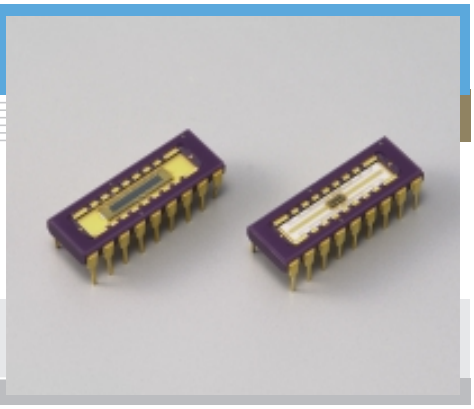
InGaAs PIN photodiode array
G7150/G7151-16

16-element array



Features

- 16-element array
- For simple measurement

Applications

- Near Infrared (NIR) spectrophotometer

■ General ratings

Parameter	G7150-16	G7151-16	Unit
Package	DIP		-
Active area	0.45 × 1 (× 16 elements)	0.08 × 0.2 (× 16 elements)	mm

■ Absolute maximum ratings (Ta=25 °C)

Parameter	Symbol	Value	Unit
Reverse voltage	V_R	5	V
Operating temperature	Topr	-25 to +70	°C
Storage temperature	Tstg	-25 to +70	°C

■ Electrical and optical characteristics (Ta=25 °C, per 1 element)

Parameter	Symbol	Condition	G7150-16			G7151-16			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	λp		-	1.55	-	-	1.55	-	μm
Photo sensitivity	S	λ=1.3 μm		0.9	-		0.9	-	A/W
		λ=1.55 μm		0.95	-		0.95	-	
Dark current	I_D	V_R=1 V	-	5	25	-	0.2	1	nA
Cut-off frequency	fc	V_R=1 V, R_L=50 Ω λ=1.3 μm, -3 dB	-	30	-	-	300	-	MHz
Terminal capacitance	Ct	V_R=1 V, f=1 MHz	-	100	-	-	10	-	pF
Shunt resistance	Rsh	V_R=10 mV	-	100	-	-	1000	-	MΩ
Detectivity	D*	λ=λp	-	5×10^{12}	-	-	5×10^{12}	-	$cm \cdot Hz^{1/2}/W$
Noise equivalent power	NEP	λ=λp	-	2×10^{-14}	-	-	3×10^{-15}	-	$W/Hz^{1/2}$

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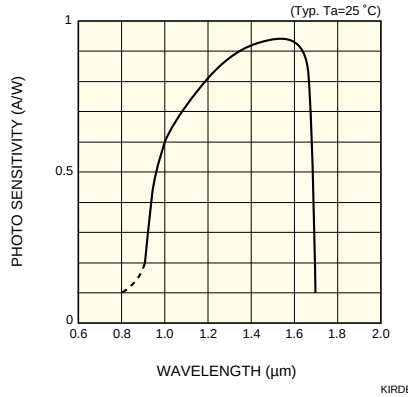
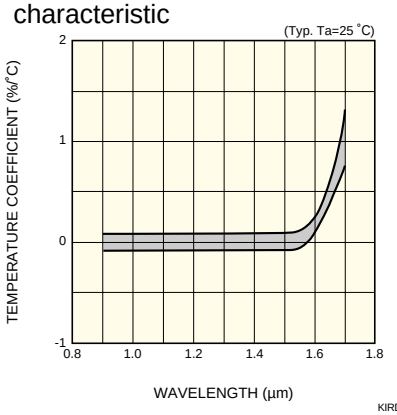
■ Spectral response



KIRDB0002EB

■ Photo sensitivity temperature characteristic



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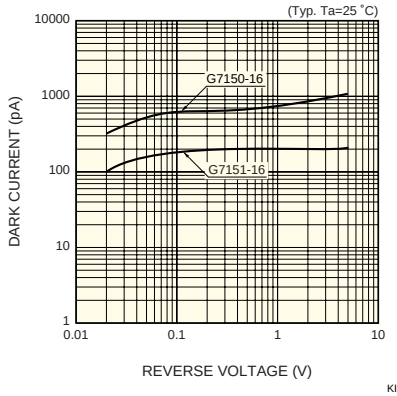
■ Dark current vs. reverse voltage



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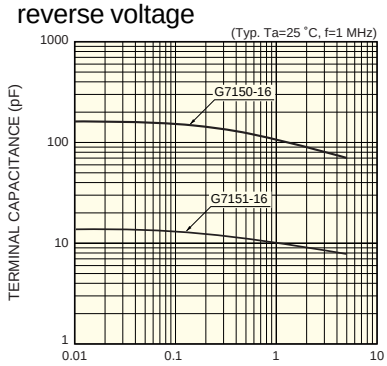
■ Terminal capacitance vs. reverse voltage



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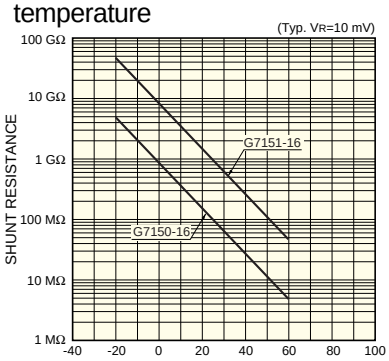
■ Shunt resistance vs. ambient temperature



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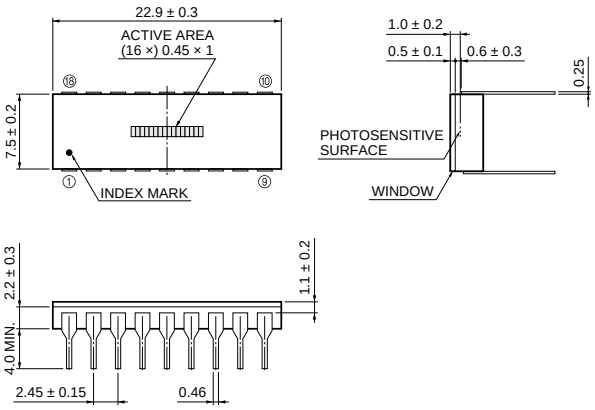
■ Dimensional outlines (unit: mm)

G7150-16



PIN No.	DETECTOR	PIN No.	DETECTOR	PIN No.	DETECTOR	PIN No.	DETECTOR
①	1	⑥	KC	⑪	14	⑯	6
②	3	⑦	11	⑫	12	⑰	4
③	5	⑧	13	⑬	KC	⑱	2
④	7	⑨	15	⑭	10		
⑤	9	⑩	16	⑮	8		

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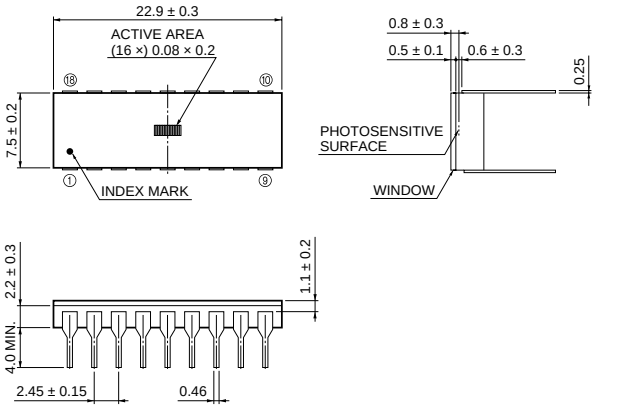
G7151-16



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