

# 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 ± 10 % · 50/60 Hz *2		
Power consumption	30 W		
Dimensions	105 (W) × 86 (H) × 190 (D) mm		
Weight	1.9 kg approx.		
Accessories	Instruction manual 4-conductor cable (with a connector, 2 m) A4372-05		

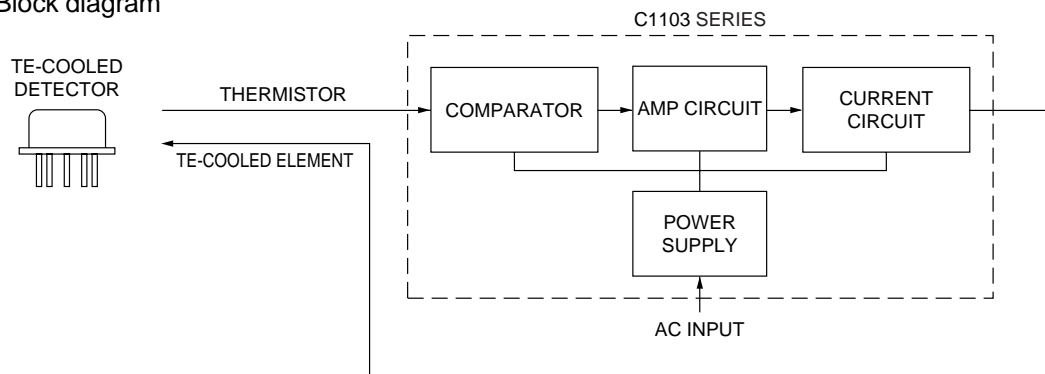
\*1: It doesn't correspond to infrared detection module with TE-cooled type preamplifier.

\*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



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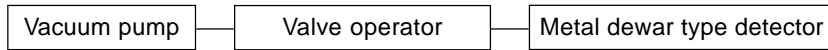
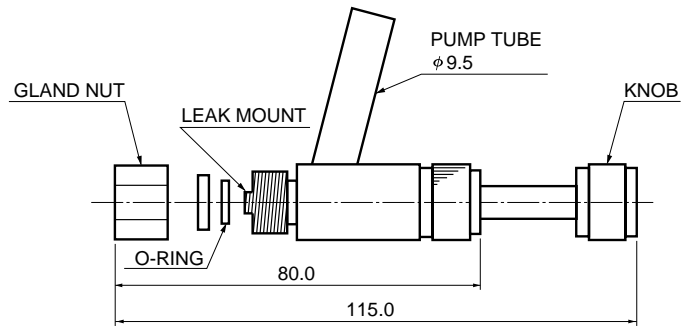
**CE**  
C1103-04 conforms to European EMC directives (89/336/EEC) and LVD (73/23/EEC).

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**SOLID STATE DIVISION**

**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)**

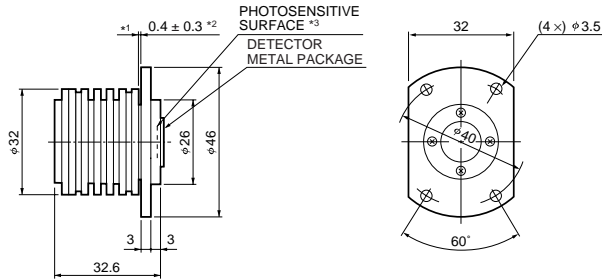
KIRDA0021EB

## 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

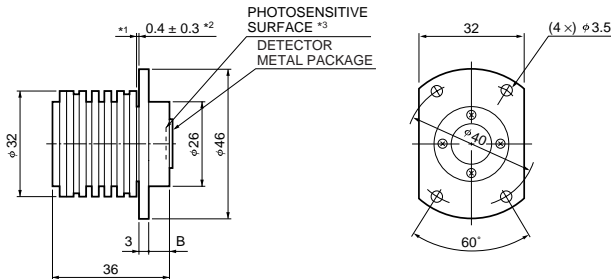


Weight: 50 g approx.

- \*1: Bottom surface (reference surface) of detector metal package
- \*2: When detector element is installed.
- \*3: 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

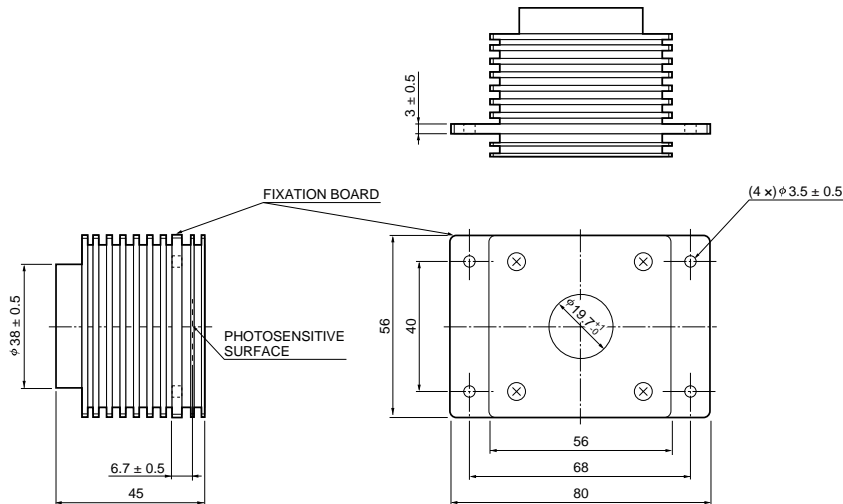


A3179-01: B=6  
A3179-03: B=6.4  
Weight: 53 g approx.

- \*1: Bottom surface (reference surface) of detector metal package
- \*2: When detector element is installed.
- \*3: 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



Weight: 320 g approx.

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## Chopper C4696

### ■ Specifications

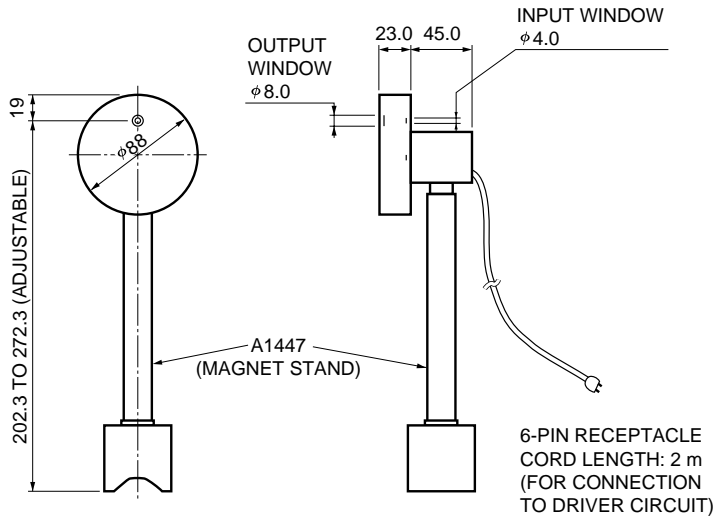
Parameter		Specification
Chopping frequency *1		115 to 380 Hz, 345 Hz Typ. *2
Power supply (V <sub>D</sub> )		DC 5 to 13 V, 12 V Typ.
Duty ratio		1: 1
Rotational stability		0.06 %/°C
Sync signal (high level)	Min.	V <sub>D</sub> - 0.5 V
	Max.	V <sub>D</sub> - 0.2 V
Operating temperature		0 to 50 °C
Maximum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

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

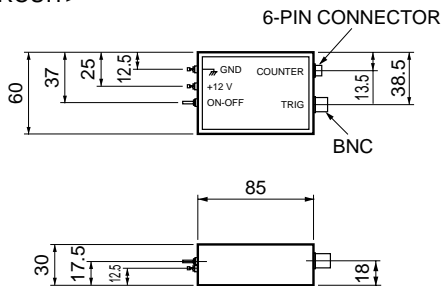
\*2: V<sub>D</sub>=12 V

### ■ Dimensional outline (unit: mm)

<CHOPPER>



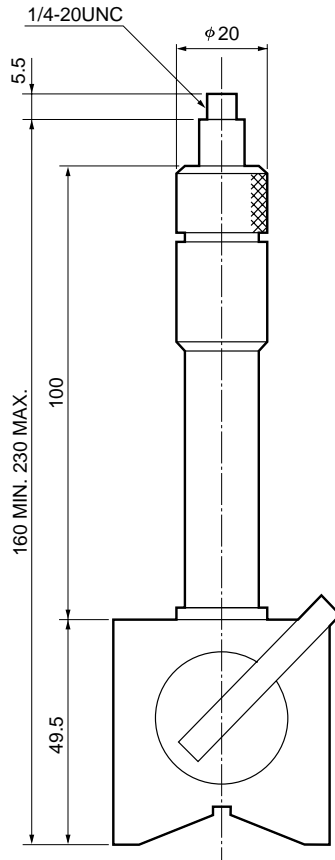
<DRIVER CIRCUIT>



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**Magnet stand A1447**

## ■ Dimensional outline (unit: mm)



KIRDA0017EA

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