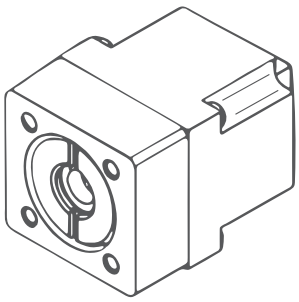
SIP-TO39 SERIES



Small-size transimpedance amplifiers

FEATURES

- Compatible with VIGO uncooled IR detectors in the TO39 (3 pins) package
- Frequency bandwidth: up to 250 MHz
- Adjustable gain (optional, modules with a frequency bandwidth of up to 100MHz)
- AC or DC coupled
- Small size
- Compatible with optical accessories

INCLUDED ACCESSORIES

- 1 pc of MMCX-BNC cable
- 1 pc of AMP2×4-DB9 cable

DEDICATED ACCESSORIES

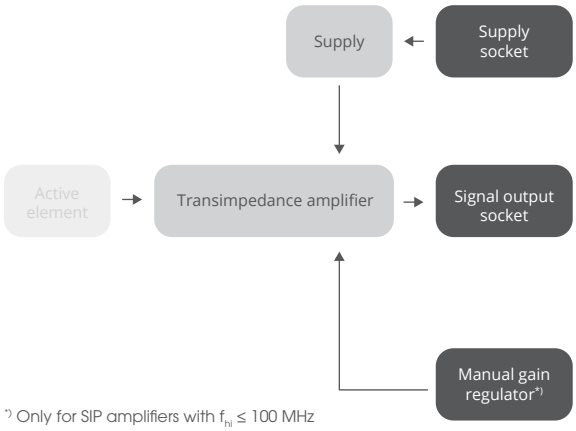
- PPS-03 amplifier power supply series (p. 149)

CODE DESCRIPTION

Type		f_{lo}, Hz		f_{hi}, Hz		Detector package		Gain adjustment
SIP	-	DC 10 100 1k 10k	-	100k 1M 10M 100M 250M	-	TO39	-	G*) (with gain adjustment) NG (without gain adjustment)

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

SCHEMATIC DIAGRAM

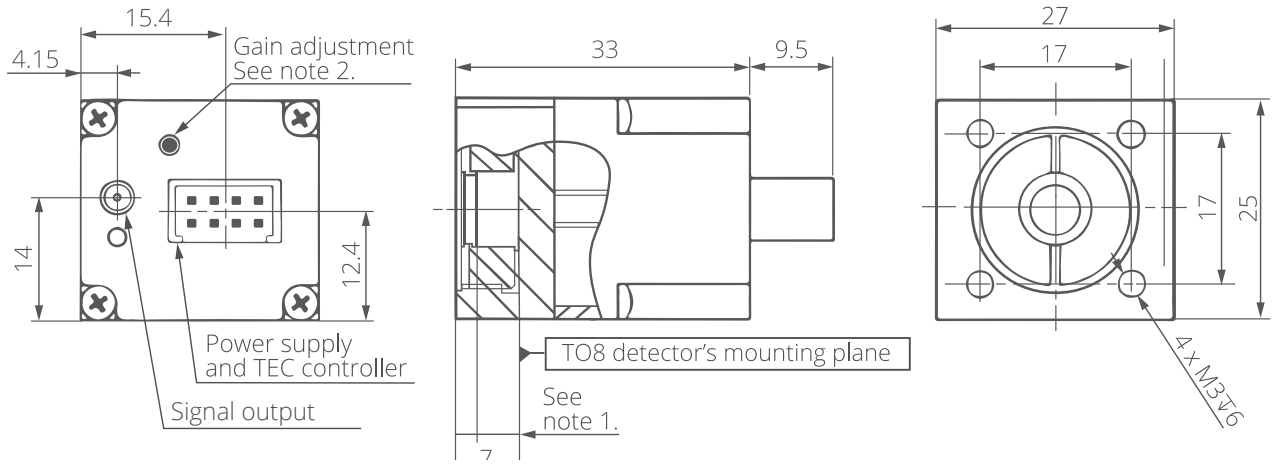


*) Only for SIP amplifiers with $f_{hi} \leq 100$ MHz

SPECIFICATION (T_{amb} = 293 K)

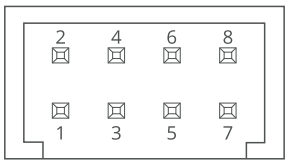
Parameter	Conditions/remarks	Value	Unit
Low cut-off frequency, f_{lo}		DC, 10, 100, 1k, 10k	Hz
High cut-off frequency, f_{hi}		100k, 1M, 10M, 100M, 250M	Hz
Transimpedance, K_i	Tunable, only the SIP-xx-xx-TO39-G version	up to 100	kV/A
Transimpedance range, $K_{i\,max}/K_{i\,min}$	Depending on the $f_{hi,}$ only the SIP-xx-xx-TO39-G version	up to 5	-
Output impedance, R_{out}		50	Ω
Output voltage swing, V_{out}	$f_{hi} \leq 1$ MHz, R_{load} = 1 MΩ	±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 MΩ	±15	V
	$f_{hi} > 1$ MHz, R_{load} = 50 Ω	±9	
Power supply current, I_{sup}		max. ±50	mA
Weight		52	g

MECHANICAL LAYOUT (Unit: mm)



Notes:
1. TO39 detector dimensions in the TO39 package technical drawings (p. 197, 198, 199)
2. Only for the SIP-xx-xx-TO39-G version.

POWER SUPPLY SOCKET PINOUT



AMP2×4 (PART NO. 280389-2)

Pin No.	Symbol	Function
1	-Vsup	Power supply input (-)
2	NC	Not connected
3	GND	Ground
4	NC	Not connected
5	GND	Ground
6	NC	Not connected
7	+Vsup	Power supply input (+)
8	NC	Not connected

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.