

GaAsP photodiodes

G5645

G5842

G6262

Diffusion type photodiodes with sensitivity in the short wavelength regions (less affected by 2nd order light)

Features

- Low dark current
- Narrow spectral response range

Applications

- Analytical instruments
- UV detection

General ratings/Absolute maximum ratings

Type No.	Dimensional outline/ Window material	Package	Active area size (mm)	Effective active area (mm ²)	Absolute maximum ratings		
					Reverse voltage V _R Max. (V)	Operating temperature T _{opr} (°C)	Storage temperature T _{stg} (°C)
G5645	①/K *	TO-18	0.8 × 0.8	0.58	5	-30 to +80	-40 to +85
G5842	②	Plastic					
G6262	②	Plastic					

* Borosilicate glass

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

Type No.	Spectral response range λ	Peak sensitivity wavelength λ_p	Photo sensitivity S (A/W)		Short circuit current I _{sc} 1000 lx		Dark current I _D V _R =5 V Max.	Temp. coefficient of I _D T _{CID}	Rise time t _f V _R =0 V R _L =1 kΩ	Terminal capacitance C _t V _R =0 V f=10 kHz	Shunt resistance R _{sh} V _R =10 mV		NEP
			λ_p	GaP LED 560 nm	Min. (nA)	Typ. (nA)					Min. (GΩ)	Typ. (GΩ)	
	(nm)	(nm)			(nA)	(nA)	(pA)	(times/°C)	(μs)	(pF)	(GΩ)	(GΩ)	
G5645	300 to 580	470	0.28	0.05	60	90	50	1.07	3	80	10	80	2.3 × 10 ⁻¹⁵
G5842	260 to 400	370	0.06	-	-	2							7.6 × 10 ⁻¹⁵
G6262	280 to 580	470	0.2	0.05	45	65							2.3 × 10 ⁻¹⁵

Spectral response

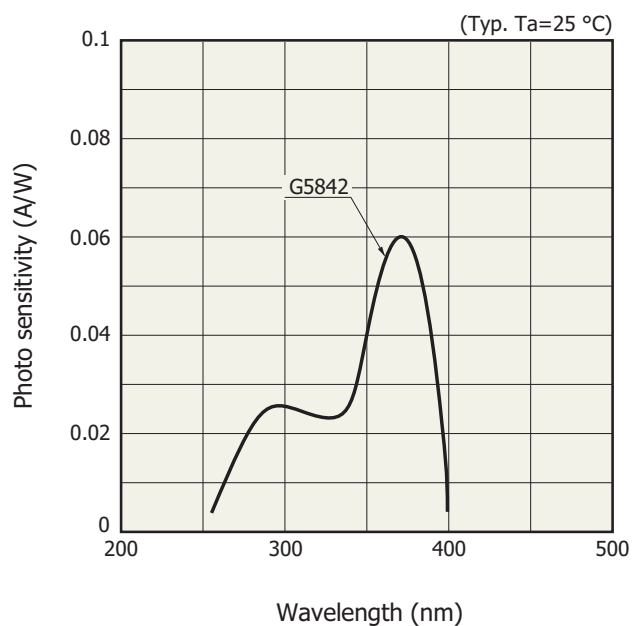
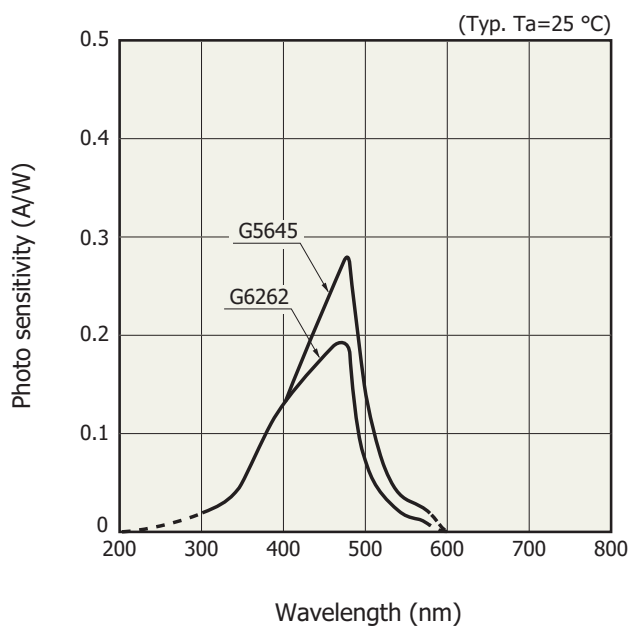
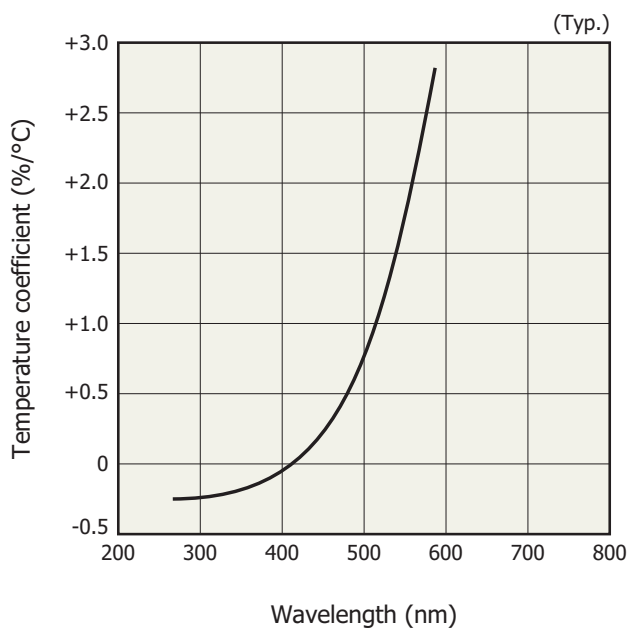
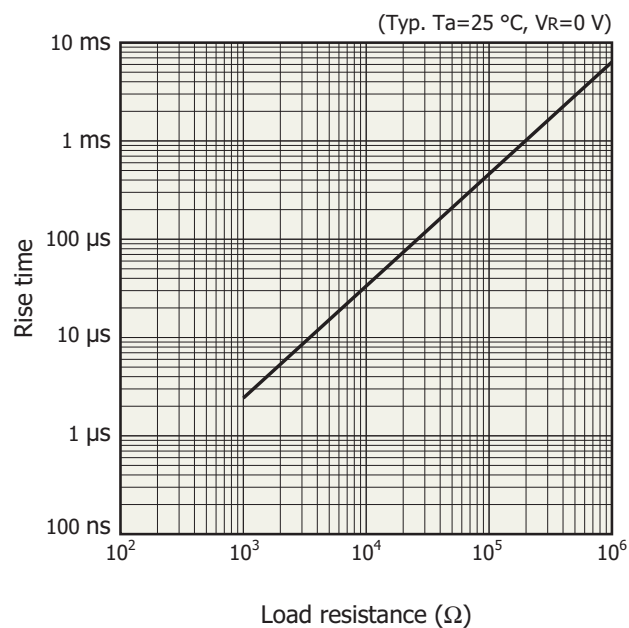


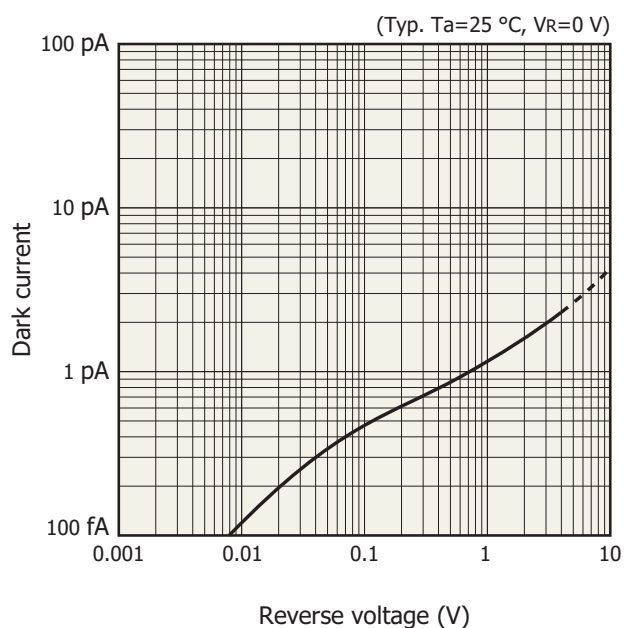
Photo sensitivity temperature characteristic



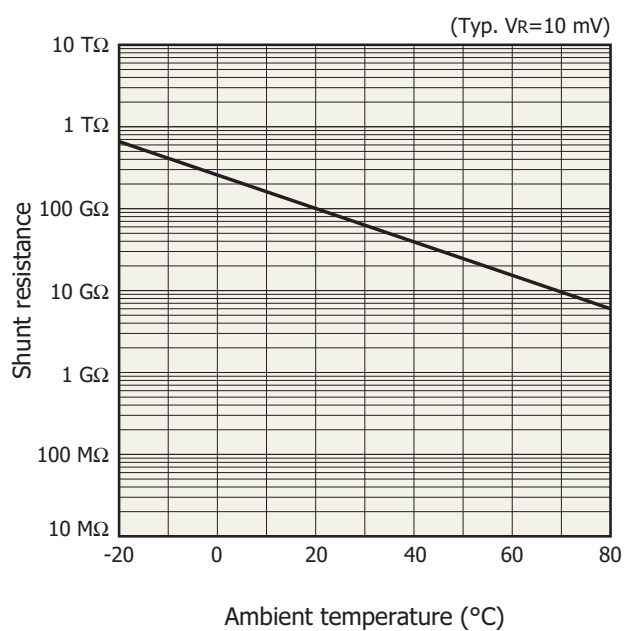
Rise time vs. load resistance



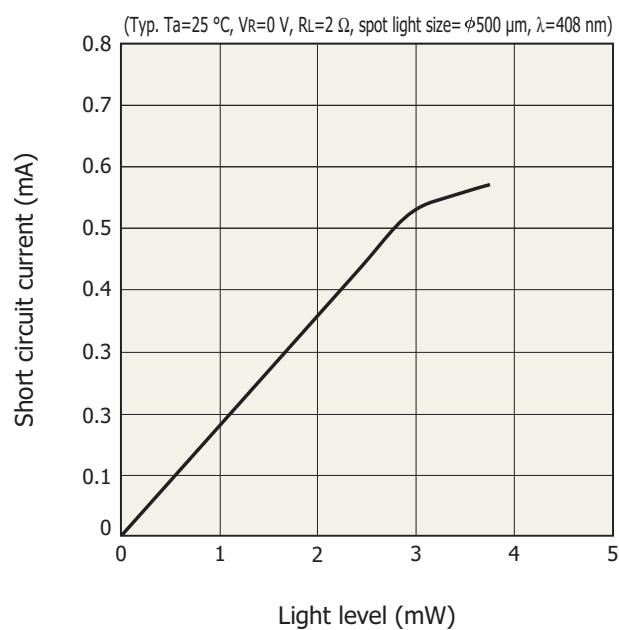
Dark current vs. reverse voltage



Shunt resistance vs. ambient temperature

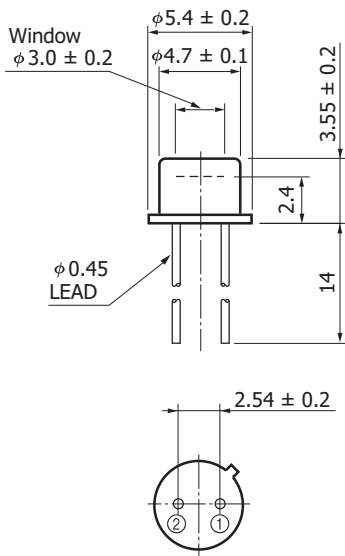


Short circuit current linearity (G5645, G6262)



Dimensional outlines (unit: mm)

① G5645



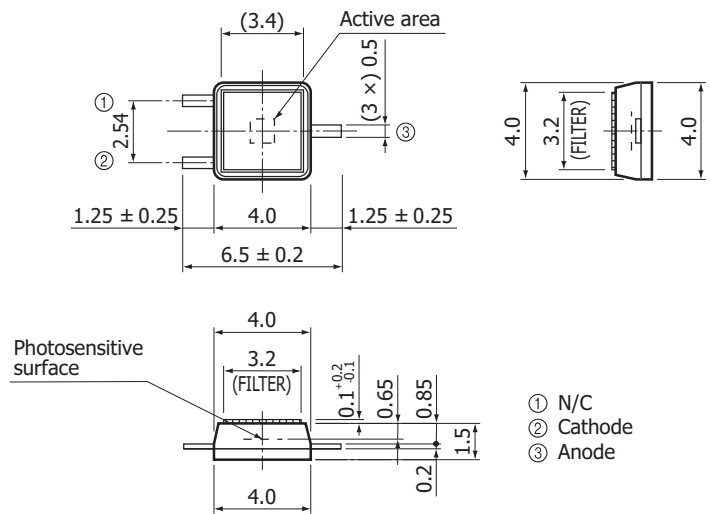
Connected
to case



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

KGPD0012EA

② G5842, G6262



KGPD0004EA

Information described in this material is current as of April, 2011. Product specifications are subject to change without prior notice due to improvements or other reasons. Before assembly into final products, please contact us for the delivery specification sheet to check the latest information.

Type numbers of products listed in the delivery specification sheets or supplied as samples may have a suffix "(X)" which means preliminary specifications or a suffix "(Z)" which means developmental 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.

HAMAMATSU

www.hamamatsu.com

HAMAMATSU PHOTONICS K.K., Solid State Division

1126-1 Ichino-cho, Higashi-ku, Hamamatsu City, 435-8558 Japan, Telephone: (81) 53-434-3311, Fax: (81) 53-434-5184

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) 8152-375-0, Fax: (49) 8152-265-8

France: Hamamatsu Photonics France S.A.R.L.: 19, Rue du Saule Traipu, 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 int. 6, 20020 Arese, (Milano), Italy, Telephone: (39) 02-935-81-733, Fax: (39) 02-935-81-741