

PbS Photoconductive Cells

Type No.	Out-line No. (P.28 29)	Package	Window Material [Ⓐ]	Effective Sensitive Area Size (mm)	Effective Sensitive Area (mm ²)	Characteristics				
						Measure-ment Temp. (°C)	Peak Respon-sivity Wavelength λ_p (μm)	IR Cutoff Wave-length λ_c (μm)	Radiant Respon-sivity at λ_p $V_s=15\text{V}$ (V/W)	Dark Resis-tance R_d (M Ω)

Uncooled Types

P394A	⑨	TO-5	B	2×5	10	+25	2.2	2.9	5×10 ⁴	0.1~1.5
P3258		TO-5	B	3×3	9	+25	2.2	2.9	5×10 ⁴	0.5~2.5
P394R		TO-5	Q	0.5×5	2.5	+25	2.4	3.1	3×10 ⁵	0.1~0.5
P3226	⑩	TO-5	B (Lens Type)	2×2	4	+25	2.2	2.9	1×10 ⁵	0.5~2.5
P394	⑪	TO-5	B	1×5	5	+25	2.2	2.9	1×10 ⁵	0.1~1
P397	⑫	TO-8	B	4×5	20	+25	2.2	2.9	3×10 ⁴	0.3~2

1-Stage Thermoelectrically-Cooled Types

P1026	⑬	TO-66	S	1×3	3	+25	2.4	3.1	3×10 ⁵	0.1~1
						-10	2.5	3.2	1×10 ⁶	0.3~5
P2532	⑭	6 pin TO-8	B	1×3	3	+25	2.2	2.9	2×10 ⁵	0.1~1
						-10	2.4	2.9	6×10 ⁵	0.3~5
P2532-01	⑮	6 pin TO-8	B	4×5	20	+25	2.2	2.9	3×10 ⁴	0.3~2
						-10	2.4	2.9	9×10 ⁴	0.5~10

2-Stage Thermoelectrically-Cooled Types

P2682	⑯	6 pin TO-8	S	1×3	3	+25	2.2	2.9	2×10 ⁵	0.1~1
						-20	2.5	3.2	1×10 ⁶	1~10
P2682-01	⑰	6 pin TO-8	S	4×5	20	+25	2.2	2.9	3×10 ⁴	0.3~2
						-20	2.5	3.2	2×10 ⁵	1~10

Dewar Type (for dry ice cooling)

P819	⑱	Glass dewar	S	2×10	20	-77 (196K)	2.7	3.6	3×10 ⁶	0.5~10
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Dewar Type (for liquid nitrogen cooling)

P3263	⑲	Glass dewar	S	2×10	20	-196 (77K)	3.1	4.3	3×10 ⁵	0.5~10
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Ⓐ B: Borosilicate glass window

Q: Fused silica window

S: Sapphire window

Ⓑ Measured under the following conditions:

• Light source: 500 K black body

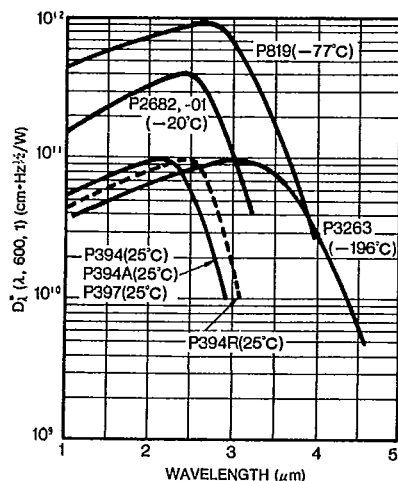
• Irradiance: 4.8 $\mu\text{W}/\text{cm}^2$

• Chopping frequency: 600 Hz (P819, P3263: 100 Hz)

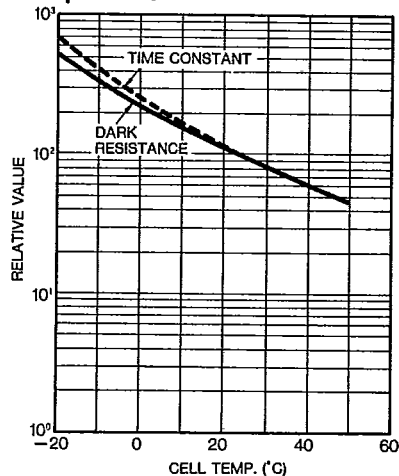
• Supply voltage: 15 Vdc

• Load resistance: Close to dark resistance

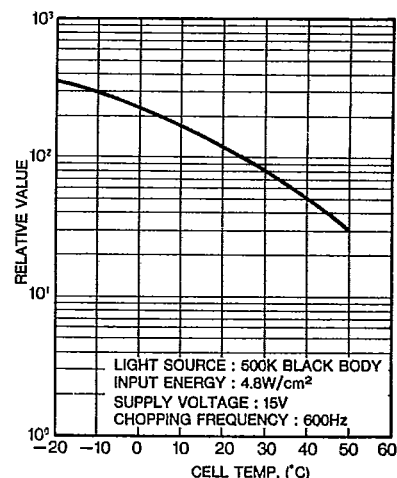
● Spectral Response



● Dark Resistance, Time Constant vs. Temperature



● Responsivity vs. Temperature



Characteristics								Temperature Range ^①		Thermistor Capacity ^② (mW)	Type No.
Signal, S ^③		Noise, N ^④		D* (500, 600, 1)		D* (λp, 600, 1) (cmHz ^{1/2} /W)	Rise Time t _r 0~63% (μs)	Maximum Supply Voltage (Vdc)	Operating	Storage	
Min. (μV)	Typ. (μV)	Typ. (μV)	Max. (μV)	Min. (cmHz ^{1/2} /W)	Typ. (cmHz ^{1/2} /W)				(°C)	(°C)	

100	250	2	4	5×10 ⁸	1×10 ⁹	1×10 ¹¹	100~400	100	-30~+50	-55~+50	—	P394A
100	250	2	4	5×10 ⁸	1×10 ⁹	1×10 ¹¹	100~400	100	-30~+50	-55~+50	—	P3258
100	280	2	4	5×10 ⁸	1×10 ⁹	1×10 ¹¹	100~400	70	-30~+50	-55~+50	—	P394R
800	1200	2	4	5×10 ⁸	1×10 ⁹	1×10 ¹¹	100~400	100	-30~+50	-55~+50	—	P3226
100	250	2	4	5×10 ⁸	1×10 ⁹	1×10 ¹¹	100~400	100	-30~+50	-55~+50	—	P394
100	250	2	4	2×10 ⁸	5×10 ⁸	5×10 ¹⁰	100~400	100	-30~+50	-55~+50	—	P397

100	280	2	4	5×10 ⁸	1×10 ⁹	1×10 ¹¹	100~400	100	-30~+50	-55~+50	0.2	P1026
400	1000	4	8	1×10 ⁹	2×10 ⁹	2×10 ¹¹	300~1100					
100	250	2	4	5×10 ⁸	1×10 ⁹	1×10 ¹¹	100~400	100	-30~+50	-55~+50	0.2	P2532
300	750	4	8	1×10 ⁹	2×10 ⁹	2×10 ¹¹	300~1100					
100	250	2	4	2×10 ⁸	5×10 ⁸	5×10 ¹⁰	100~400	100	-30~+50	-55~+50	0.2	P2532-01
300	750	4	8	5×10 ⁸	1×10 ⁹	1×10 ¹¹	300~1100					

100	250	2	4	5×10 ⁸	1×10 ⁹	1×10 ¹¹	100~400	100	-30~+50	-55~+50	0.2	P2682
600	1500	5	10	2×10 ⁹	4×10 ⁹	4×10 ¹¹	300~1500					
100	250	2	4	2×10 ⁸	5×10 ⁸	5×10 ¹⁰	100~400	100	-30~+50	-55~+50	0.2	P2682-01
600	1500	5	10	8×10 ⁸	2×10 ⁹	2×10 ¹¹	300~1500					

10000	30000	3	6	1×10 ¹⁰	2×10 ¹⁰	1×10 ¹²	2000~5000	100	-30~+50	-55~+50	—	P819
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7000	20000	6	12	2×10 ⁹	5×10 ⁹	1×10 ¹¹	2000~5000	100	-30~+50	-55~+50	—	P3263
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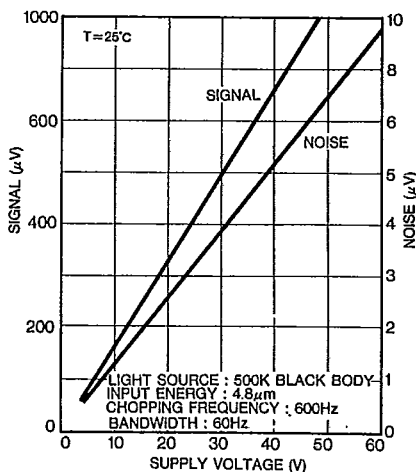
③ Measured under the following conditions:

- Chopping frequency: 600 Hz (P819, P3263: 100 Hz)
- Amplifier bandwidth: 60 Hz (P819, P3263: 10 Hz)
- Load resistance: Close to dark resistance

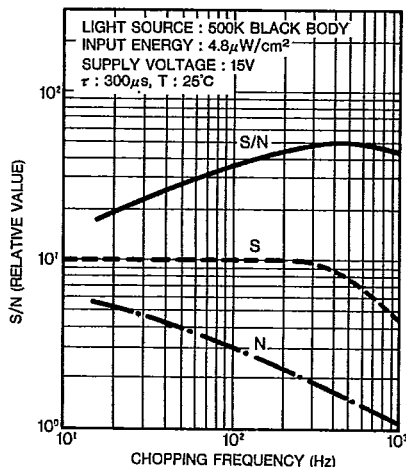
① Avoid long-term operation or storage at high temperatures.

② The recommended operating power for the thermistor is 0.03mW or less.

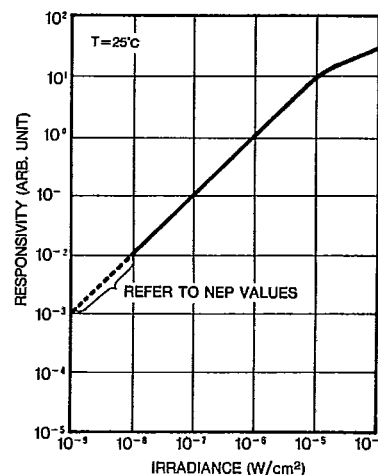
● S/N Ratio vs. Supply Voltage



● S/N Ratio vs. Chopping Frequency



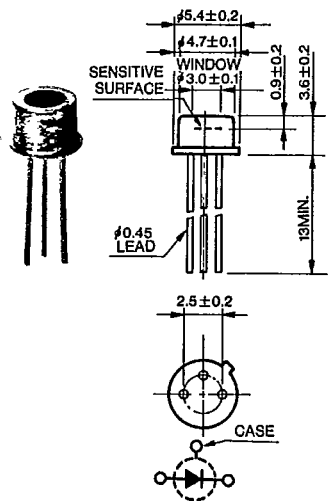
● Linearity



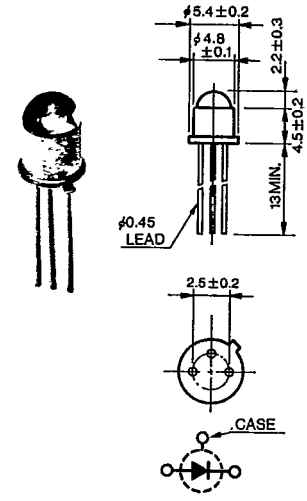
Dimensional Outlines

T-90-20

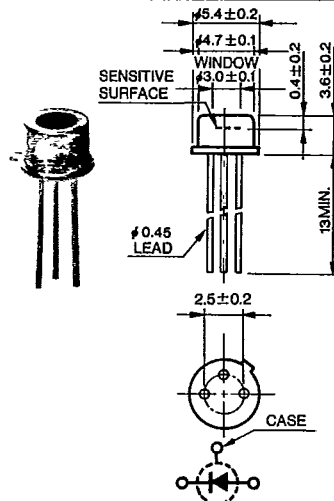
① B1720-04, B2297-02, etc.



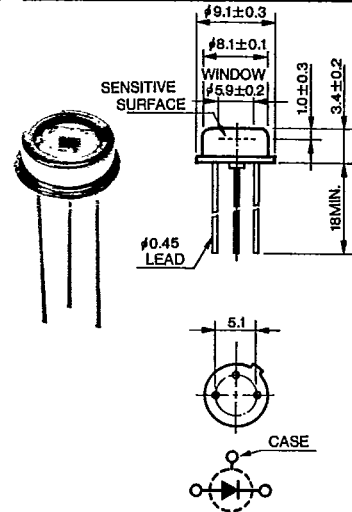
② B1720-05



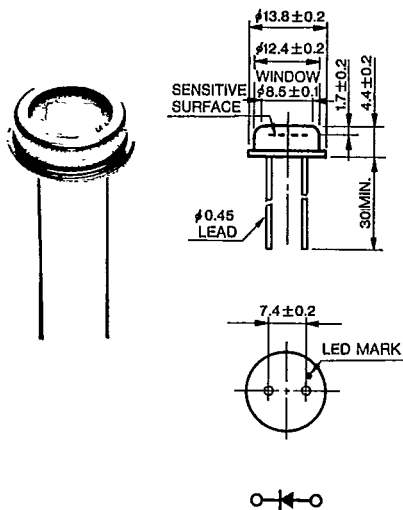
③ B2834, B2834-01



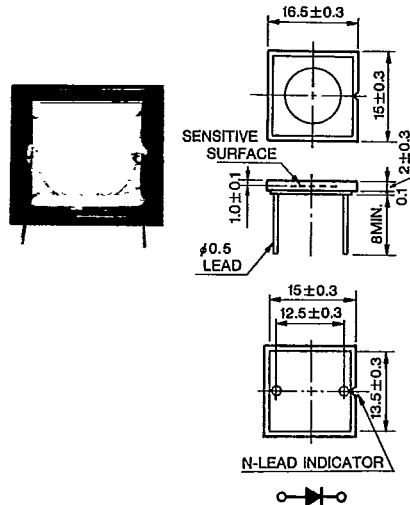
④ B2144, B1918, etc.



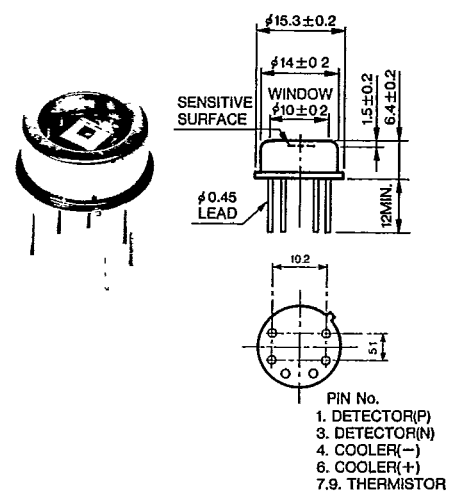
⑤ B1919, B1919-01



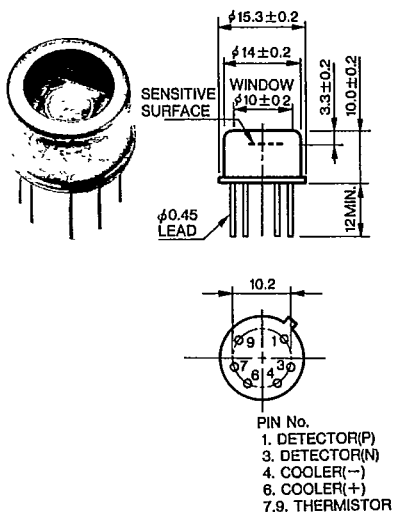
⑥ B1920-01



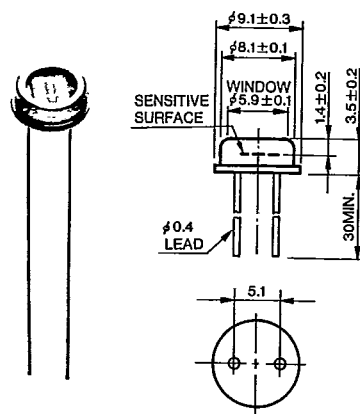
⑦ B2538-01, etc. (1-Stage TE)



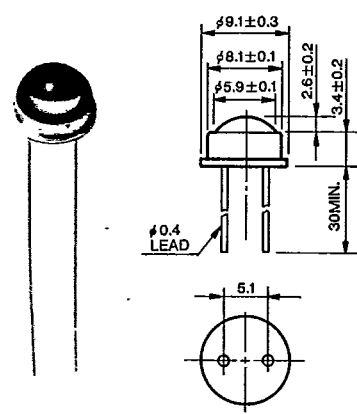
⑧ B2614-01, etc. (2-Stage TE)



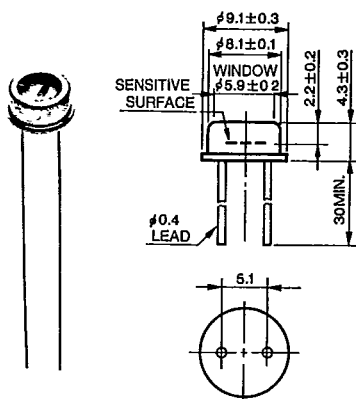
⑨ P394A, P394R, P791



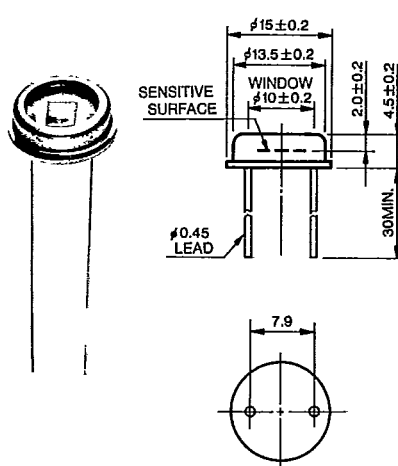
⑩ P3226



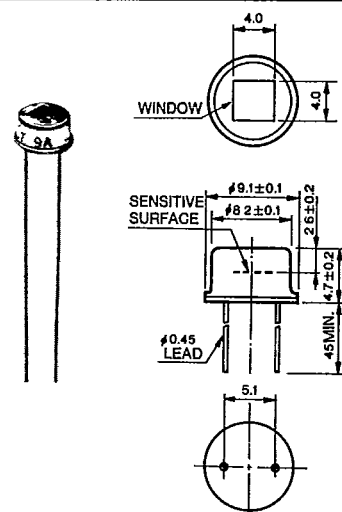
11 P394



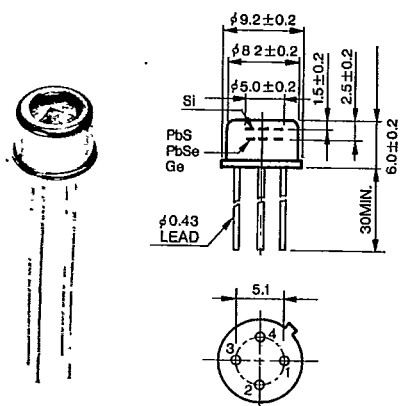
12 P397



13 P3207

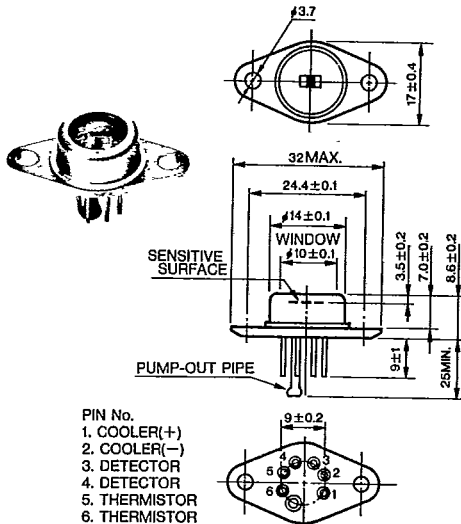


14 K1713-01,K1713-02,K1713-03



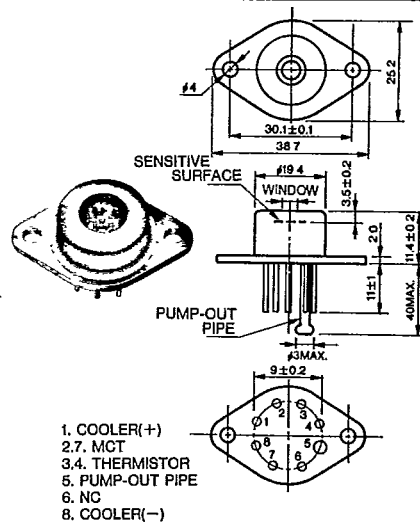
PIN No.
1. Si(N)
2. Si(P)
3. DETECTOR(N)
4. DETECTOR(P)

15 P1026,P903 (1-Stage TE)



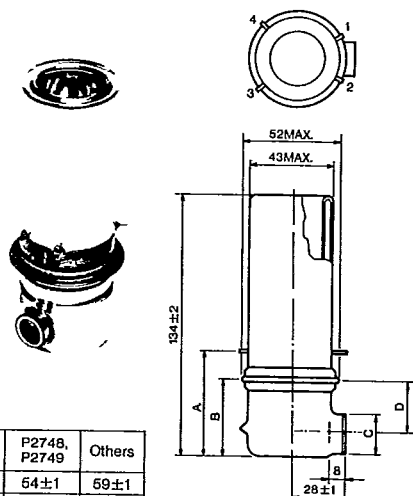
PIN No.
1. COOLER(+)
2. COOLER(-)
3. DETECTOR
4. DETECTOR
5. THERMISTOR
6. THERMISTOR

16 P2750 (3-Stage TE)



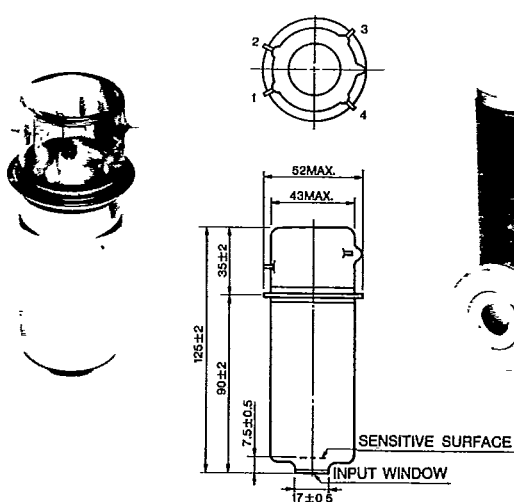
1. COOLER(+)
2.7. MCT
3.4. THERMISTOR
5. PUMP-OUT PIPE
6. NC
8. COOLER(-)

⑪ P2748,B2123,P819, etc.



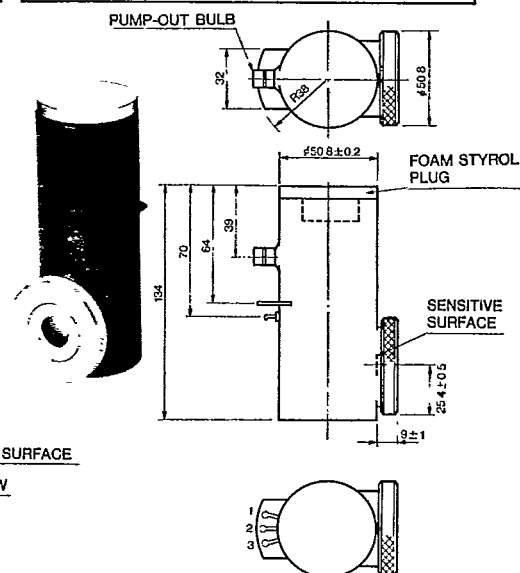
1. DETECTOR(N)
2. DETECTOR(P)
3. NC
4. NC

18 P839-02



1. DETECTOR(N)
2. DETECTOR(P)
3. NC
4. NC

19 P3257



1.3. DETECTOR
2. NC

	P2748, P2749	Others
A	54±1	59±1
B	41±1	44±1
C	19.5±0.5	17±0.5
D	25±0.5	28±0.5