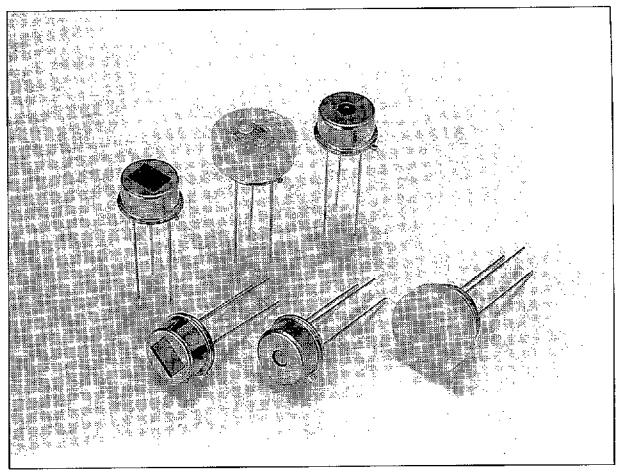
Pyroelectric Detectors

Ideally suited for human body sensing and simplified analytical instruments

Broad spectral response
Operates at room temperature
Low cost



Thermally-Compensated Types (Single Element)

Including a thermal compensation element in the same package, these types can minimize noise fluctuation caused by changes in the ambient temperature. Suited for simplified analytical instruments.

Dual Element Types

Optimized specifically for human body sensing. Two families are available: the P4488 series with wide fields of view and the P3514 series with a lens cap that provides limited fields of view.

Single Element Types

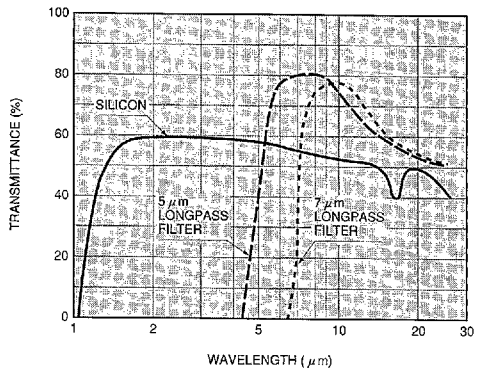
A single pyroelectric element is used, being suitable for general-purpose infrared detection.

(Typical data unless otherwise specified, Ta=25 °C)

Type No.	Window Material	Active Area (mm)	Spectral Response Range (μm)	Sensitivity (500, 1) (V/W)	Noise Max. (μV/Hz$^{1/2}$)	D* (500,1,1) (cm•Hz$^{1/2}$/W)	NEP (500,1,1) (W/Hz$^{1/2}$)	Rise Time tr 0 to 63 % (ms)	Temp. Coefficient of Sensitivity Max. (%/°C)	Supply Voltage (V)	Offset Voltage RL=22 kΩ (V)	Operating Temperature Topr (°C)	Storage Temperature Tstg (°C)
Thermally-Compensated xTypes (Single Element)													
P3782	Silicon	φ2	2 to 20	1500	15	1.7×10^{8}	8.5×10^{-10}	100	0.2	3 to 15	0.2 to 1.0	-20 to +60	-30 to +85
P3782-01	7 μm long-pass filter	φ2	7 to 20	1300	15	1.5×10^{8}	1.0×10^{-9}						
P3782-02	4.3 μm band-pass filter	φ2	4.3 (HW=80 nm)	3900Ⓐ	15	3.0×10^{8}	5.0×10^{-10}						
P3782-03	8-14 μm band-pass filter	φ2	8 to 14	900	15	2.0×10^{8}	1.0×10^{-9}						
P3782-05	5 μm long-pass filter	φ2	5 to 20	1500	15	1.7×10^{8}	8.5×10^{-10}						
P3782-12	4.4 μm band-pass filter	φ2	4.4 (HW=650 nm)	4100Ⓐ	15	3.0×10^{8}	5.0×10^{-10}						
P4736	Silicon	φ2	2 to 20	1500	15	1.7×10^{8}	8.5×10^{-10}						
P4736-01	7 μm long-pass filter	φ2	7 to 20	1300	15	1.5×10^{8}	1.0×10^{-9}						
P4736-05	5 μm long-pass filter	φ2	5 to 20	1500	15	1.7×10^{8}	8.5×10^{-10}						
P4736-12	4.4 μm band-pass filter	φ2	4.4 (HW=650 nm)	4100Ⓐ	15	3.0×10^{8}	5.0×10^{-10}						
Dual Element Types													
P4488	7 μm long-pass filter	2×1 (×2)	7 to 20	1300	15	1.5×10^{8}	1.0×10^{-9}	100	0.2	3 to 15	0.2 to 1.0	-20 to +60	-30 to +85
P4488-02	5 μm long-pass filter		5 to 20	1500	15	1.7×10^{8}	8.5×10^{-10}						
Dual Element Types with Lens Cap													
P3514	7 μm long-pass filter	2×1 (×2)	7 to 20	450	15	1.0×10^{8}	1.5×10^{-9}	100	0.2	3 to 15	0.2 to 1.0	-20 to +60	-30 to +85
P3514-01													
Single Element Types													
P2613	Silicon	φ2	2 to 20	1800	15	2.0×10^{8}	1.0×10^{-9}	100	0.2	3 to 15	0.2 to 1.0	-20 to +60	-30 to +85
P2613-01	7 μm long-pass filter	φ2	7 to 20	1500	15	2.0×10^{8}	1.0×10^{-9}						
P2613-02	4.3 μm band-pass filter	φ2	4.3 (HW=80 nm)	3900Ⓐ	15	3.0×10^{8}	5.0×10^{-10}						
P2613-03	8-14 μm band-pass filter	φ2	8 to 14	900	15	2.0×10^{8}	1.0×10^{-9}						
P2613-12	4.4 μm band-pass filter	φ2	4.4 (HW=650 nm)	4100Ⓐ	15	3.0×10^{8}	5.0×10^{-10}						

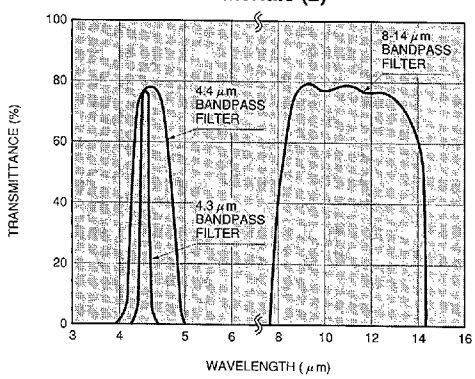
Ⓐ Measured at 4.3 μm or 4.4 μm.

● Transmittance of Window Materials (1)



KIRDB0077EA

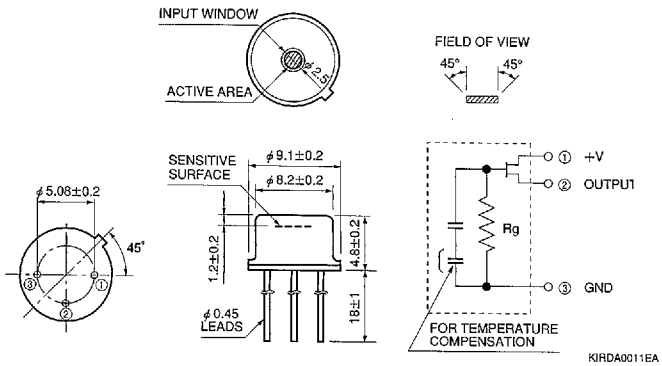
● Transmittance of Window Materials (2)



KIRDB0078EA

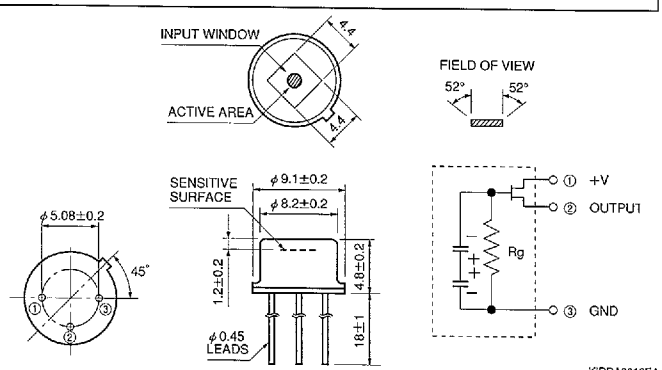
● Dimensional Outlines (Unit: mm)

P3782 Series



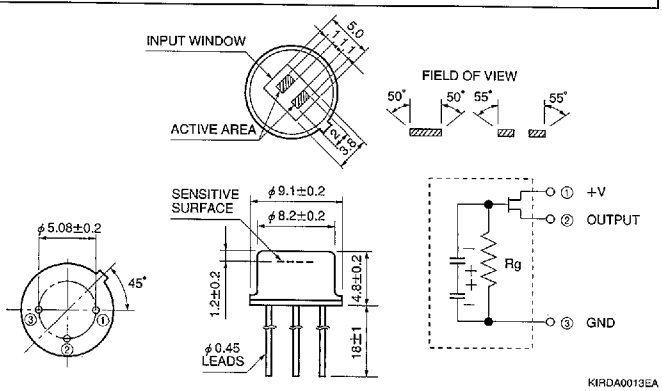
KIRDA0011EA

P4736 Series



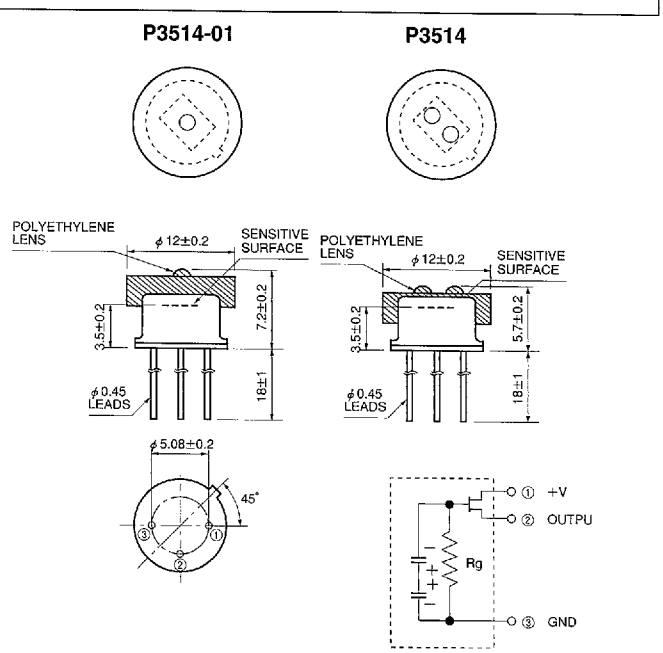
KIRDA0012EA

P4488 Series



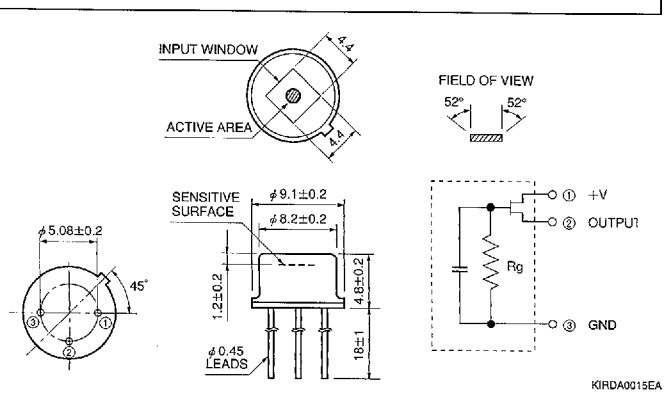
KIRDA0013EA

P3514 Series



KIRDA0014EA

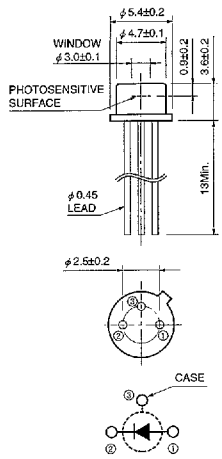
P2613 Series



KIRDA0015EA

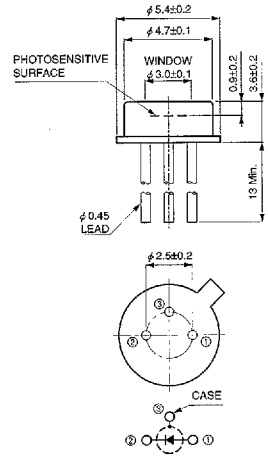
Dimensional Outlines (Unit: mm)

❶ G3476-01, etc.



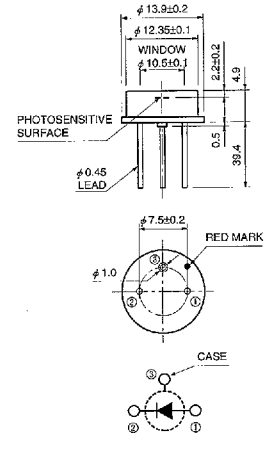
KIRDA0034EA

❷ G5832-02, -03



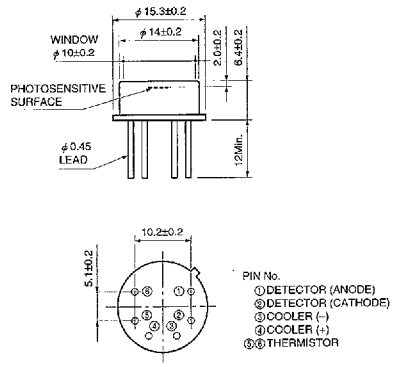
KIRDA0002EB

❸ G5832-05, etc.



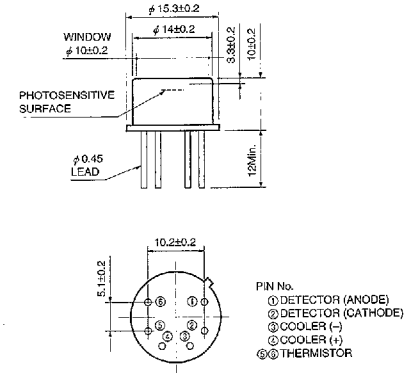
KIRDA0052EA

❹ G5832-11, etc.



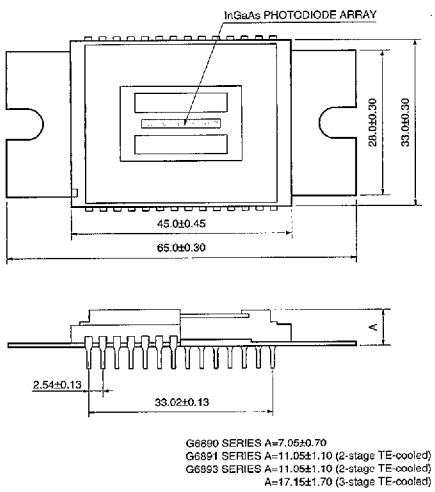
KIRDA0029EB

❺ G5832-21, etc.



KIRDA0031EB

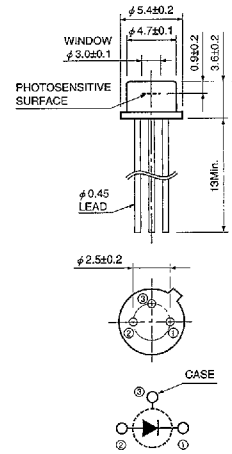
❻ G6890-128, etc.



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)

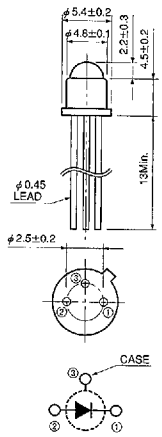
KMIRA0007EA

❼ B1720-02, etc.



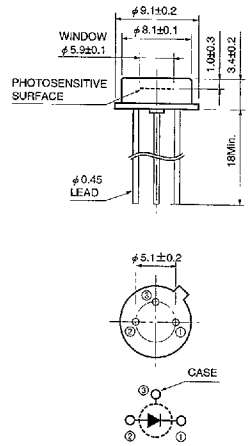
KIRDA0023EA

⑧ B1720-05



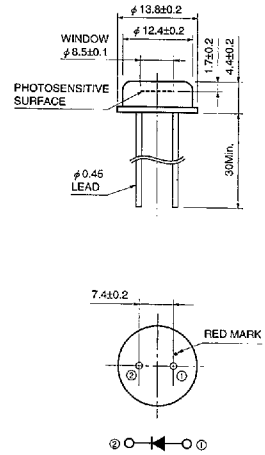
KIRDA0024EA

⑨ B2144-01, etc.



KIRDA0025EA

⑩ B1919-01



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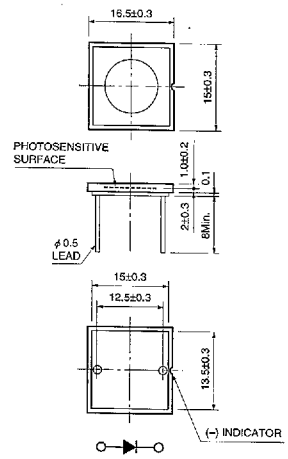
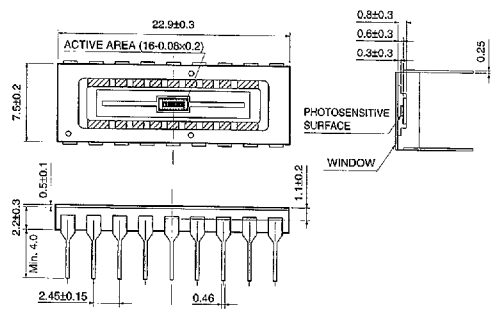
⑪ B1920-01



KIRDA0027EB

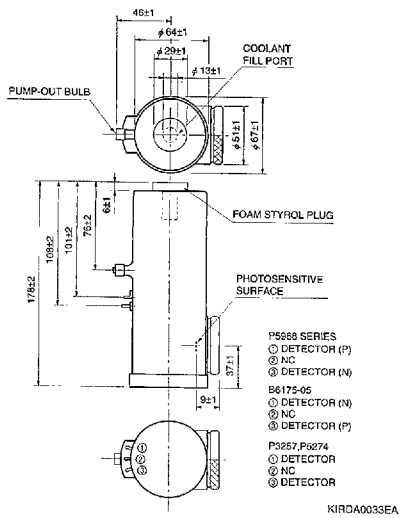
⑫ G7151-16



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		

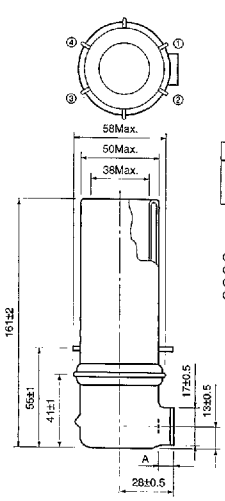
KIRDA0030EB

⑬ P5968 series, P7163, B6175-05, etc.



KIRDA0033EA

⑭ P5138, etc.

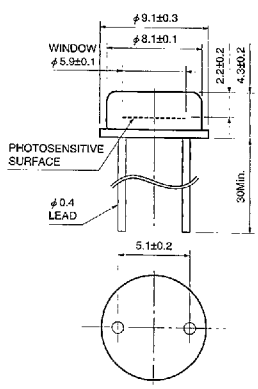


Type No.	A
P5168, P5169	7±1
P5171, P5172 SERIES	8±1
P5138 SERIES	9±1

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

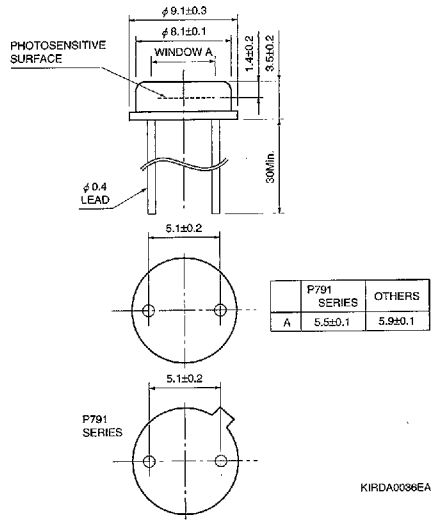
KIRDA0032EA

⑮ P394



KIRDA0055EA

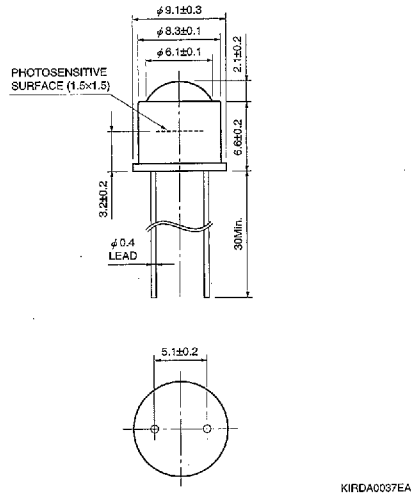
⑯ P394A, etc.



	P791 SERIES	OTHERS
A	5.5±0.1	5.9±0.1

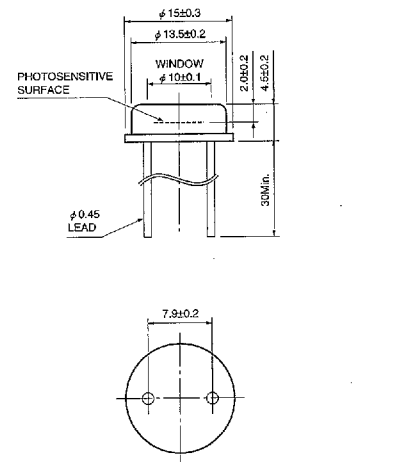
KIRDA0036EA

⑰ P3226-02



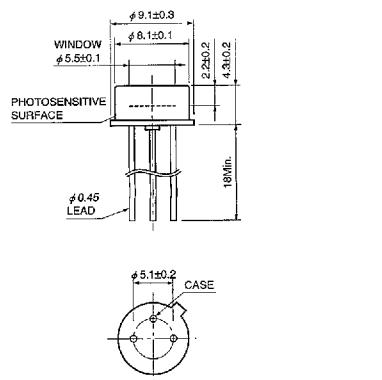
KIRDA0037EA

⑱ P397



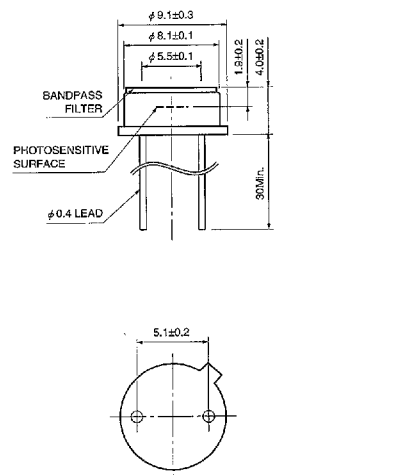
KIRDA0038EA

⑲ P791-11



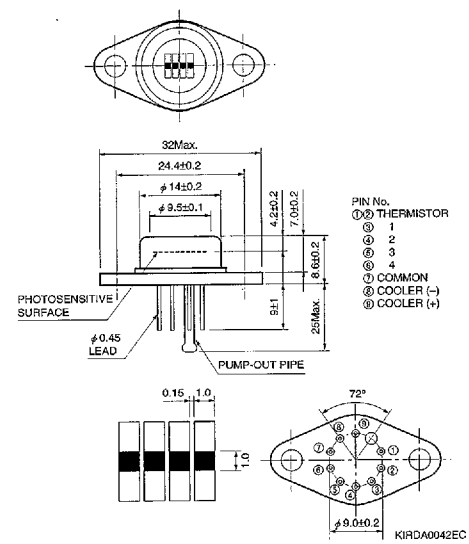
KIRDA0056EA

⑳ P3207-04



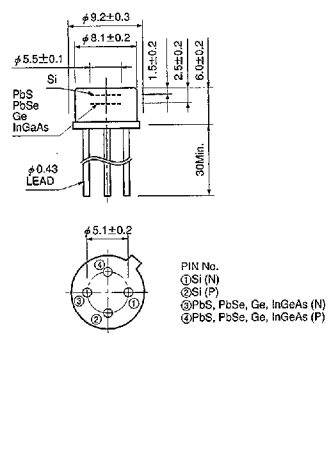
KIRDA0054EA

㉑ P4115



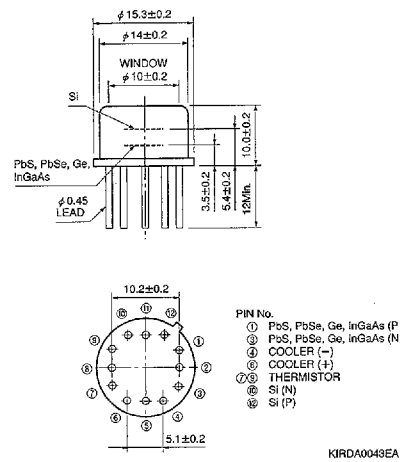
KIRDA0042EC

㉒ K1713-01, etc.



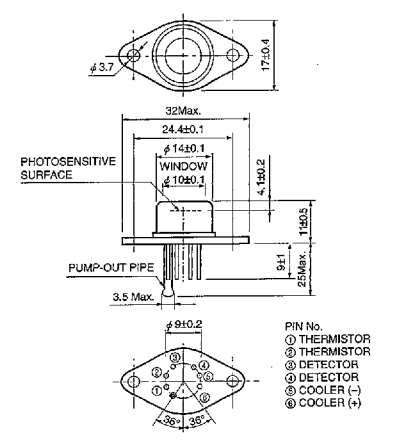
KIRDA0041EA

㉓ K3413-01, etc.



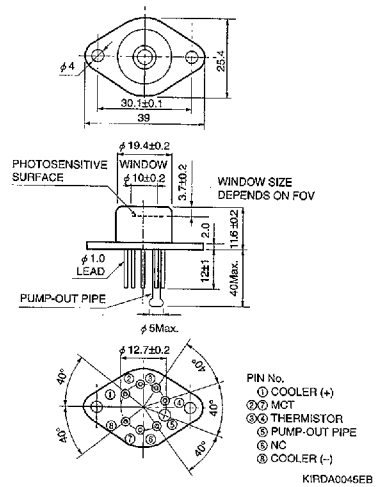
KIRDA0043EA

㉔ P3981-01, etc.



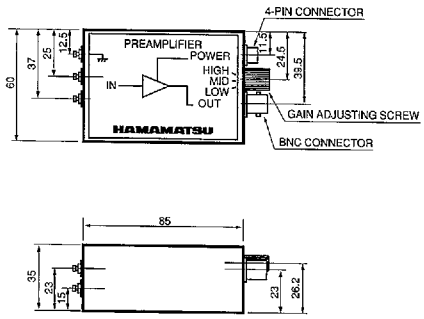
KIRDA0044EB

㉕ P2750, etc.



KIRDA0045EB

㉖ C4159, -01, -03



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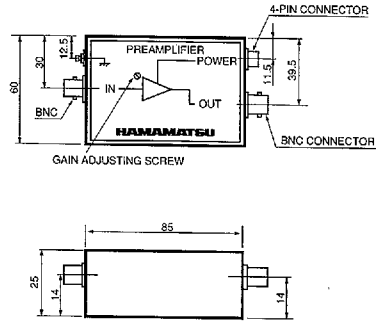
㉗ C4159-02



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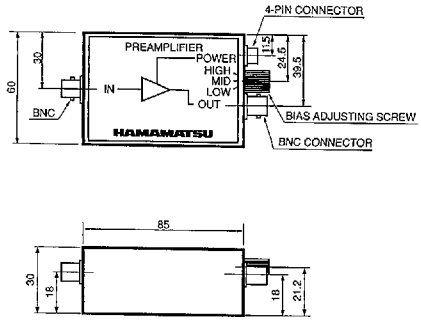
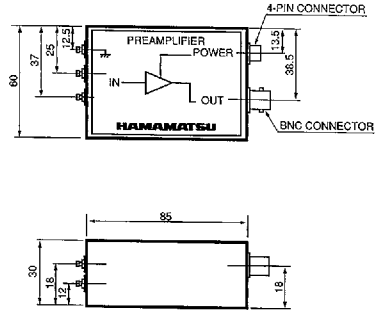
㉘ C5185, -01



KIRDA0048EB

㉙ C3757-02



KIRDA0049EA