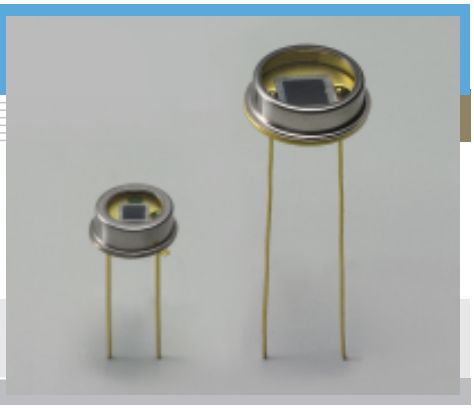
GaAsP photodiode
G1746, G1747

Schottky type with extended red sensitivity



Features

- Low dark current
- Extended red sensitivity
- High UV sensitivity

Applications

- Analytical instrument
- Color identification
- 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 Topr (°C)	Storage temperature Tstg (°C)
G1746	①/Q	TO-5	2.3 × 2.3	5.2	5	-10 to +60	-20 to +70
G1747	②/Q	TO-8	4.6 × 4.6	21			

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

Type No.	Spectral response range λ (nm)	Peak sensitivity wavelength λp (nm)	Photo sensitivity 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		NEP (W/$Hz^{1/2}$)
			λp	Hg line 254 nm	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)	
G1746	190 to 760	710	0.22	0.02	0.18	0.2	0.5	0.65	10	100	1.07	3	1600	1	8	6.5×10^{-15}
G1747							1.8	2.4	20	200		12	6000	0.5	2.5	1.2×10^{-14}

* Window material Q: quartz glass

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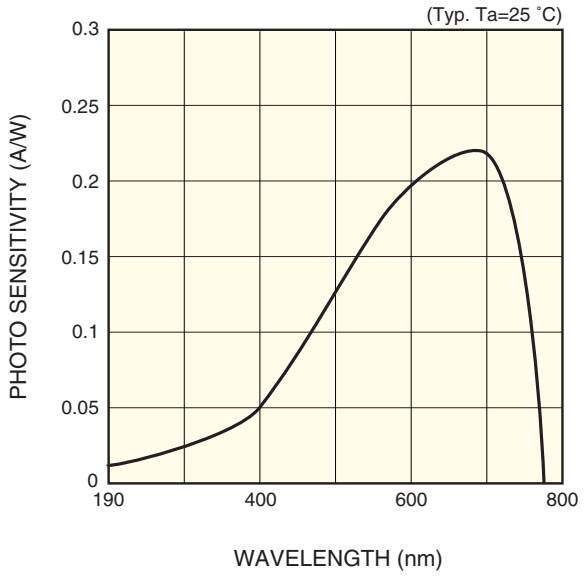
■ Spectral response



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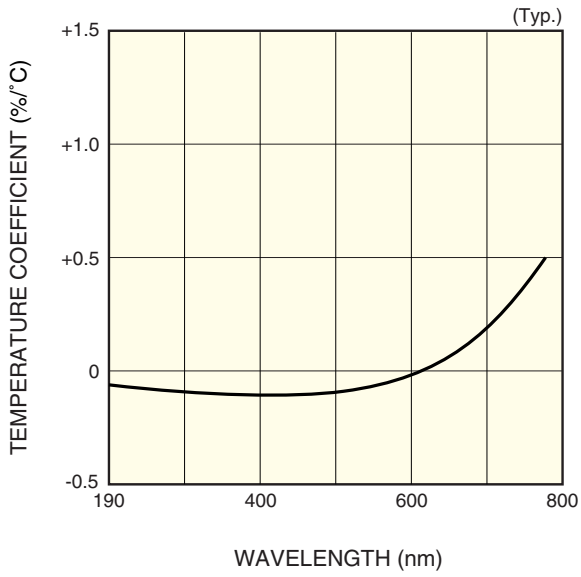
■ Photo sensitivity temperature characteristic



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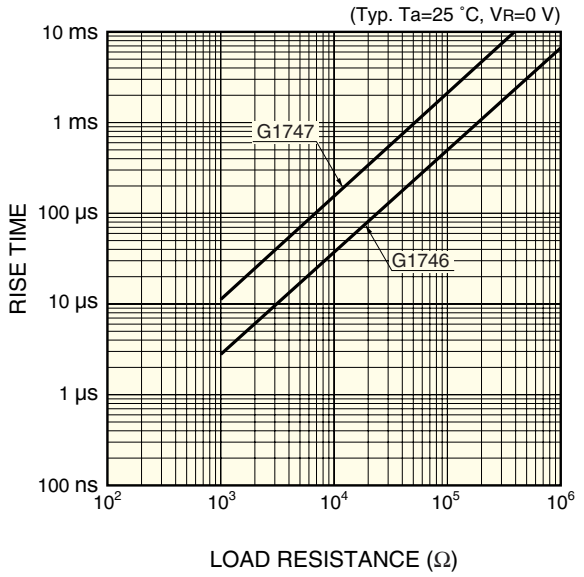
■ Rise time vs. load resistance



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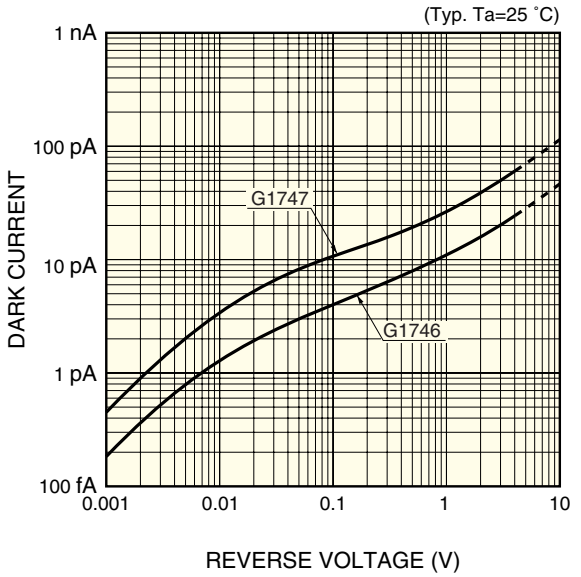
■ Dark current vs. reverse voltage



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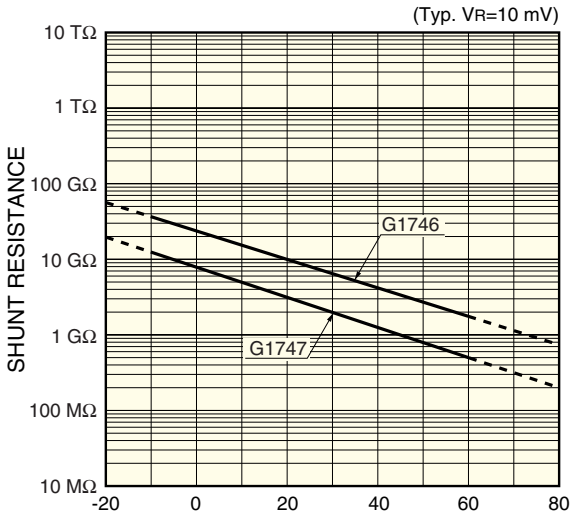
■ Shunt resistance vs. ambient temperature



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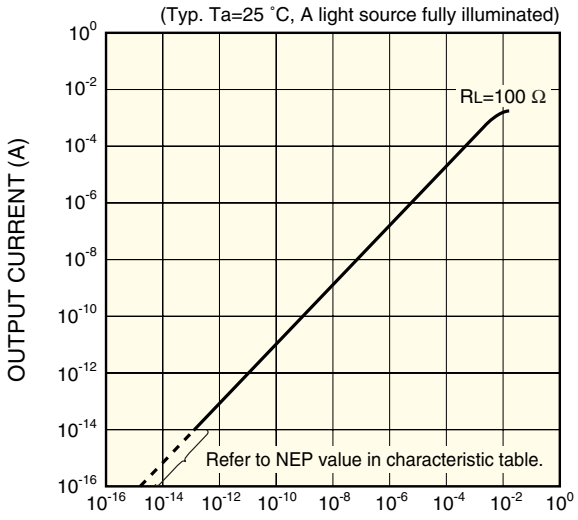
■ Short circuit current linearity



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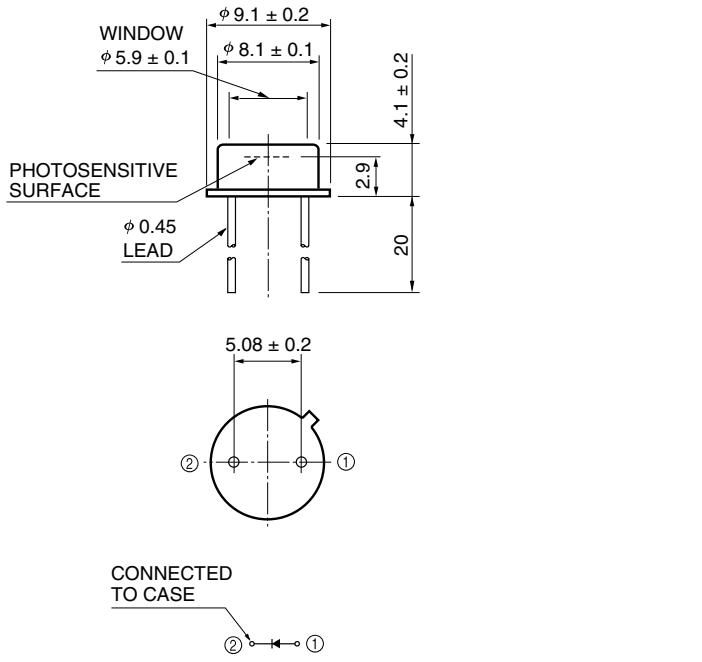
■ Dimensional outlines (unit: mm)

① G1746



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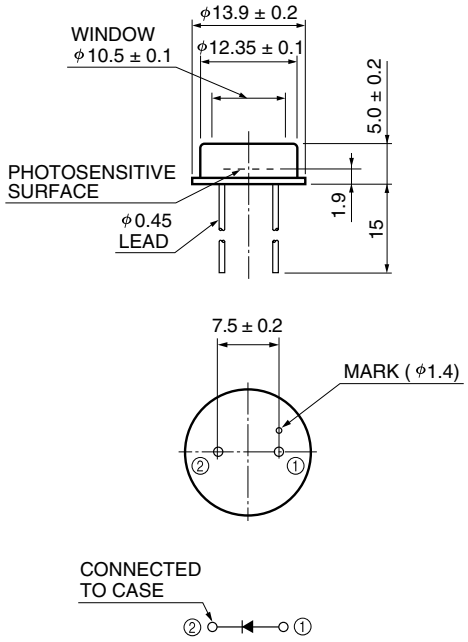
② G1747



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