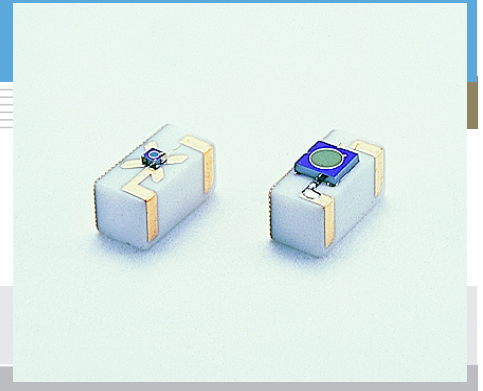


InGaAs PIN photodiode G6742 series

Surface-mount type



Features

- Small chip carrier package
- High reliability
- Low price

Applications

- Laser diode monitors

General ratings

Parameter	G6742-003	G6742-01	Unit
Package	Ceramic base		-
Active area	φ0.3	φ1.0	mm

Absolute maximum ratings

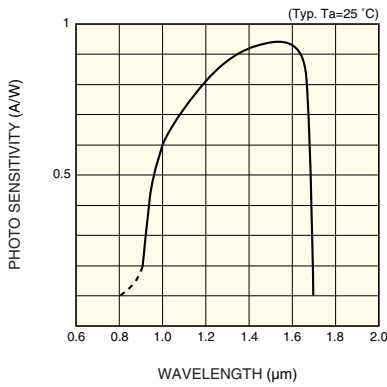
Parameter	Symbol	G6742-003	G6742-01	Unit
Reverse voltage	V _R Max.	20	10	V
Operating temperature	T _{opr}	-40 to +85 *		°C
Storage temperature	T _{stg}	-55 to +125 *		°C

* No condensation

Electrical and optical characteristics (T_a=25 °C)

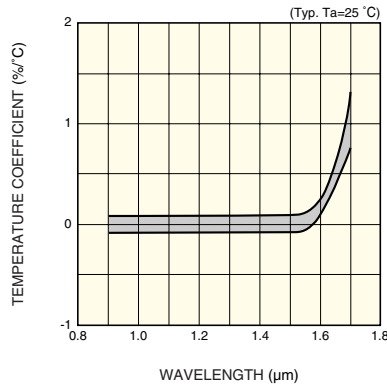
Parameter	Symbol	Condition	G6742-003			G6742-01			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Spectral response range	λ		-	0.9 to 1.7	-	-	0.9 to 1.7	-	μm
Peak sensitivity wavelength	λ _p		-	1.55	-	-	1.55	-	μm
Photo sensitivity	S	λ=1.3 μm λ=1.55 μm	0.8 0.85	0.9 0.95	-	0.8 0.85	0.9 0.95	-	A/W
Dark current	I _D	V _R =5 V	-	0.3	1.5	-	1	5	nA
Cut-off frequency	f _c	V _R =5 V, R _L =50 Ω -3 dB	-	300	-	-	35	-	MHz
Terminal capacitance	C _t	f=1 MHz V _R =5 V	-	10	-	-	90	-	pF
Shunt resistance	R _{sh}	V _R =10 mV	-	1000	-	-	100	-	MΩ
Detectivity	D*	λ=λ _p	-	5 × 10 ¹²	-	-	5 × 10 ¹²	-	cm · Hz ^{1/2} /W
Noise equivalent power	NEP	λ=λ _p	-	4 × 10 ⁻¹⁵	-	-	2 × 10 ⁻¹⁴	-	W/Hz ^{1/2}

Spectral response



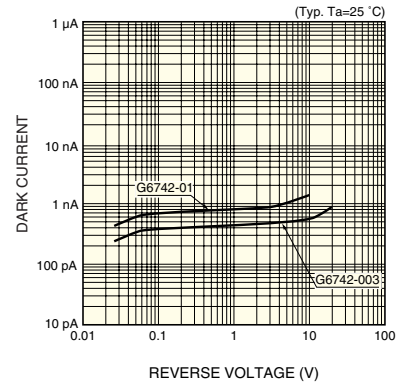
KIRDB0002EB

Photo sensitivity temperature characteristic



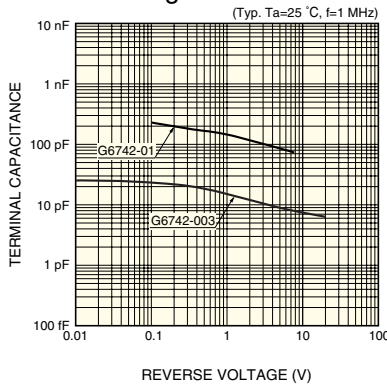
KIRDB0042EA

Dark current vs. reverse voltage



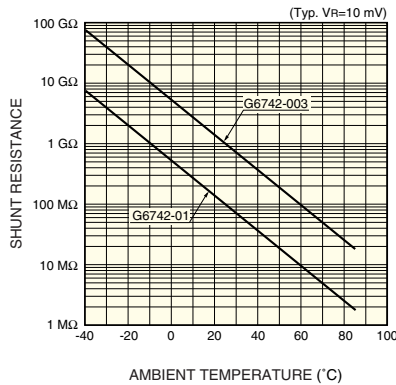
KIRDB0150EA

Terminal capacitance vs. reverse voltage



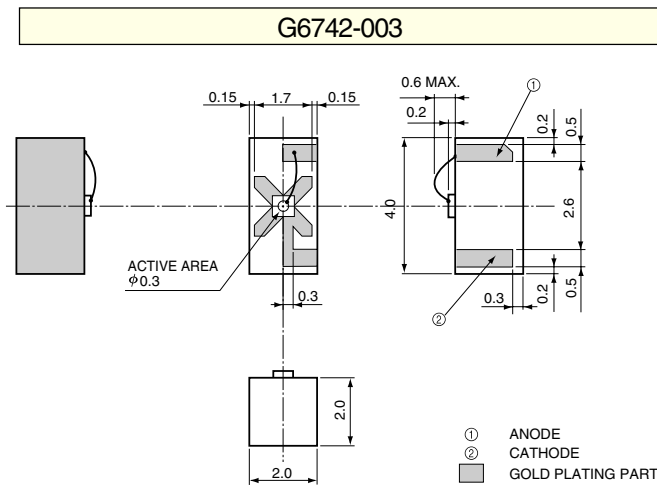
KIRDB0209EA

Shunt resistance vs. ambient temperature

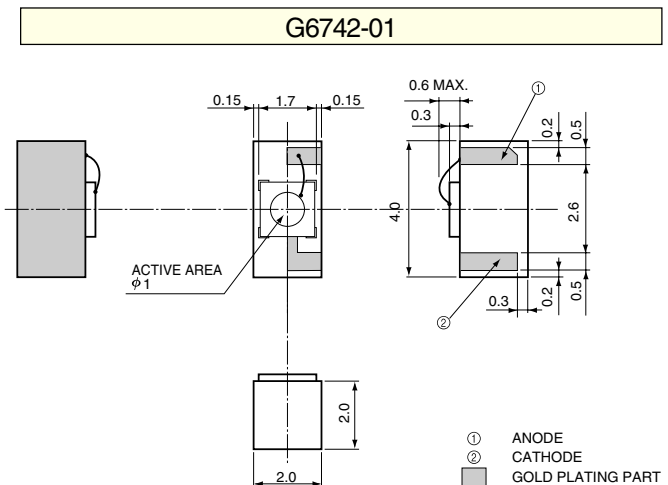


KIRDB0210EA

Dimensional outlines (unit: mm, tolerance: ± 0.1)



KIRDA0057EA



KIRDA0058EA