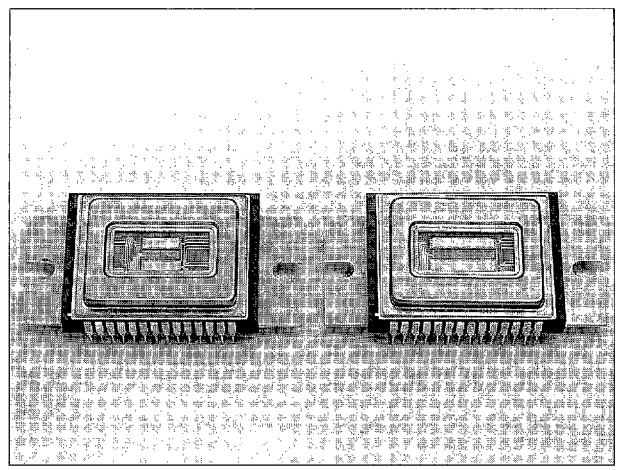
InGaAs Linear Image Sensors

NIR applications (0.9 to 1.7 μm/1.2 to 2.6 μm)

The InGaAs linear image sensors are self-scanning photodiode arrays designed specifically for detectors in near infrared multichannel spectroscopy. They incorporate an InGaAs photodiode array chip, a shift register with C-MOS transistor, integration amplifier array, clamp circuit, and hold circuit, etc. So they operate stably in wide photometry range. Low dark current enables long time exposure, so the sensors output high S/N signal to low-level-light. The package is high reliable with sapphire window. Two-stage TE-cooled type G6891, G6893 series enable lower dark current. Multichannel detector heads and driver/amplifier circuit (sold separately) for InGaAs linear image sensors are also available.



● SPECIFICATIONS (Common)

Package	28-pin DIP
Window Material	Sapphire
Operating Temperature	-40 to +65 °C
Storage Temperature	-40 to +85 °C
Total Power Dissipation	100 mW Typ.

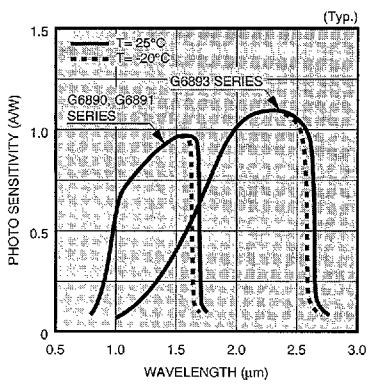
● ACCESSORIES (Optional)

InGaAs multichannel detector heads C6990, C6991
Driver/amplifier circuit C6992

(Typical data)

Type No.	Outline No. (P.34)	Cooling	Number of Pixels	Pixel Size (μm)	Active Area [mm (H)×mm (V)]	Spectral Response Range (μm)	Peak Sensitivity Wavelength (μm)	Saturation Charge Qsat (pC)	Dark Current Id (pA)
G6890-128	❻	Non-cooled	128	50×200	6.4×0.2	0.9 to 1.7	1.55	1	3 (25 ℃)
G6890-256			256		12.8×0.2				
G6891-128		Two-stage TE-cooled	128		6.4×0.2				
G6891-256			256		12.8×0.2				
G6893-128			128		6.4×0.2	1.2 to 2.6	2.3		2000 (-30 ℃)
G6893-256			256		12.8×0.2				

● Spectral Response



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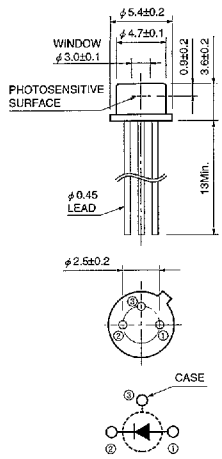
Dimensional Outlines (Unit: mm)

❶ G3476-01, etc.



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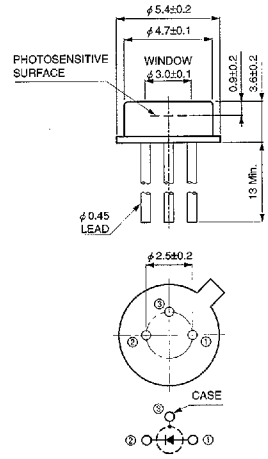
❷ G5832-02, -03



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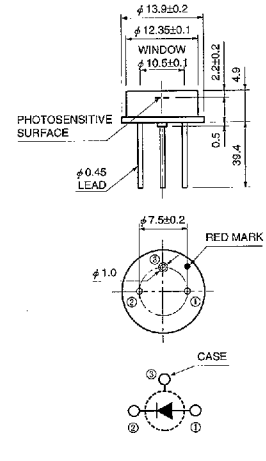
❸ G5832-05, etc.



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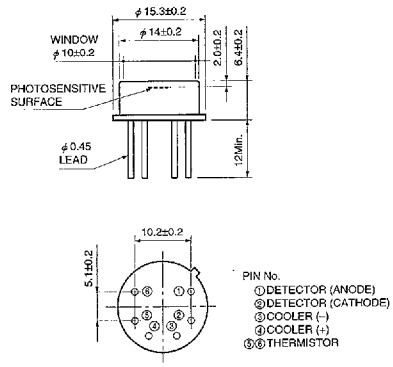
❹ G5832-11, etc.



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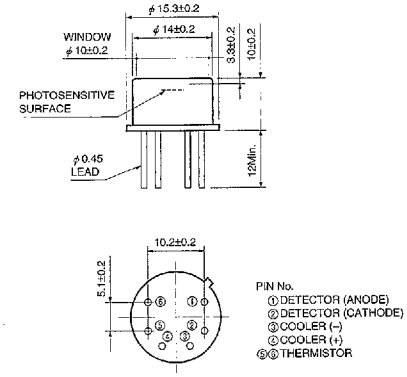
❺ G5832-21, etc.



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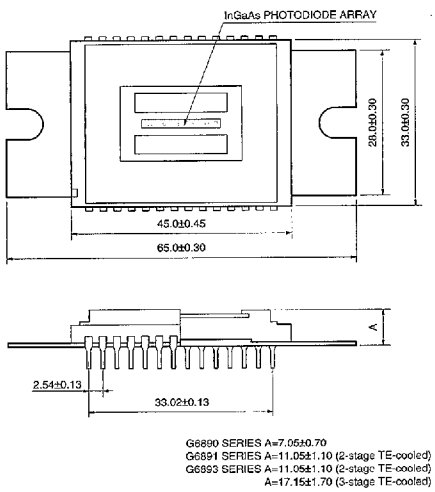
❻ G6890-128, etc.



G6890 SERIES A=7.05±0.70
G6891 SERIES A=11.05±1.10 (2-stage TE-cooled)
G6893 SERIES A=11.05±1.10 (2-stage TE-cooled)
A=17.15±1.70 (3-stage TE-cooled)

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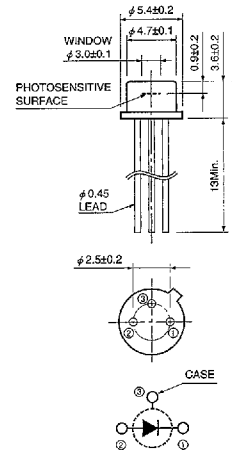
❼ B1720-02, etc.



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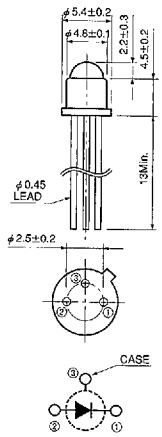
⑧ B1720-05



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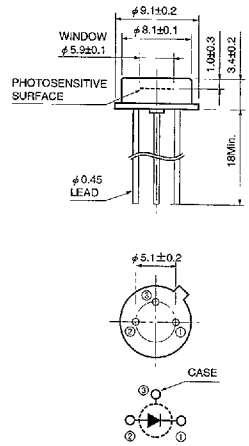
⑨ B2144-01, etc.



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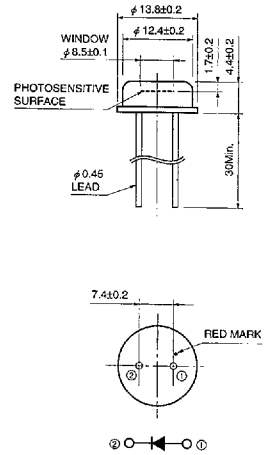
⑩ B1919-01



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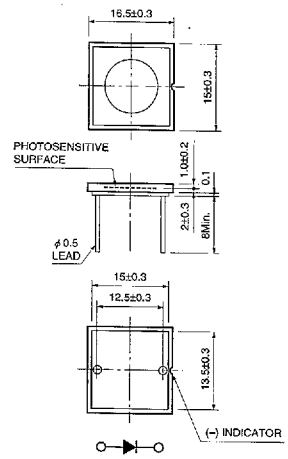
⑪ B1920-01



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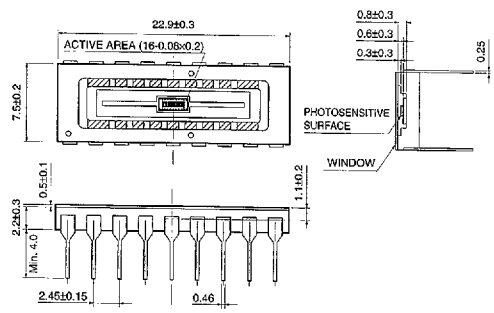
⑫ G7151-16



PIN No.	DETECTOR	PIN No.	DETECTOR	PIN No.	DETECTOR	PIN No.	DETECTOR
①⑰	1	⑥	COMMON	⑪	14	⑯	6
②④⑱	3	⑦	11	⑫	12	⑰	4
⑤	5	⑧	13	⑬⑭	COMMON	⑱	2
⑥	7	⑨	15	⑮	10		
⑦⑧	9	⑩	16	⑯	8		

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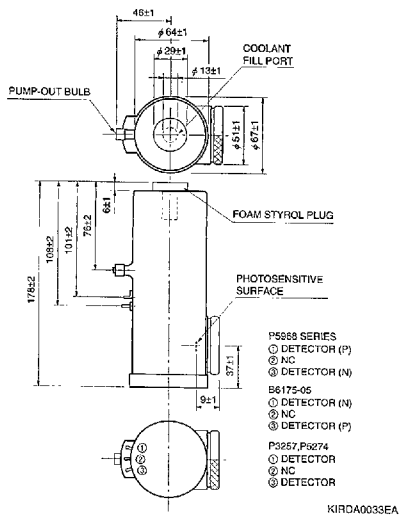
⑬ P5968 series, P7163, B6175-05, etc.



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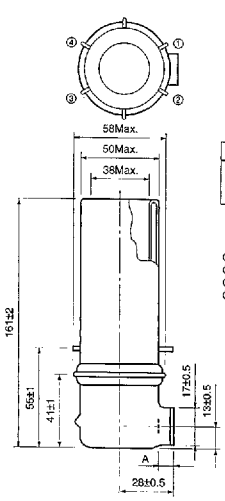
⑭ P5138, etc.



Type No.	A
P5168, P5169	7±1
P5171, P5172 SERIES	8±1
P5138 SERIES	9±1

① DETECTOR(N) WEIGHT:115g
② DETECTOR(P)
③ NC
④ NC

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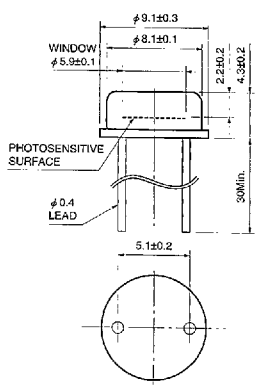
⑮ P394



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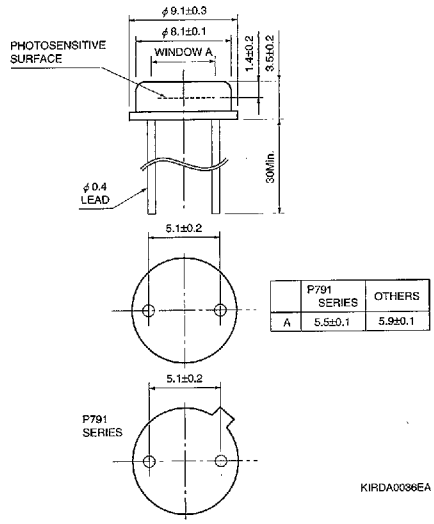
⑯ P394A, etc.



	P791 SERIES	OTHERS
A	5.5±0.1	5.9±0.1

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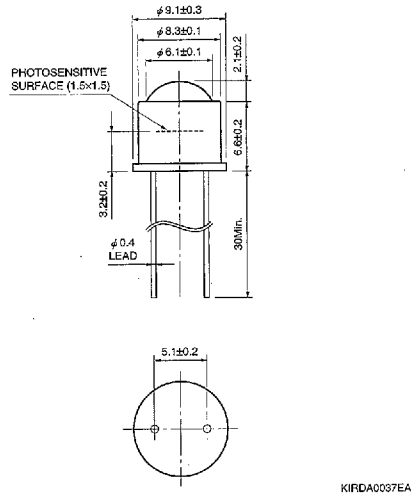
⑰ P3226-02



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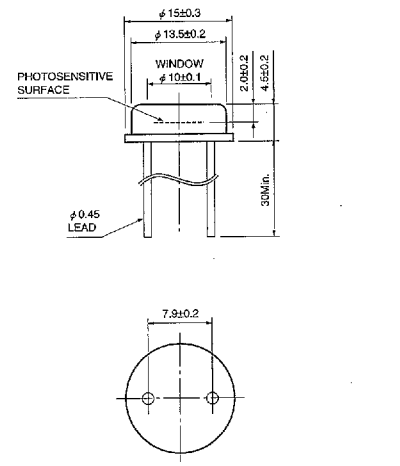
⑱ P397



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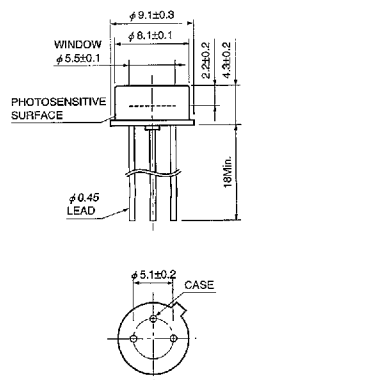
⑲ P791-11



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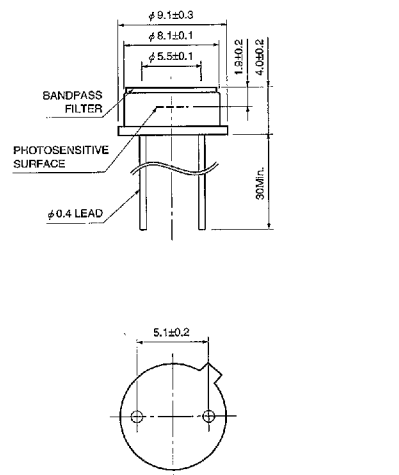
⑳ P3207-04



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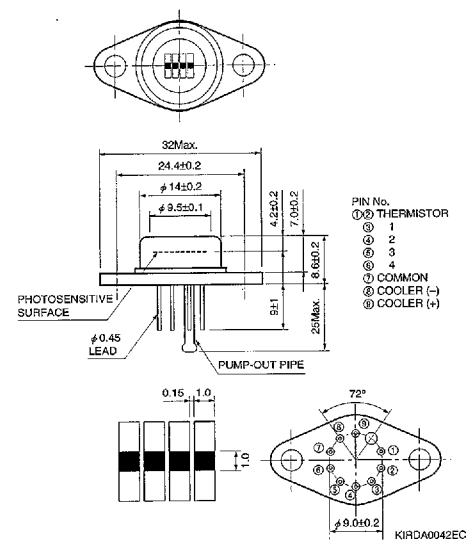
㉑ P4115



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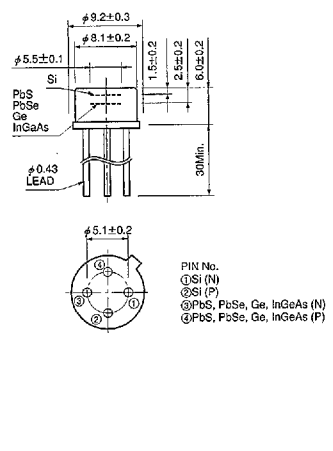
㉒ K1713-01, etc.



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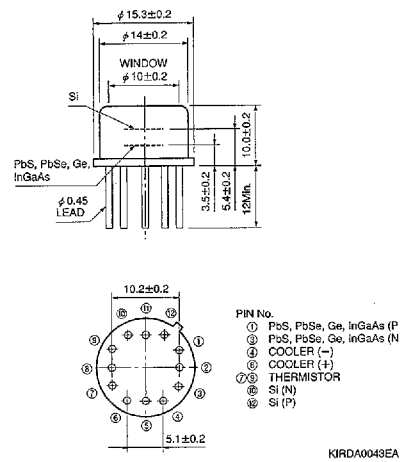
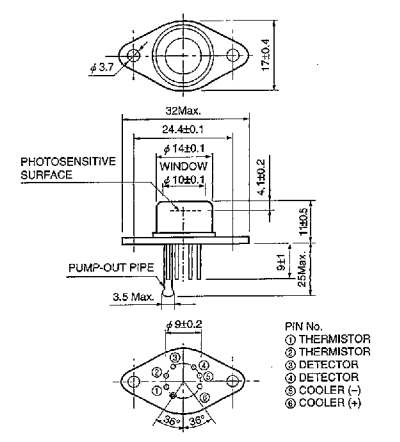
㉓ K3413-01, etc.



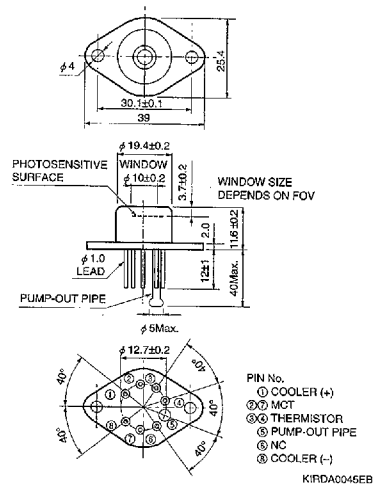
KIRDA0043EA

㉔ P3981-01, etc.



KIRDA0044EB

㉕ P2750, etc.



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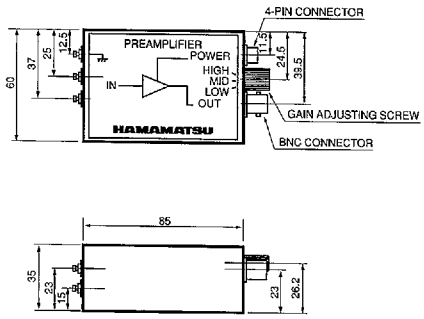
㉖ C4159, -01, -03



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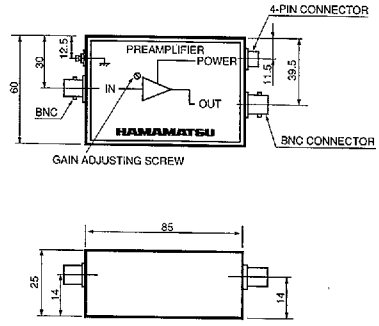
㉗ C4159-02



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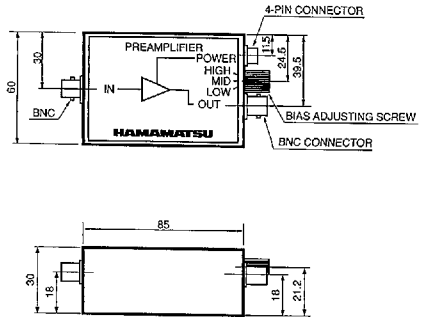
㉘ C5185, -01



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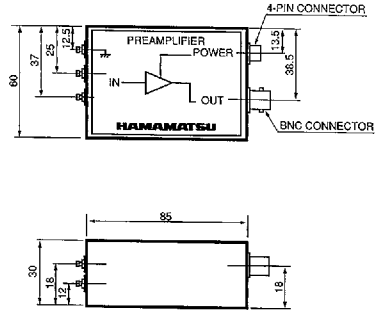
㉙ C3757-02



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