HAMAMATSU

NEW

InGaAs PIN photodiodes

G11193 series 25-05805

Small package, surface mount type

Features

- Small SMD (surface mount device) package
- Low noise, low dark current
- Low price

Applications

- Optical power meter
- Measurement/analytical instruments

General ratings

Parameter	G11193-02R	G11193-03R	Unit
Package	SMD		-
Active area	ϕ0.2	ϕ0.3	mm
Window	Resin		-

Absolute maximum ratings

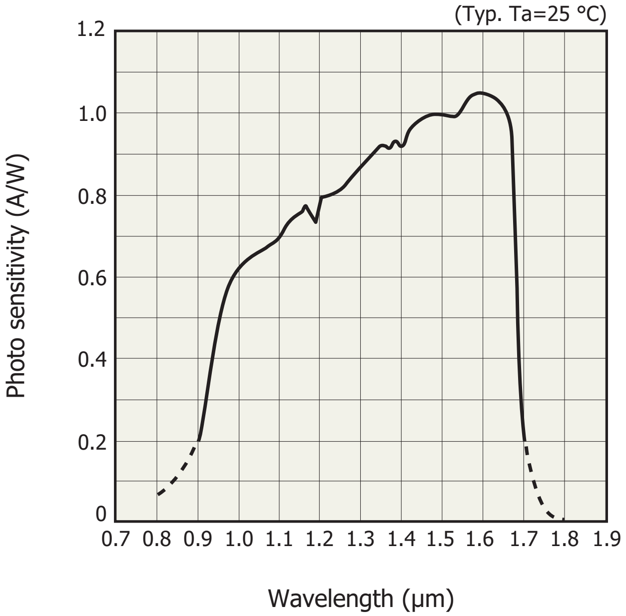
Parameter	Symbol	G11193-02R	G11193-03R	Unit
Reverse voltage	V_R Max.	10		V
Operating temperature	Topr	-25 to +85*		°C
Storage temperature	Tstg	-40 to +100*		°C

* No condensation

Electrical and optical characteristics (Ta=25 °C)

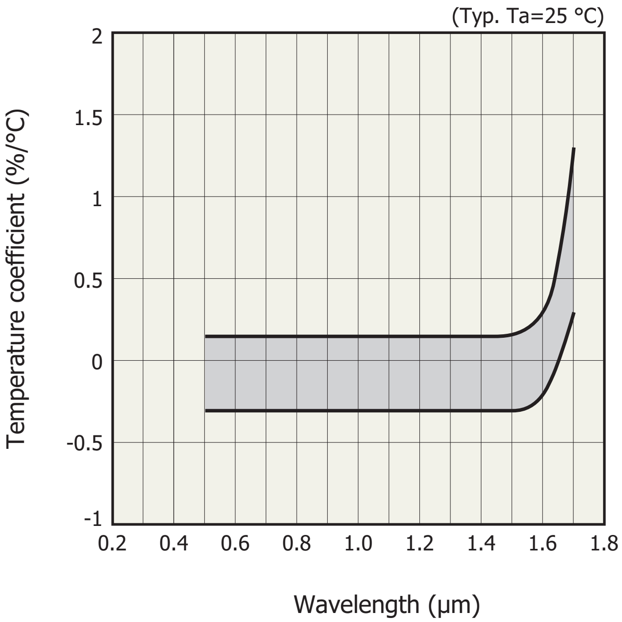
Parameter	Symbol	Condition	G11193-02R			G11193-03R			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Spectral response range	λ	Higher than 10% of peak	-	0.9 to 1.7	-	-	0.9 to 1.7	-	μm
Peak sensitivity wavelength	λp		-	1.55	-	-	1.55	-	μm
Photo sensitivity	S	λ=1.3 μm	0.75	0.85	-	0.75	0.85	-	A/W
		λ=1.55 μm	0.77	1.0	-	0.77	1.0	-	
Dark current	I_D	V_R=5 V	-	40	800	-	100	1200	pA
Cut-off frequency	fc	V_R=5 V, R_L=50 Ω	-	1	-	-	0.5	-	GHz
Terminal capacitance	Ct	V_R=5 V, f=1 MHz	-	3	-	-	5	-	pF
Shunt resistance	Rsh	V_R=10 mV	-	1000	-	-	700	-	MΩ
Detectivity	D*	λ=λp	-	5×10^{12}	-	-	5×10^{12}	-	$\mathrm{cm \cdot Hz^{1/2}/W}$

Spectral response



KIRDB0445EA

Photo sensitivity temperature characteristic



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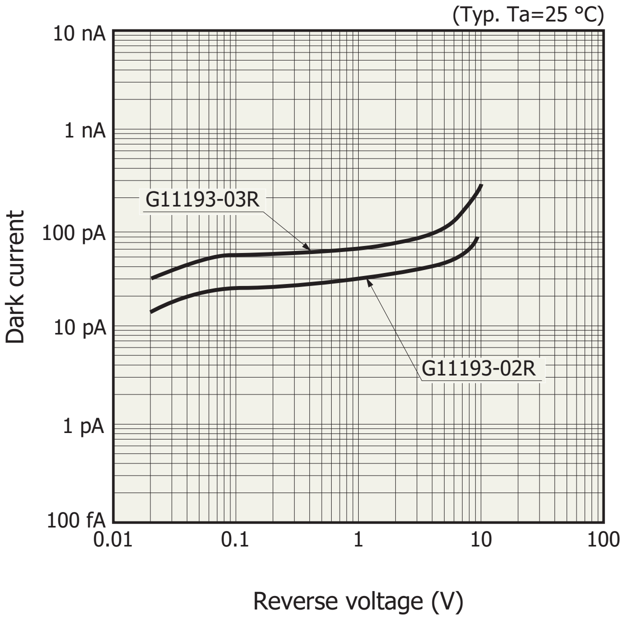
Dark current vs. reverse voltage



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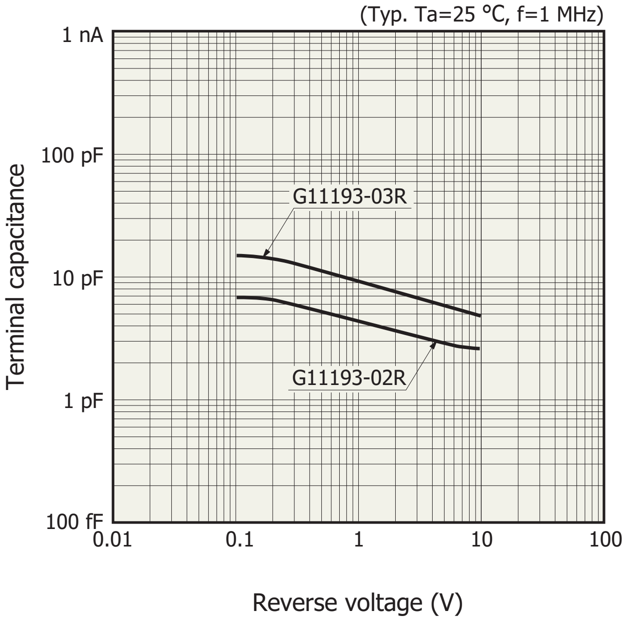
Terminal capacitance vs. reverse voltage



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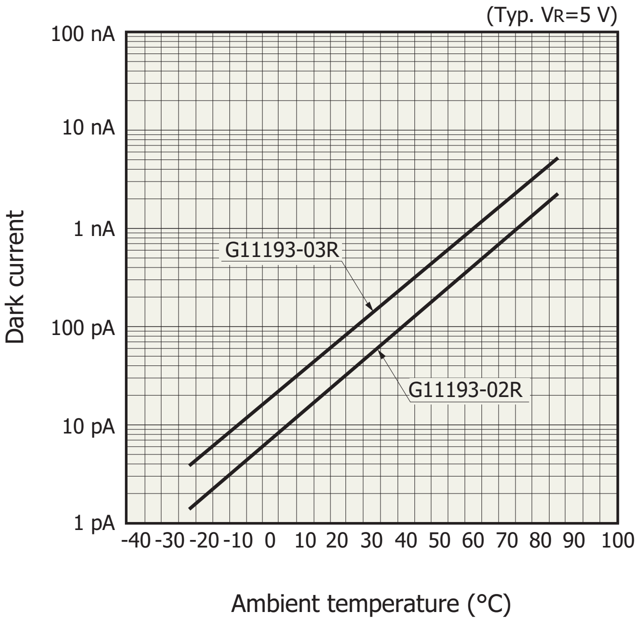
Dark current vs. ambient temperature



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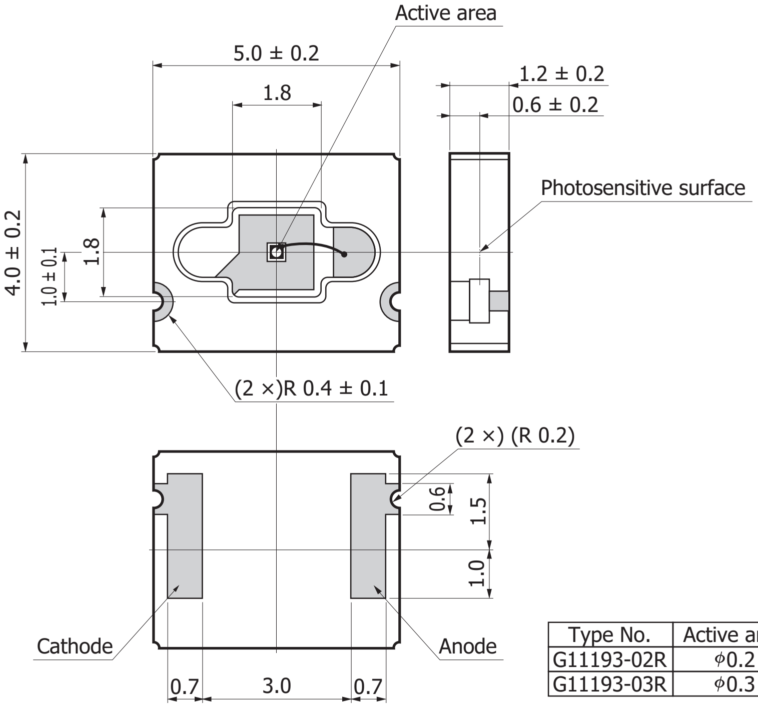
Dimensional outline (unit: mm)



Type No.	Active area
G11193-02R	ϕ0.2
G11193-03R	ϕ0.3

KIRDA0210EA

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