

## **AIP** series

**AIP** is a new generation of transimpedance, AC or DC coupled preamplifiers. It is designed to operate with either biased or non-biased VIGO detectors. AIP is "all-in-one" device — a preamplifier is integrated with a fan and a thermoelectric cooler controller in a compact housing. It is very convenient and user-friendly device, thus can be easily used in a variety of applications.

#### **Features**

- Integrated TEC controller and fan
- Frequency bandwidth up to 250 MHz
- Single power supply
- DC monitor
- Optimised for effective heat dissipation
- Compatible with optical accessories
- Cost effective OEM version available
- Universal and flexible



## Specification (T<sub>a</sub> = 20°C)

Specification (1a - 20 C)									
Parameter	Typical value	Conditions, remarks							
Low cut-off frequency f₀, Hz	DC, 10, 100, 1k, 10k								
High cut-off frequency fhi, Hz	100k, 1M, 10M, 100M, 250M								
Transimpedance K <sub>i</sub> , V/A	up to 200k	fixed							
Output impedance $R_{out}$ , $\Omega$	50								
o	±1.8	$f_{hi} \leq 1 \text{ MHz}, R_L = 1 \text{ M}\Omega^{*)}$							
Output voltage swing V <sub>out</sub> , V	±0.7	$f_{hi} > 1$ MHz, $R_L = 50 \Omega^*$							
Output voltage offset Voff, mV	max ±20**)								
Power supply voltage V <sub>sup</sub> , V	+5 +12	with 2TE and 3TE cooled detectors with 4TE cooled detectors							
Power supply current I <sub>sup</sub> , mA	max ±50								
Ambient operating temperature Ta, °C	10 to 30								
Signal output socket	SMA	RF output							
DC output socket	SMA	DC monitor							
Supply socket	DC 2.1/5.5 DC 2.5/5.5	$V_{sup} = +12 V$ $V_{sup} = +5 V$							
Mounting hole	M4								
Fan	yes								

<sup>\*)</sup> R<sub>L</sub> – load resistance

# Types of VIGO detectors that can be integrated with AIP preamplifier

- Photoconductive
  - PC-2TE, PC-3TE, PC-4TE
- Photoconductive optically immersed PCI-2TE, PCI-3TE, PCI-4TE
- Photovoltaic
  - PV-2TE, PVA-2TE, PV-3TE, PV-4TE
- Photovoltaic optically immersed PVI-2TE, PVIA-2TE, PVI-3TE, PVI-4TE
- Photovoltaic multiple junction PVM-2TE
- Photovoltaic multiple junction optically immersed PVMI-2TE, PVMI-3TE, PVMI-4TE

## **Code description**

	Type		f <sub>lo</sub> , Hz		f <sub>hi</sub> , Hz		Version
	AIP -		DC 10		100 1M		
		100	_	10M	-	<b>S</b> *) (with package)	
		1k		100M			
	*\ ~		10k	ļ	250M		

<sup>\*)</sup> OEM version available upon request.

### **Included accessories**

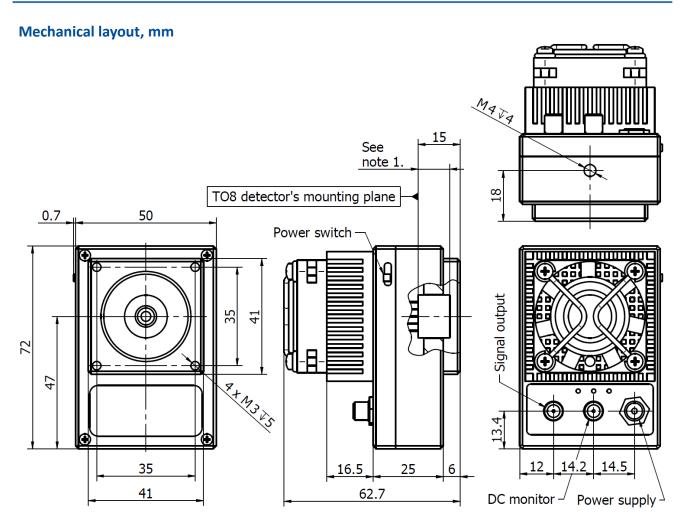
2×SMA-BNC cables + AC adaptor

### **Dedicated accessories**

- OTA optical threaded adapter
- DRB-2 base mounting system

<sup>\*\*)</sup> Measured with equivalent resistor at the input instead of the detector, it is to avoid the environmental thermal radiation impact.





Notes:

TO8 detector dimensions in the "TO8 technical drawing".