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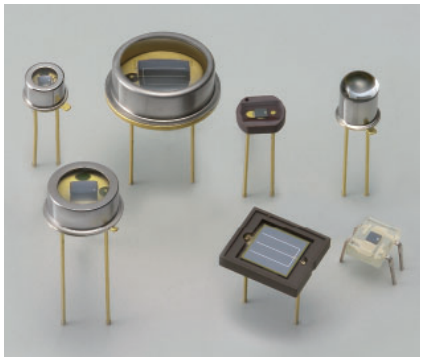
GaAsP photodiode

Diffusion type



Photodiode for visible light detection

Features

- Low dark current
- High stability

Applications

- Analytical instrument
- Color identification

Structure / Absolute maximum ratings

Type no.	Dimensional outline/ Window material*	Package	Photosensitive area size (mm)	Effective photosensitive area (mm^2)	Absolute maximum ratings		
					Reverse voltage V_R max (V)	Operating temperature Topr (°C)	Storage temperature Tstg (°C)
G1115	①/K	TO-18	1.3 × 1.3	1.66	5	-30 to +80	-40 to +85
G1116	②/K	TO-5	2.7 × 2.7	7.26			
G1117	③/K	TO-8	5.6 × 5.6	29.3			
G1118	④/R	Ceramic	1.3 × 1.3	1.66			
G1120	⑤/R	Ceramic	5.6 × 5.6	29.3			
G3067	⑥/L	TO-18	1.3 × 1.3	1.66			
G2711-01	⑦/R	Plastic	1.3 × 1.3	1.66			

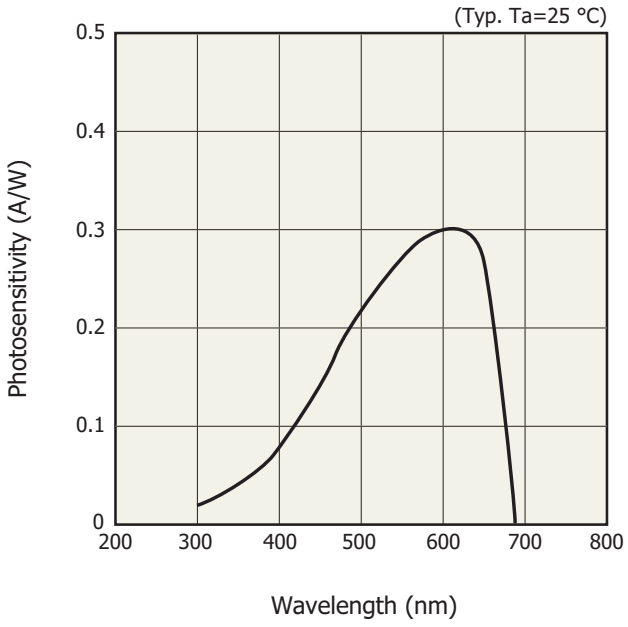
Note: Exceeding the absolute maximum ratings even momentarily may cause a drop in product quality. Always be sure to use the product within the absolute maximum ratings.

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

Type no.	Spectral response range λ (nm)	Peak sensitivity wavelength λp (nm)	Photosensitivity S (A/W)			Short circuit current Isc 100 lx		Dark current I_D max.		Temp. coefficient of I_D T_{CID} (times/°C)	Rise time tr V_R=0 V R_L=1 kΩ (μs)	Terminal capacitance Ct V_R=0 V f=10 kHz (pF)	Shunt resistance Rsh V_R=10 mV		Noise equivalent power NEP (W/$Hz^{1/2}$)
			λp	GaP LED 560 nm	He-Ne laser 633 nm	Min. (μA)	Typ. (μA)	V_R=10 mV (pA)	V_R=1 V (pA)				Min. (GΩ)	Typ. (GΩ)	
G1115	300 to 680	640	0.3	0.29	0.29	0.12	0.15	1	10	1.07	1	300	10	80	1.5×10^{-15}
G1116						0.45	0.6	2.5	25		4	1400	4	30	2.5×10^{-15}
G1117						2	2.5	5	50		15	6000	2	15	3.5×10^{-15}
G1118						0.12	0.15	1	10		1	300	10	80	1.5×10^{-15}
G1120						2	2.5	5	50		15	6000	2	15	3.5×10^{-15}
G3067						0.75	0.95	1	10		1	300	10	80	1.5×10^{-15}
G2711-01						0.15	0.18	1	10		1	300	10	80	1.5×10^{-15}

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

Spectral response



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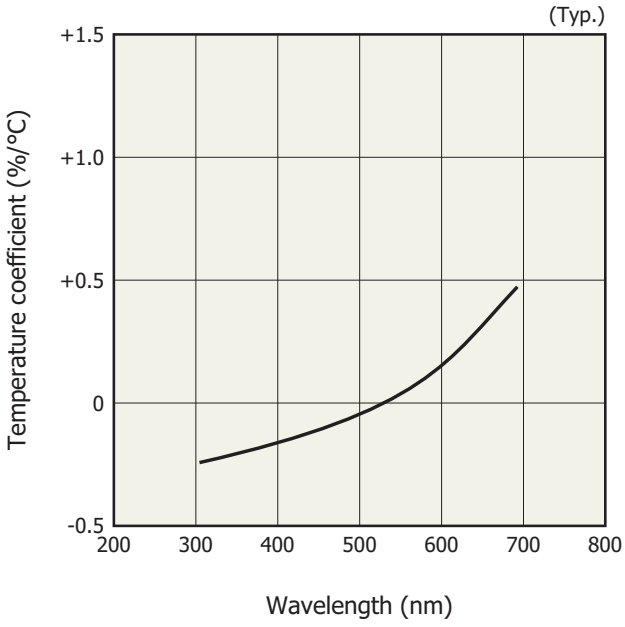
Photosensitivity temperature characteristic



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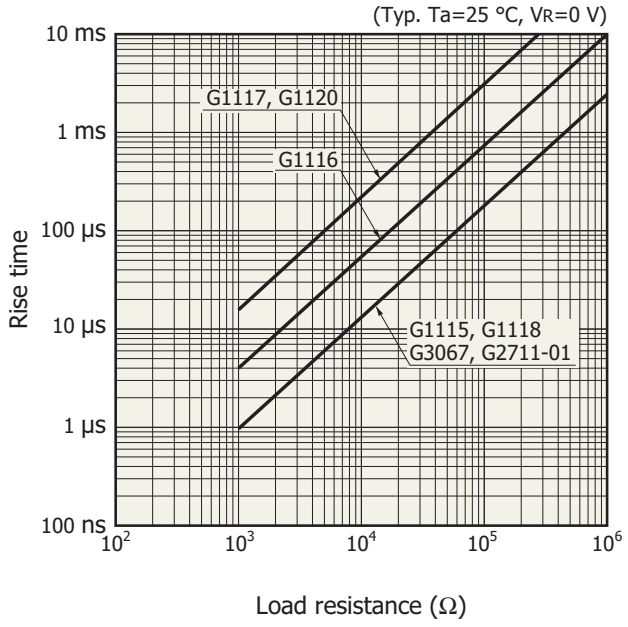
Rise time vs. load resistance



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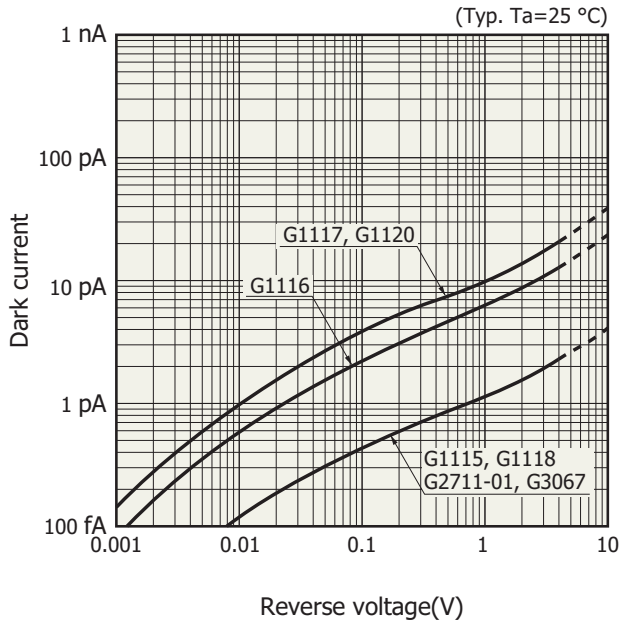
Dark current vs. reverse voltage



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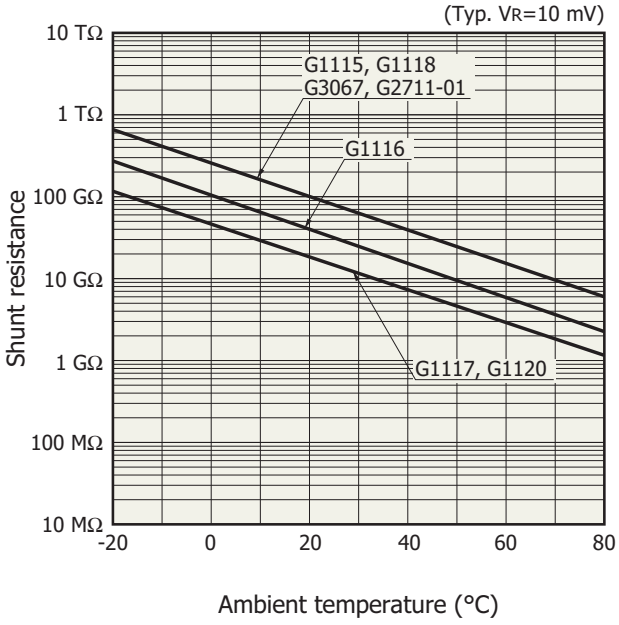
Shunt resistance vs. ambient temperature



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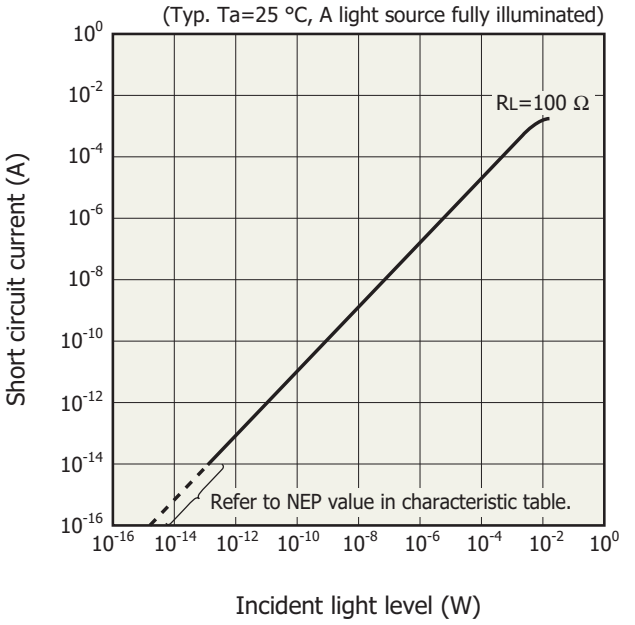
Short circuit current linearity



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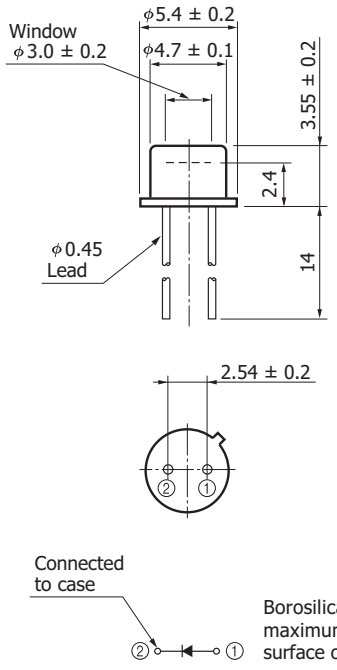
Dimensional outline (unit: mm)

① G1115



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

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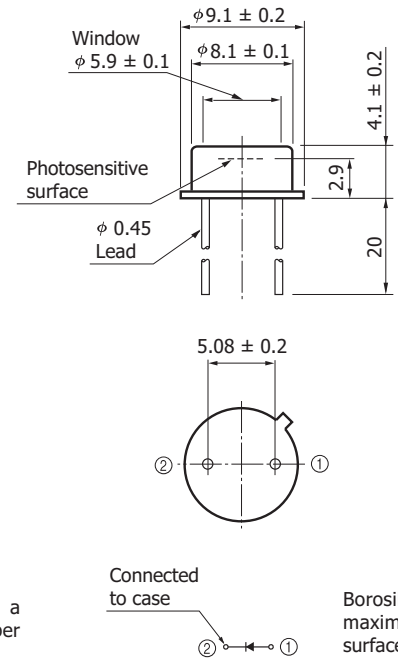
② G1116



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

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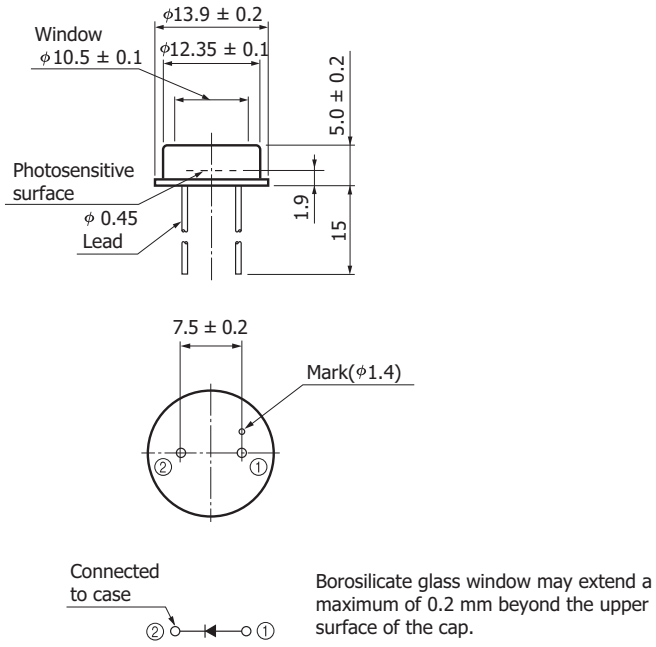
③ G1117



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

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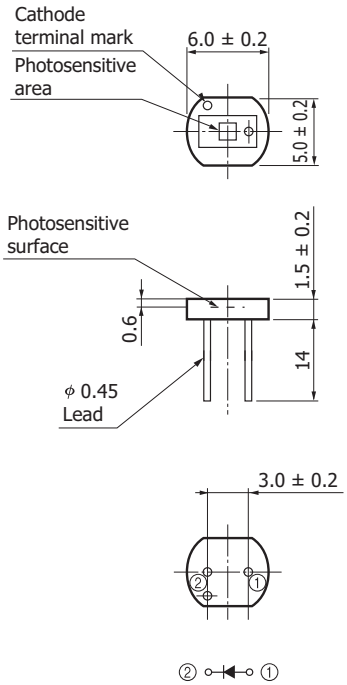
④ G1118



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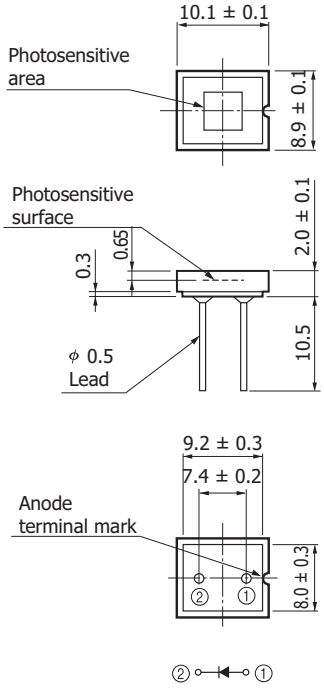
⑤ G1120



Coating resin may extend a maximum of 0.1 mm beyond the upper surface of the package.

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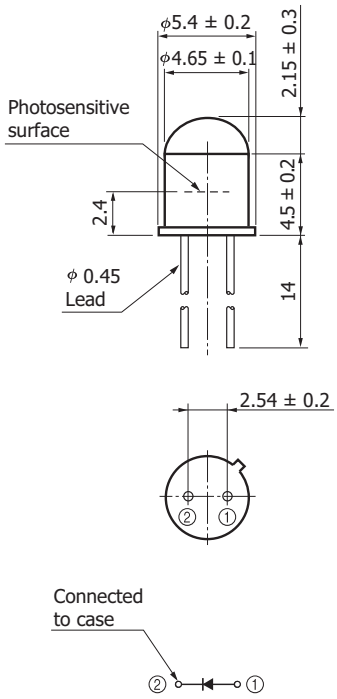
⑥ G3067



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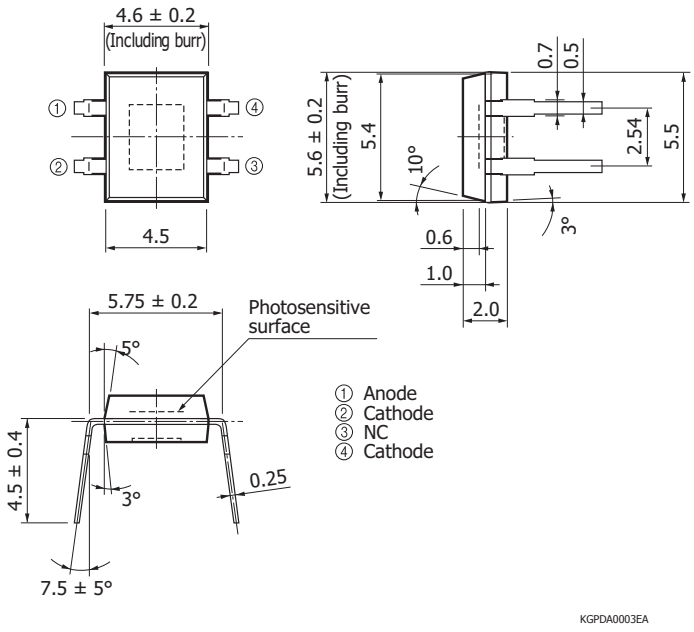
⑦ G2711-01



Information described in this material is current as of May, 2012.
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.

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.

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