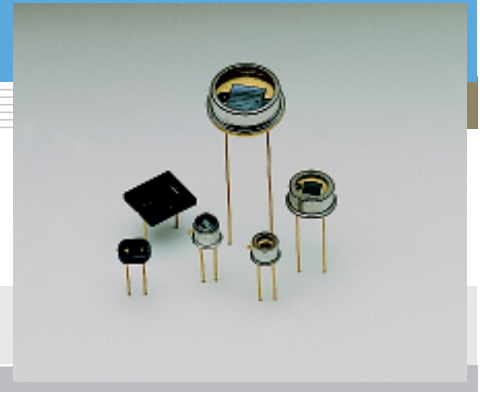


# GaAsP photodiode

## Diffusion type

### Red sensitivity extended type



#### Features

- Low dark current
- High stability
- Red sensitivity extended type

#### Applications

- Analytical instruments
- Color identification

#### ■ General ratings / Absolute maximum ratings

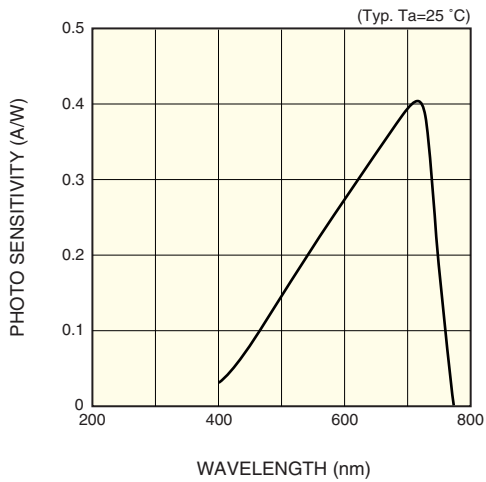
Type No.	Dimensional outline/ Window material *	Package	Active area size (mm)	Effective active area (mm <sup>2</sup> )	Absolute maximum ratings		
					Reverse voltage V <sub>R</sub> Max. (V)	Operating temperature T <sub>opr</sub> (°C)	Storage temperature T <sub>stg</sub> (°C)
G1735	①/K	TO-18	1.3 × 1.3	1.66	5	-30 to +80	-40 to +85
G1736	②/K	TO-5	2.7 × 2.7	7.26			
G1737	③/K	TO-8	5.6 × 5.6	29.3			
G1738	④/R	Ceramic	1.3 × 1.3	1.66			
G1740	⑤/R	Ceramic	5.6 × 5.6	29.3			
G3297	⑥/L	TO-18	1.3 × 1.3	1.66			

#### ■ Electrical and optical characteristics (Typ. T<sub>a</sub>=25 °C, unless otherwise noted)

Type No.	Spectral response range λ (nm)	Peak sensitivity wavelength λ <sub>p</sub> (nm)	Photo sensitivity S (A/W)			Short circuit current I <sub>sc</sub> 100 k		Dark current I <sub>d</sub> Max.		Temp. coefficient of I <sub>d</sub> T <sub>CID</sub> (times/°C)	Rise time t <sub>r</sub> V <sub>R</sub> =0 V R <sub>L</sub> =1 kΩ (μs)	Terminal capacitance C <sub>t</sub> V <sub>R</sub> =0 V f=10 kHz (pF)	Shunt resistance R <sub>sh</sub> V <sub>R</sub> =10 mV		NEP (W/Hz <sup>1/2</sup> )
			λ <sub>p</sub>	GaP LED 560 nm	He-Ne laser 633 nm	Min. (μA)	Typ. (μA)	V <sub>R</sub> =10 mV (pA)	V <sub>R</sub> =1 V (pA)				Min. (GΩ)	Typ. (GΩ)	
G1735	400 to 760	710	0.4	0.22	0.29	0.2	0.25	2	20	1.07	0.5	250	5	25	2.0 × 10 <sup>-15</sup>
G1736						0.8	1.1	5	50				2	15	3.2 × 10 <sup>-15</sup>
G1737						4	5	10	100				1	5	4.5 × 10 <sup>-15</sup>
G1738						0.2	0.25	2	20				5	25	2.0 × 10 <sup>-15</sup>
G1740						4	5	10	100				1	5	4.5 × 10 <sup>-15</sup>
G3297						1.5	1.8	2	20				5	25	2.0 × 10 <sup>-15</sup>

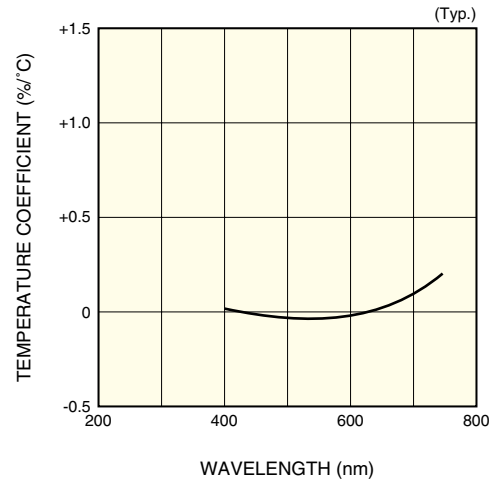
\* Window material K: borosilicate glass, L: lens type borosilicate glass, R: resin coating

## Spectral response



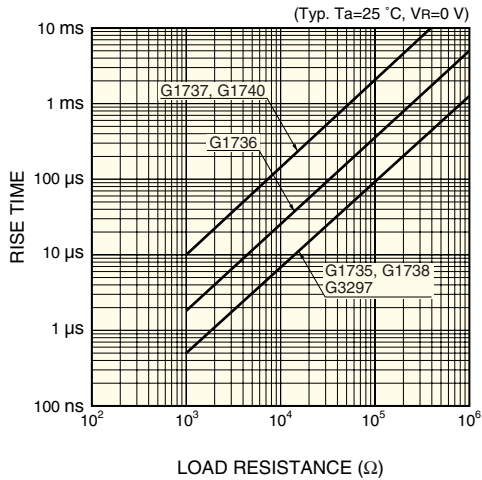
KGPD80024EA

## Photo sensitivity temperature characteristic



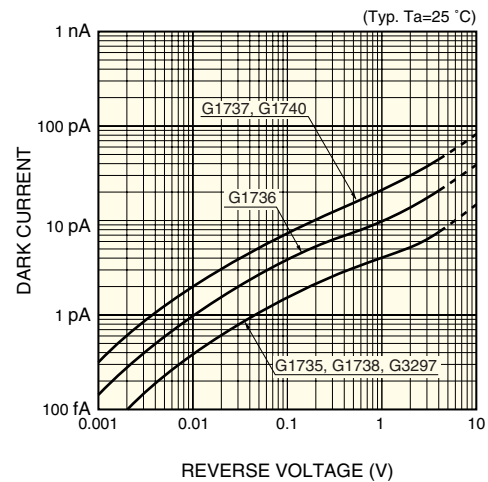
KGPD80025EA

## Rise time vs. load resistance



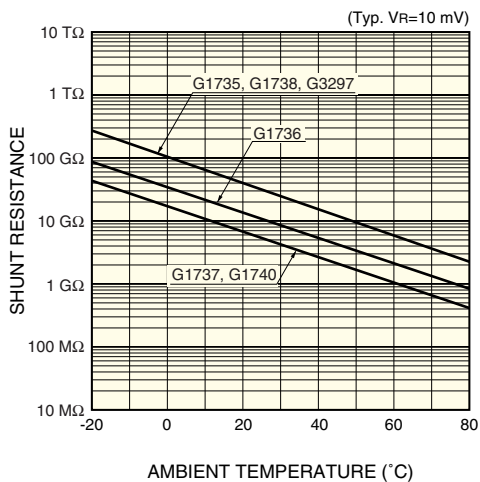
KGPD80026EA

## Dark current vs. reverse voltage



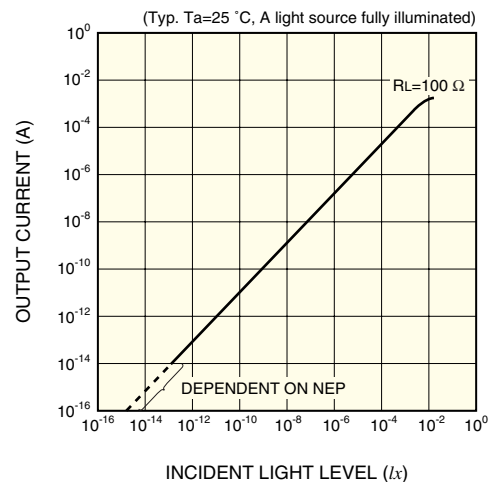
KGPD80027EA

## Shunt resistance vs. ambient temperature



KGPD80028EA

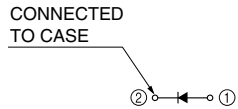
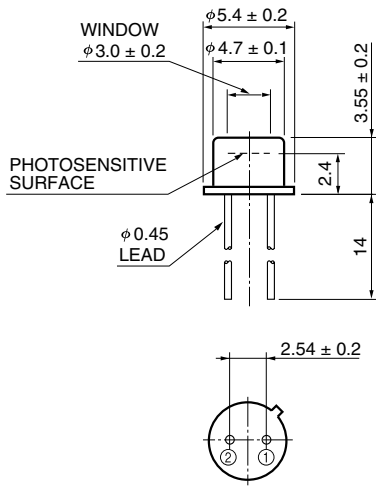
## Short circuit current linearity



KGPD80008EA

## Dimensional outlines (unit: mm)

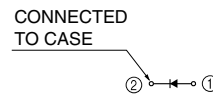
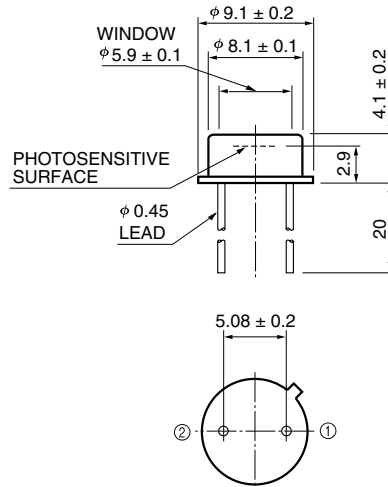
① G1735



Borosilicate glass window may extend a maximum of 0.1 mm beyond the upper surface of the cap.

KGPD A0012EA

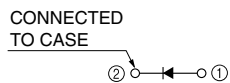
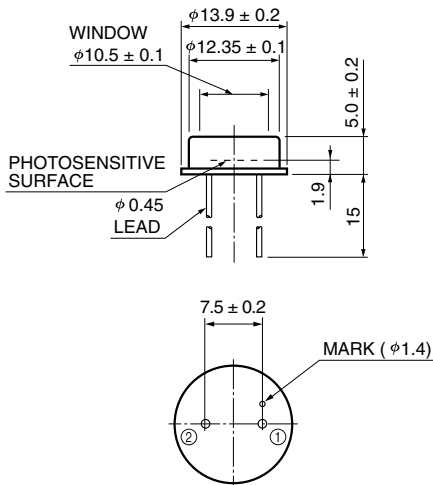
② G1736



Borosilicate glass window may extend a maximum of 0.2 mm beyond the upper surface of the cap.

KGPD A0013EA

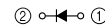
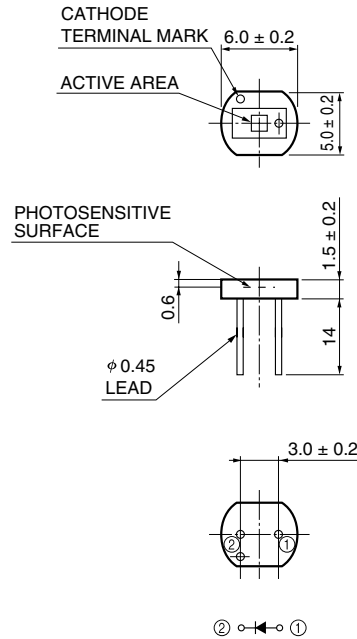
③ G1737



Borosilicate glass window may extend a maximum of 0.2 mm beyond the upper surface of the cap.

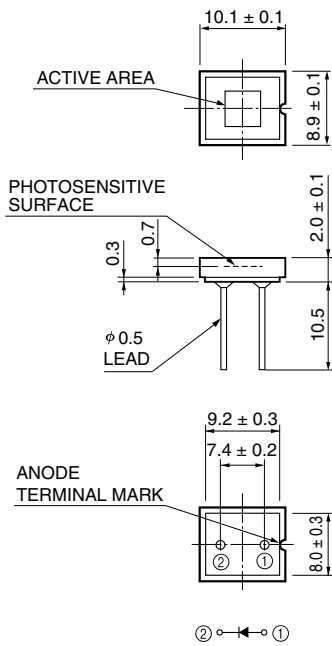
KGPD A0014EA

④ G1738



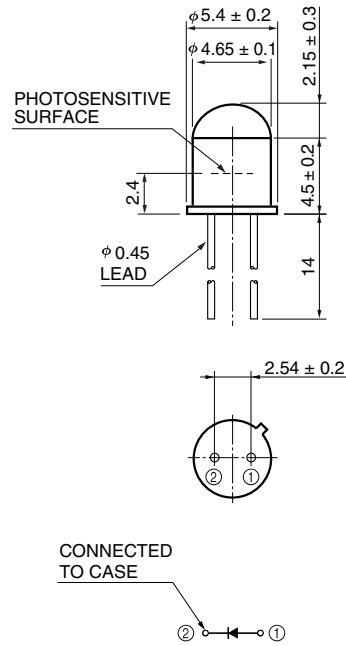
KGPD A0002EA

## ⑤ G1740



KGPD0010EA

## ⑥ G3297



KGPD0009EA