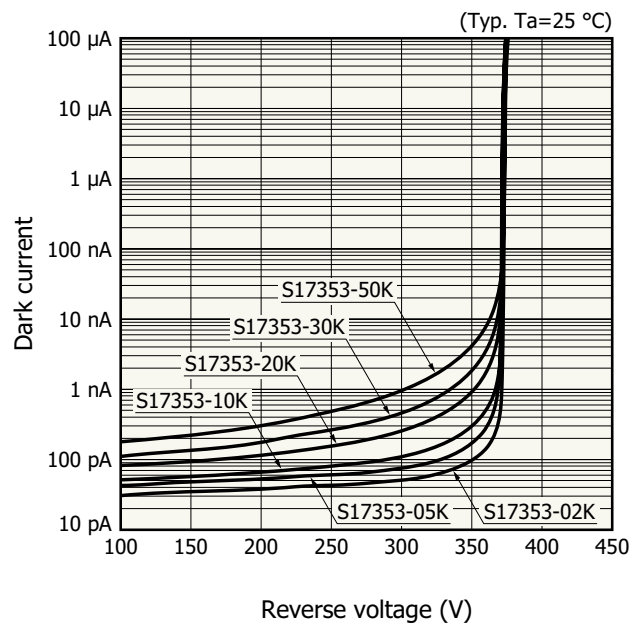
Spectral response



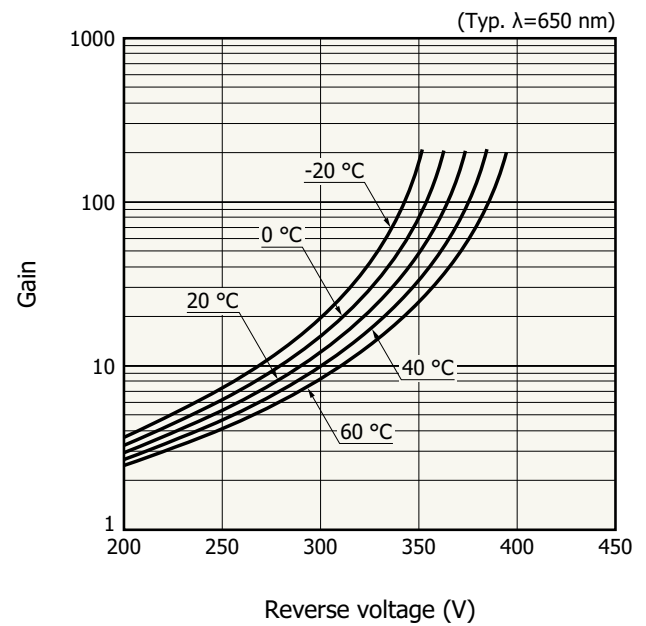
Quantum efficiency vs. wavelength



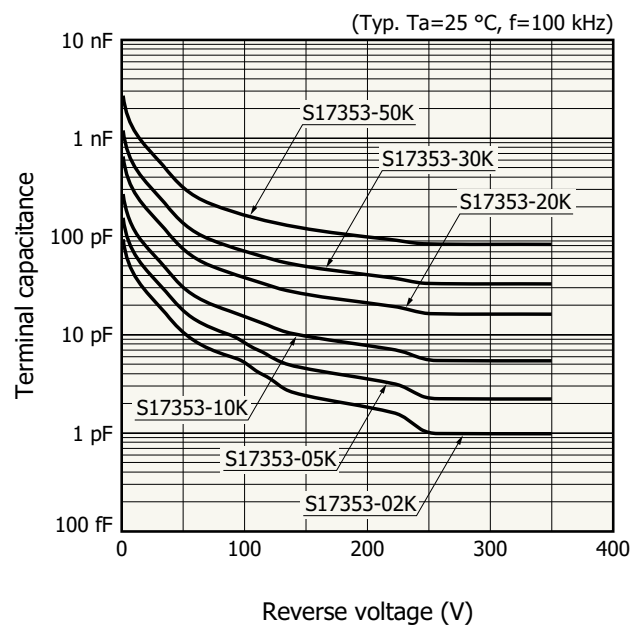
Dark current vs. reverse voltage



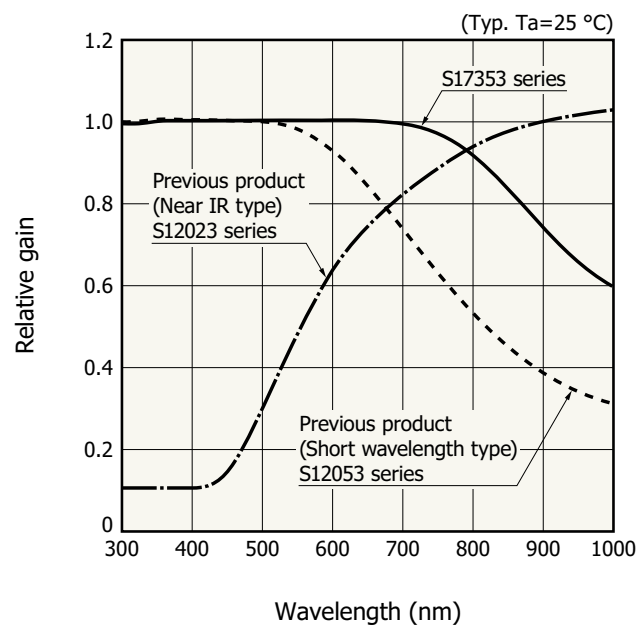
Gain vs. reverse voltage



Terminal capacitance vs. reverse voltage

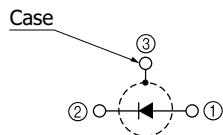
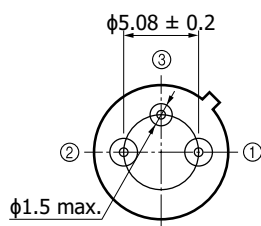
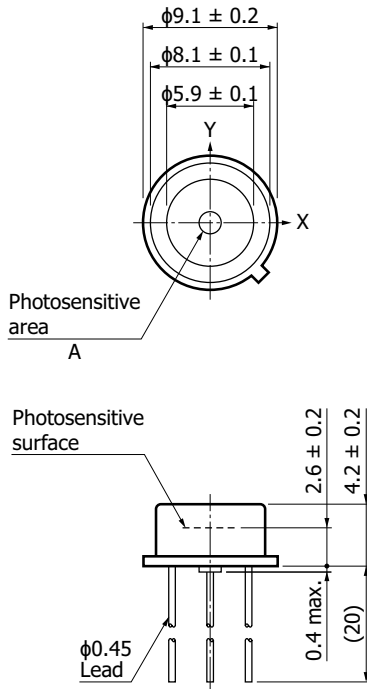


Gain wavelength dependence



Dimensional outlines (unit: mm)

① S17353-02K/-05K/-10K/-20K



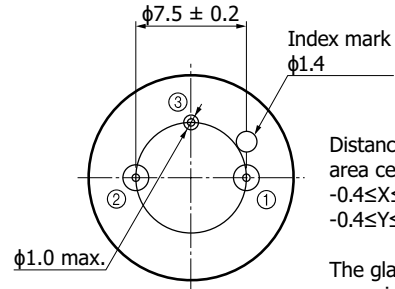
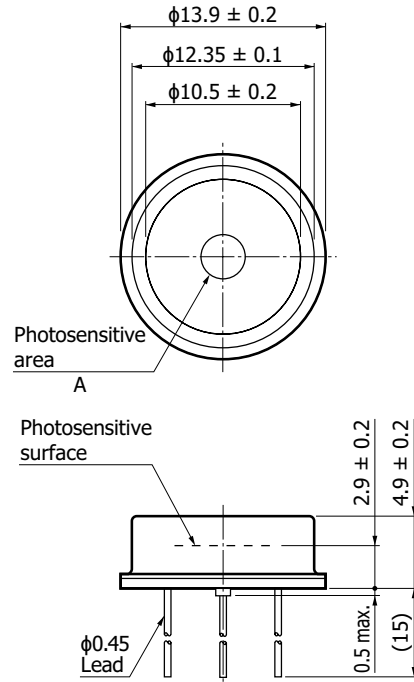
Distance from photosensitive area center to cap center
 $-0.3 \leq X \leq +0.3$
 $-0.3 \leq Y \leq +0.3$

The glass window may extend a maximum of 0.2 mm above the upper surface of the cap.

Type no.	A
S17353-02K	$\phi 0.2$
S17353-05K	$\phi 0.5$
S17353-10K	$\phi 1.0$
S17353-20K	$\phi 2.0$

KAPDA0236EA

② S17353-30K/-50K



Distance from photosensitive area center to cap center
 $-0.4 \leq X \leq +0.4$
 $-0.4 \leq Y \leq +0.4$

The glass window may extend a maximum of 0.2 mm above the upper surface of the cap.

Type no.	A
S17353-30K	$\phi 3.0$
S17353-50K	$\phi 5.0$

KAPDA0237EA

Recommended soldering conditions

Solder temperature: 260 °C (10 s or less, once)

Solder the leads at a point at least 1 mm away from the package body.

Note: When you set soldering conditions, check that problems do not occur in the product by testing out the conditions in advance.

Precautions

Long-term exposure to UV will cause product characteristics deteriorate. Avoid exposing the products to any unnecessary UV irradiation.

Related information

http://www.hamamatsu.com/sp/ssd/doc_en.html

■ Precautions

- Disclaimer
- Precautions / Metal, ceramic, plastic package products

■ Catalogs

- Technical note / Si APD

Information described in this material is current as of March 2026.

Product specifications are subject to change without prior notice due to improvements or other reasons. This document has been carefully prepared and the information contained is believed to be accurate. In rare cases, however, there may be inaccuracies such as text errors. Before using these products, always contact us for the delivery specification sheet to check the latest specifications.

The product warranty is valid for one year after delivery and is limited to product repair or replacement for defects discovered and reported to us within that one year period. However, even if within the warranty period we accept absolutely no liability for any loss caused by natural disasters or improper product use. Copying or reprinting the contents described in this material in whole or in part is prohibited without our prior permission.