

Infrared detector Accessory

Wide lineups of accessories for infrared detection

Temperature controller C1103 series

C1103 series is a temperature controller designed for thermoelectrically cooled infrared detectors. C1103 series allows easy but accurate temperature setting for the thermoelectric cooler mounted in an infrared detector.

Specifications

Parameter	C1103-04	C1103-05	C1103-07
Applicable detector *1	One-stage/two-stage TE-cooled type PbS, PbSe photoconductive detector, InAs photovoltaic detector, InGaAs, Si, Ge photodiode	Two-stage/three-stage TE-cooled type MCT, InSb photoconductive detector	One-stage TE-cooled type MCT, InSb photoconductive detector
Setting element temperature	-30 to +20 °C	-75 to -25 °C	-30 to +20 °C
Temperature stability	Within ± 0.1 °C		
Temperature control output current	1.3 A Max.		
Power supply	100 V \pm 10 % · 50/60 Hz *2		
Power consumption	30 W		
Dimensions	105 (W) \times 86 (H) \times 190 (D) mm		
Weight	1.9 kg approx.		
Accessories	Instruction manual 4-conductor cable (with a connector, 2 m) A4372-05		

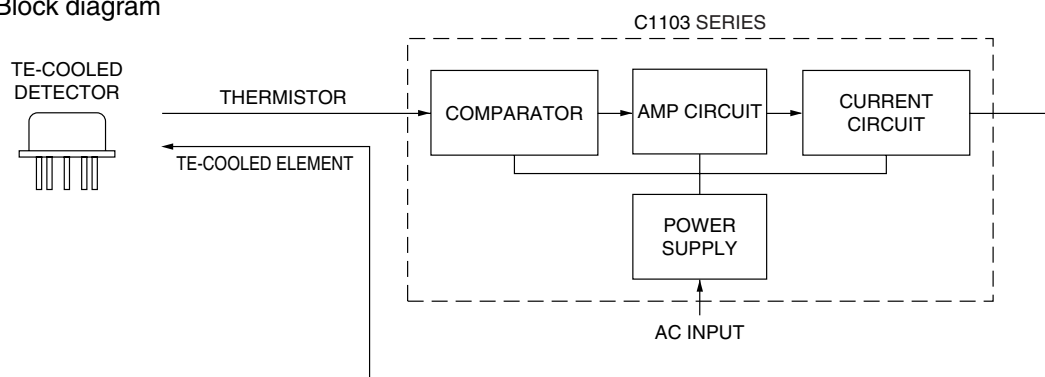
*1: It doesn't correspond to infrared detection module with TE-cooled type preamplifier.

*2: Please specify power supply requirement (AC line voltage) from among 100 V, 115 V and 230 V when ordering.

Absolute maximum ratings

Parameter	Value
Operating temperature	+10 to +40 °C
Operating humidity	90 % Max.
Storage temperature	+10 to +40 °C

Block diagram



KIRD0008EB



C1103-04 conforms to European EMC directives (89/336/EEC) and LVD (73/23/EEC).

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DC power supply for amplifier C3871 series

C3871 series is a ± 15 V power supply that exhibits minimum ripple and allows accurate measurements when used with amplifiers for infrared detectors and infrared detector modules with preamp.

C3871-03 is designed for TE-cooled infrared detector module with preamp.



■ Absolute maximum ratings

Parameter	Value	Unit
Power supply	AC 100 V \pm 10 %, 50/60 Hz *	-
Operating temperature	-5 to +45	°C
Storage temperature	-20 to +60	°C

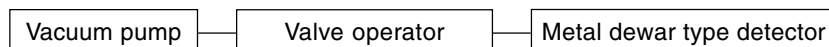
* Please specify power supply requirement (AC line voltage) from among 100 V, 115 V and 230 V when ordering.

Parameter	C3871	C3871-03		C3871-04		Unit
Output voltage	± 15 with respect to GND terminal	± 15	2.5	± 15	+4.5	V
Output current	Continuous ± 150 Max.	Continuous ± 150 Max.	Continuous +2000 Max.	Continuous ± 150 Max.	Continuous +1500 Max.	mA
Input regulation	3	1	25	1	25	mV
Load regulation	5	6	100	6	100	mV
Ripple noise	3	3	25	3	25	mVp-p
Dimensions	75 (W) \times 141 (H) \times 240 (D)	145 (W) \times 142 (H) \times 222 (D)		145 (W) \times 142 (H) \times 222 (D)		mm
Weight	2.2 approx.	3.0 approx.		3.5 approx.		kg

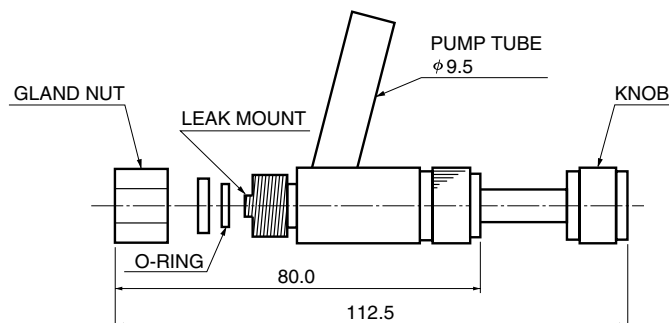
(Typ.)

Valve operator for metal dewar A3515

With this valve operator, metal dewars can be re-evacuated to maintain the desired vacuum level. Refer to the instruction manual for details.



■ Dimensional outline (unit: mm)



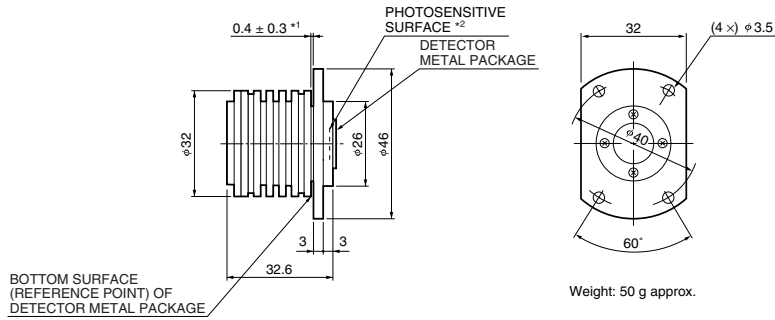
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Heatsink for TE-cooled detector (TO-8, TO-3 package) **A3179 series**

These heatsinks are designed for use with thermoelectrically cooled detector sealed in a 6-pin TO-8, TO-3 package. The cooling (heat dissipation) capacity of A3179 and A3179-03 is about 35 °C relative to the ambient temperature 25 °C, A3179-01 is about 40 °C, and that of A3179-04 is about 85 °C. A3179-03 is designed only for two-color detector K3413 series, A3179, A3179-01 for TO-8, A3179-04 for TO-3.

■ Dimensional outlines (unit: mm, tolerance unless otherwise noted: ± 1)

A3179

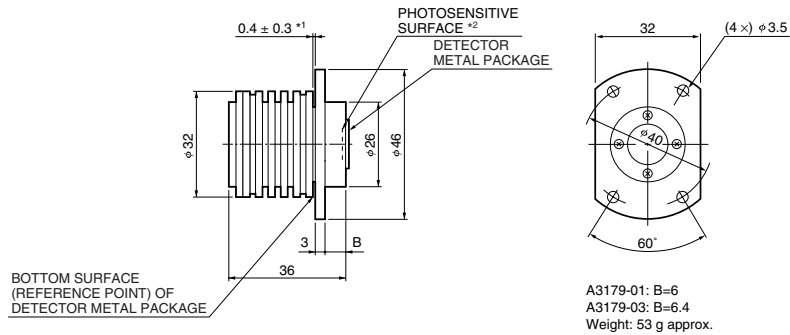


*1: When detector element is installed.

*2: The position of the photosensitive surface differs according to the detector element used. Refer to the dimensional outline for the detector.

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A3179-01, A3179-03

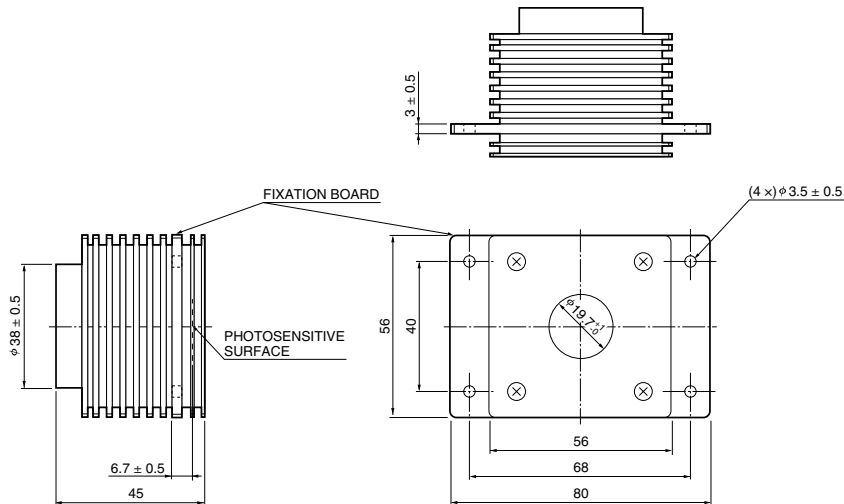


*1: When detector element is installed.

*2: The position of the photosensitive surface differs according to the detector element used. Refer to the dimensional outline for the detector.

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A3179-04



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Chopper C4696

■ Specifications

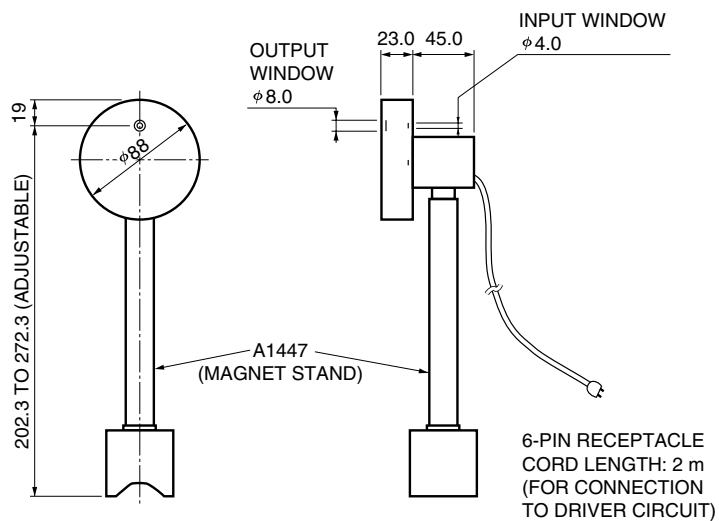
Parameter		Specification
Chopping frequency *1		115 to 380 Hz, 345 Hz Typ. *2
Power supply (V _D)		DC 5 to 13 V, 12 V Typ.
Duty ratio		1: 1
Rotational stability		0.06 %/°C
Sync signal (high level)	Min.	V _D - 0.5 V
	Max.	V _D - 0.2 V
Operating temperature		0 to 50 °C
Maximum current consumption *2		90 mA
Accessory		Magnet stand A1447

*1: Chopping frequency will be 230 to 760 Hz when an optional disc is used.

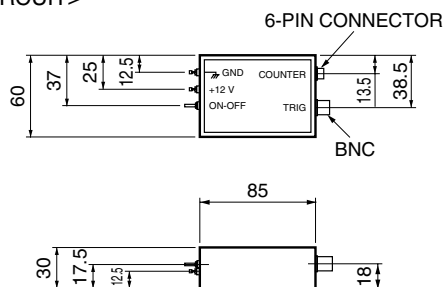
*2: V_D=12 V

■ Dimensional outline (unit: mm)

<CHOPPER>



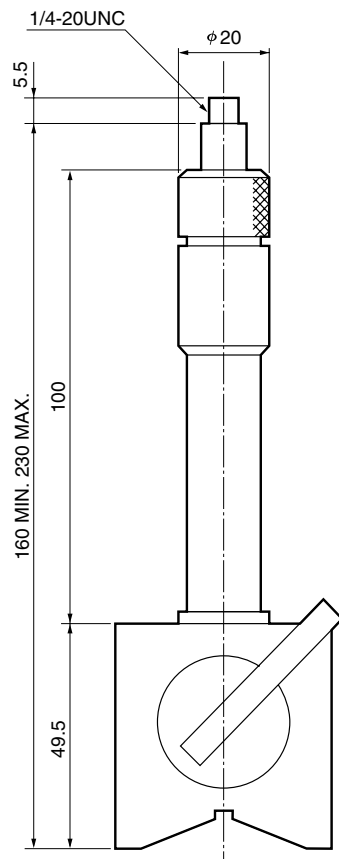
<DRIVER CIRCUIT>



KIRDA0022EA

Magnet stand A1447

■ Dimensional outline (unit: mm)



KIRDA0017EA

HAMAMATSU

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