AIP series

DATASHEET

“All-in-one” transimpedance preamplifier

FEATURES

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

INCLUDED ACCESSORIES

2 pcs of SMA-BNC cable
1 pc of AC adaptor

DEDICATED ACCESSORIES

OTA optical threaded adapter
DRB-2 base mounting system

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, PV-3TE, PV-4TE
Photovoltaic optically immersed: PVI-2TE, PVI-3TE, PVI-4TE
Photovoltaic multi-junction: PVM-2TE
Photovoltaic multi-junction optically immersed: PVMI-2TE, PVMI-3TE, PVMI-4TE

PREAMPLIFIER CODE DESCRIPTION

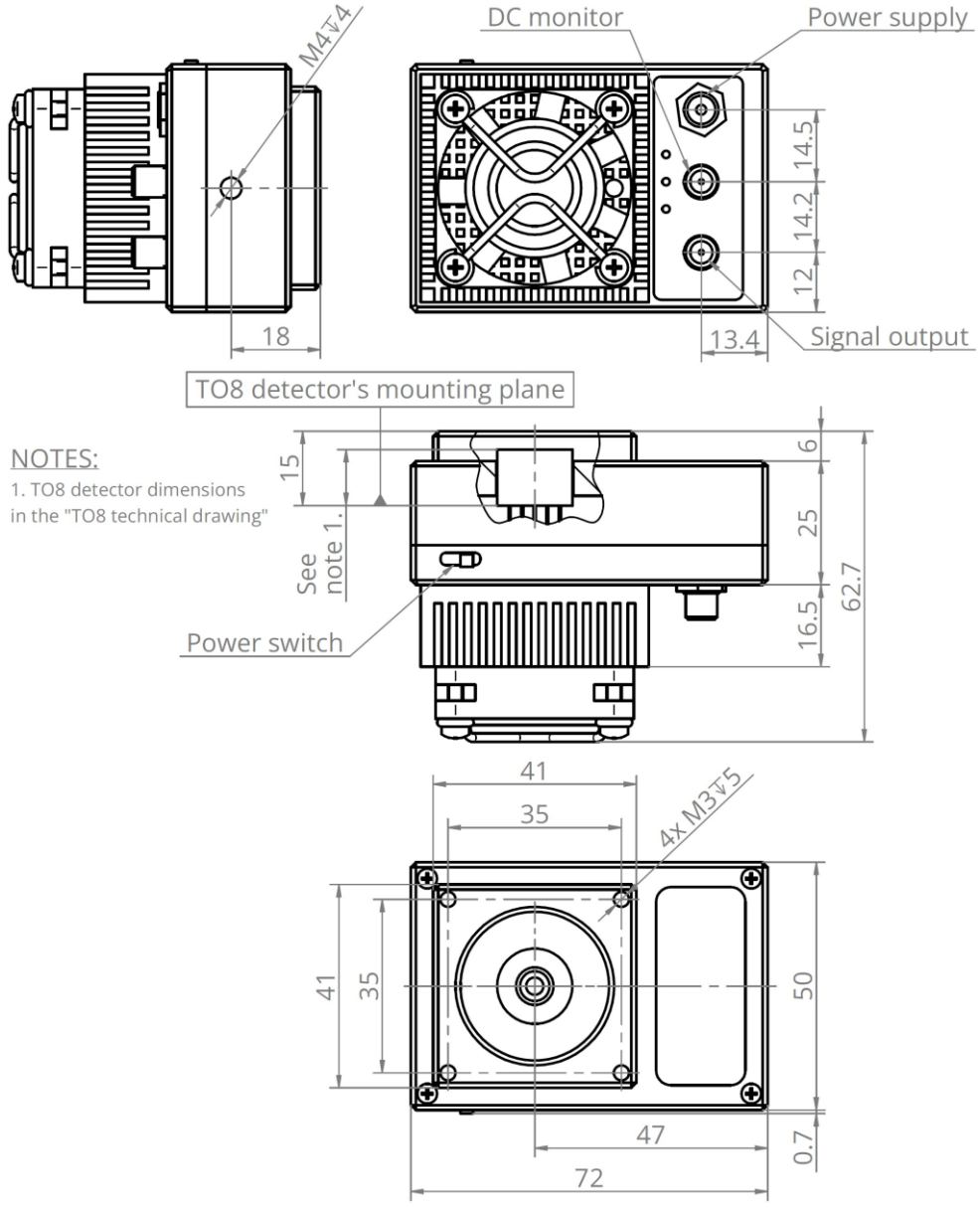
Type		f_{lo}, Hz		f_{hi}, Hz		Version
AIP	–	DC 10 100 1k 10k	–	100k 1M 10M 100M 250M	–	S*) (with the package)

*) OEM version available upon request

SPECIFICATION (T_{amb} = 293 K)

Parameter	Conditions/remarks	Value	Unit
Low cut-off frequency, f_{lo}		DC, 10, 100, 1k, 10k	Hz
High cut-off frequency, f_{hi}		100k, 1M, 10M, 100M, 250M	Hz
Transimpedance, K_i		up to 200	kV/A
Output impedance, R_{out}		50	Ω
Output voltage swing, V_{out}	$f_{hi} \leq 1$ MHz, R_{load} = 1 MΩ	±1.8	V
	$f_{hi} \geq 1$ MHz, R_{load} = 50 Ω	±0.7	V
Output voltage offset, V_{off}		max. ±20	mV
Power supply voltage, V_{sup}	With 2TE and 3TE cooled detectors	+5	V
	With 4TE cooled detectors	+12	V
Power supply current, I_{sup}	With 2TE cooled detectors	max. 1.2	A
	With 3TE cooled detectors	max. 0.5	A
	With 4TE cooled detectors	max. 0.45	A

MECHANICAL LAYOUT (Unit: mm)



ABSOLUTE MAXIMUM RATINGS

Parameter	Test conditions/remarks	Value	Unit
Maximum incident optical power density	Continuous wave (CW) or single pulses >1 µs duration	2.5	W/cm^2
	Single pulses <1 µs duration	10	kW/cm^2
Ambient operating temperature, T_{amb}		10 to 30	°C
Storage temperature, T_{stg}		-20 to 85	°C
Humidity	No dew condensation	10 to 90	%

Stresses beyond those listed under Absolute Maximum Ratings may cause permanent damage to the device.
Constant or repeated exposure to absolute maximum rating conditions may affect the quality and reliability of the device.