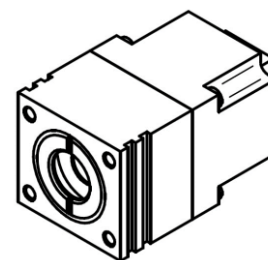


SIP-TO8 SERIES

DATASHEET

Small-size, for TE-cooled detectors, transimpedance amplifiers



FEATURES

- Compatible with VIGO TE-cooled IR detectors in the TO8 package
- Frequency bandwidth: up to 250 MHz
- Small size
- AC or DC coupled
- External TEC controller required
- External heatsink required
- Compatible with optical accessories
- Adjustable gain (optional, modules with a frequency bandwidth of up to 100 MHz)

INCLUDED ACCESSORIES

- 1 pc of MMCX-BNC cable
- 1 pc of AMP2x4-DB9 or AMP2x4-DUBOX2x5 cable

DEDICATED ACCESSORIES

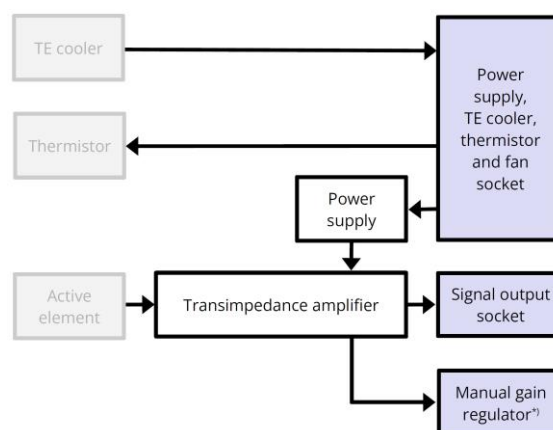
- [PTCC-01 TEC controller series](#)
- [Smart Manager software](#): freeware
- [MHS-2 heatsink](#)

CODE DESCRIPTION

Type	f_{lo} , Hz	f_{hi} , Hz	Detector package	Gain adjustment
SIP	DC	100k	TO8	G*) (with gain adjustment) NG (without gain adjustment)
	10	1M		
	100	10M		
	1k	100M		
	10k	250M		

*) Only for SIP amplifiers with $f_{hi} \leq 100$ MHz

SCHEMATIC DIAGRAM

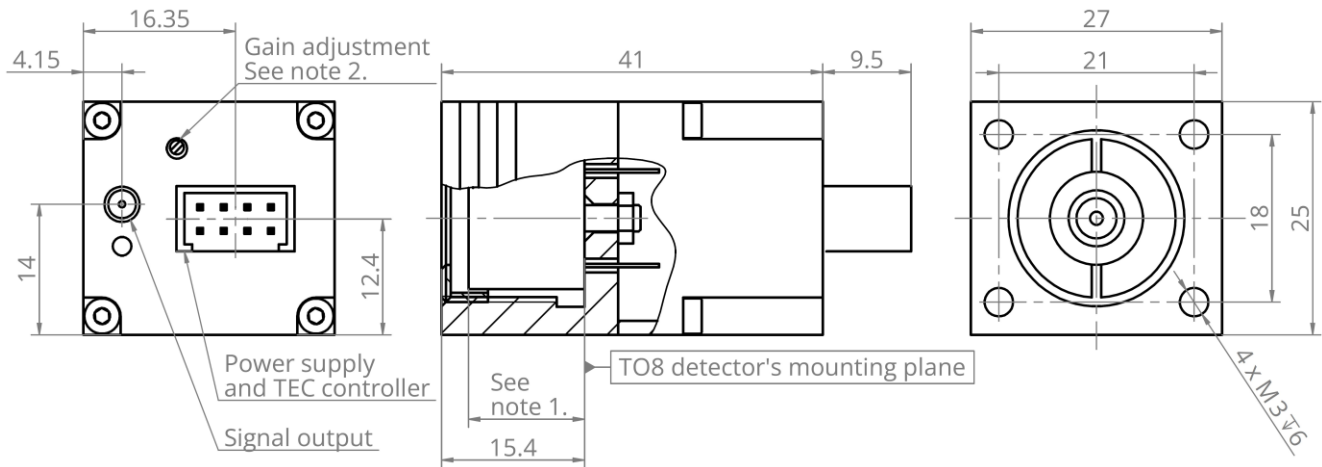


*) Only for the SIP-xx-xx-TO8-G version.

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	Tunable, only the SIP-xx-xx-TO8-G version	up to 100	kV/A
Transimpedance range, $K_{i\ max}/K_{i\ min}$	Depending on the f_{hi} , only the SIP-xx-xx-TO8-G version	up to 5	-
Output impedance, R_{out}		50	Ω
Output voltage swing, V_{out}	$f_{hi} \leq 1$ MHz, $R_{load} = 1$ M Ω	± 10	V
	$f_{hi} > 1$ MHz, $R_{load} = 50$ Ω	± 1	
Output voltage offset, V_{off}		max. ± 20	mV
Power supply voltage, V_{sup}	$f_{hi} \leq 1$ MHz, $R_{load} = 1$ M Ω	± 15	V
	$f_{hi} > 1$ MHz, $R_{load} = 50$ Ω	± 9	
Power supply current, I_{sup}		max. ± 50	mA
TEC voltage, V_{TEC}	With 2TE cooled detectors	max. 1.0	V
	With 3TE cooled detectors	max. 3.6	
	With 4TE cooled detectors	max. 8.3	
TEC current, I_{TEC}	With 2TE cooled detectors	max. 1.2	A
	With 3TE cooled detectors	max. 0.45	
	With 4TE cooled detectors	max. 0.4	
Weight		52	g

MECHANICAL LAYOUT (Unit: mm)

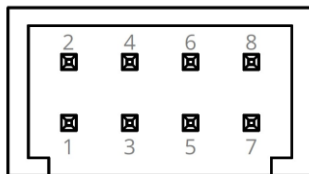


Notes:

1. TO8 detector dimensions in the TO8 package technical drawings.
2. Only for the SIP-xx-xx-TO8-G version.

POWER SUPPLY, TEC AND THERMISTOR SOCKET PINOUT

AMPMODU 280389-2 (male)



Pin No.	Symbol	Function
1	-Vsup	Power supply input (-)
2	TH2	Thermistor output (2)
3	DATA	Data
4	TEC-	TEC supply input (-)
5	GND	Ground
6	TH1	Thermistor output (1)
7	+Vsup	Power supply input (+)
8	TEC+	TEC supply input (+)

ABSOLUTE MAXIMUM RATINGS

Parameter	Test conditions, remarks	Value	Unit
Ambient operating temperature, T_{amb}		10 to 30	°C
Storage temperature, T_{stg}		-20 to 50	°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.