

**NEW**

MODULE

# Photosensor amplifier C8366

Current-to-voltage conversion amplifier for high-speed Si PIN photodiode



## Features

- Wide band  
DC to 100 MHz Typ. (at -3 dB; varied by the photodiode used)
- Easy photodiode connection  
Just inserting the photodiode lead pins makes the connection. (Compatible with TO-8, TO-5 and TO-18 packages)
- Adjustable response speed  
Response speed can be adjusted by a variable resistor easily
- Compact size

## Applications

- High-speed photometry
- Laser monitors
- Optical power meters

## ■ Absolute maximum ratings

Parameter	Symbol	Value	Unit
Supply voltage	Vs	±18	V
Operating temperature	Topr	0 to +50	°C
Storage temperature	Tstg	0 to +70	°C

## ■ Electrical and optical characteristics (Ta=25 °C, Vs= ±15 V)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Conversion impedance	Rf		-	1 × 10 <sup>3</sup>	-	V/A
Frequency bandwidth	fc	Limited to that of C8366	DC	1 × 10 <sup>8</sup>	-	Hz
Maximum output amplitude	VFS	RL=1 kΩ	+3	-	-	V
Output offset voltage	Vos	Without photodiode	-	±1	-	mV
Equivalent noise input current	In	Without photodiode, f=100 MHz	-	5 × 10 <sup>-11</sup>	-	A/Hz <sup>1/2</sup>
Output resistance	Ro		-	50	-	Ω
Photodiode reverse bias voltage output	VR		-	-12	-	V
Current consumption	Is	Without photodiode	-	-	±30	mA

## ■ Connectable Hamamatsu Si PIN photodiodes

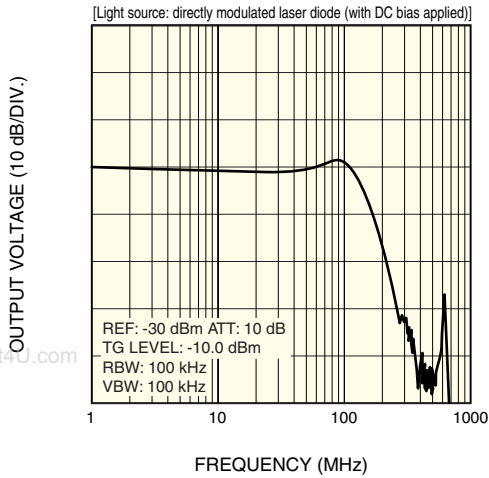
TO-8 type: S3071

TO-5 type: S3399, S3883 \*

TO-18 type: S5821 series, S5971, S5972 \*, S5973 series \*

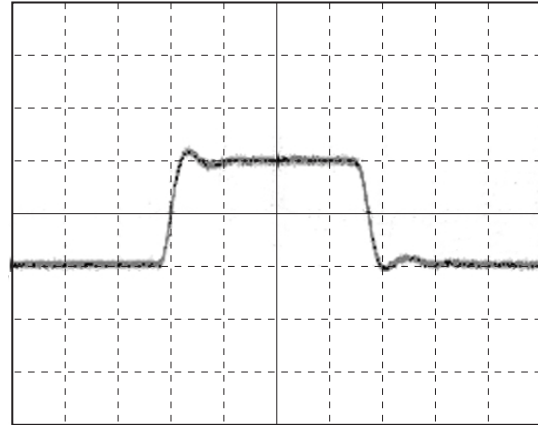
\* Frequency bandwidth is limited to that of C8366 when used with C8366.

■ Frequency response example (with S5972 connected)



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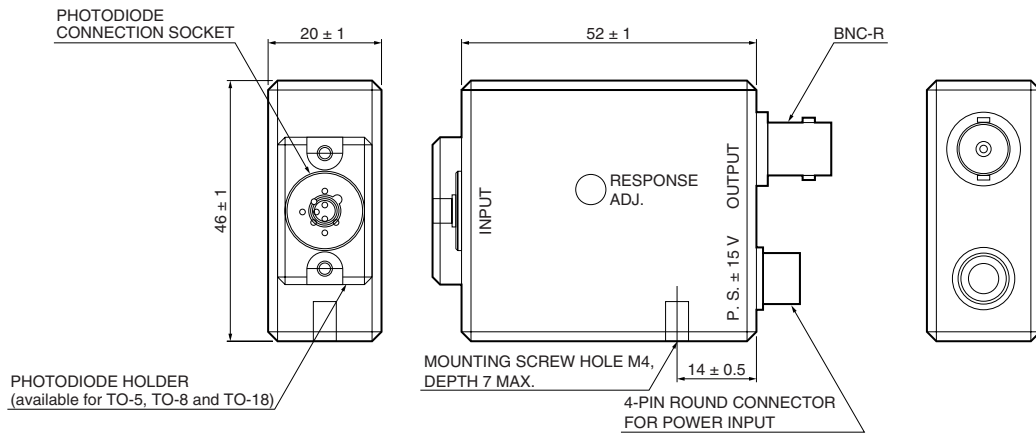
■ Output response waveform by input of step function light (with S5972 connected)



50 mV/DIV, 10 ns/DIV.

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■ Dimensional outline (unit: mm)



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■ Accessories

Power plug: HR10-7P-4S [HIROSE, with 500 mm long lead wires (AWG24)]

Photodiode holder: One each for TO-5, TO-8 and TO-18