

ORDER/QUOTE REQUEST

Low frequency Amplifier for infrared detector

LF SERIES

Name:

Email:

Institution/Company/Laboratory:

Address:

Country:

Please specify the following parameters that match your needs (*see LF amplifier series datasheet for additional information*). *If you have any trouble to fill this request, contact AltRD.*

AltRD will then conduct a feasibility study based on your request. If some changes are needed, AltRD will contact you before sending you a quote.

	PARAMETER DESCRIPTION	REQUESTED VALUE
1	<ul style="list-style-type: none"> - Amplifier documentation - Electric model identification - Transfer function measurement - Cut-off frequency measurement 	Included
AMPLIFIER		
2	Amplifier bandwidth High cutoff frequency @-3dB	<i>(Higher bandwidth = higher rms noise. For low noise application, keep the bandwidth as low as possible)</i> <input type="checkbox"/> Frequency: (< 10 kHz) <input type="checkbox"/> Highest possible (<i>according to gain [4]</i>)
3	Low cutoff frequency @-3dB	<i>(Removing low frequency guaranties that output signal stays centered on 0V. It is a key factor for very small signal analysis, since it allows the highest sensitivity level to be used in the acquisition device. Common value for low cut-off frequency is between 0.01 to 1 Hz)</i> <input type="checkbox"/> Frequency: (> 0.01 Hz) <input type="checkbox"/> DC (<i>If required, it is recommended to include option [12] "auto-zero system" below for small signal analysis</i>)
4	Gain	<i>(For photovoltaic detector, standard gain is 10⁵ to 10⁶ V/A. For photoconductive detector, standard gain is 10 to 100 V/Ohm)</i> <input type="checkbox"/> Gain: <input type="checkbox"/> Highest possible (<i>according to max. frequency [2]</i>)

DETECTOR		
5	Detector model and manufacturer	<i>(Specify the detector model)</i>
6	Detector type	<p><i>(To design your amplifier, we need to know your detector type. Please check the appropriate detector)</i></p> <p><input type="checkbox"/> Unknown <i>(if you have no idea. We will rely on your detector model [5])</i></p> <p><input type="checkbox"/> Photoconductive type <i>(if your detector type is photoconductive, i.e. electric resistance varying with incoming radiation and if you know the value and the bias current. Higher current increases the sensitivity but the noise as well)</i></p> <p>Resistance= Ohm Current=.....mA</p> <p><input type="checkbox"/> Photovoltaic type with standard 0V biasing</p> <p><input type="checkbox"/> Photovoltaic type <i>(With custom biasing voltage. Please specify the corresponding detector current and its dynamic resistance)</i></p> <p>Voltage= V Current= mA</p> <p>Dynamic resistance=..... Ohm</p>
OUTPUTS		
7	Output impedance	<input type="checkbox"/> Default impedance (0.1 to 10 kOhm) <input type="checkbox"/> 50 Ohm output impedance (+100€) <i>(increase current consumption by at least 4mA)</i>
8	Additional output	<input type="checkbox"/> Add second output (+200€) <i>(increase current consumption by at least 10mA)</i> Gain: Low cut-off frequency (DC / >0.01 Hz): High cut-off frequency (< 10kHz):
9	Digital output (USB)	<p><i>(If needed, an analog-to-digital converter can be integrated. An additional input is added which can be used to synchronize digital conversions. Data are sent using USB connection. A dedicated power supply is added to keep noise low).</i></p> <input type="checkbox"/> None <input type="checkbox"/> 12 bits digital output (+300€) <input type="checkbox"/> 24 bits digital output (+600€)
POWER SUPPLY		
10	Power supply connectors	<input type="checkbox"/> 3x banana socket 4mm isolated <input type="checkbox"/> 3x banana cable 4mm isolated <input type="checkbox"/> Shielded connector (DIN) and 1m shielded cable with no connector at the end (+50€) <input type="checkbox"/> Internal battery, with 3x internal banana socket 4mm

11	Power supply for detector	<p><i>(For now noise operation, a dedicated power supply can be used to power the detector, instead of using a shared power supply between amplifiers and detector. This option is only available with photoconductive detector and with non-zero biased photovoltaic detector.)</i></p> <p><input type="checkbox"/> Dedicated power supply <input type="checkbox"/> Dedicated power supply + batteries</p>
11	2x batteries 7.4V or 12V 2Ah Li-Ion	<p><input type="checkbox"/> No <input type="checkbox"/> Internal batteries (no connector) (+200€ to +300€) <input type="checkbox"/> External batteries (+4mm banana isolated connector) (+100€ to +200€)</p>
OPTIONS		
12	Auto-zero system	<p><i>(Use this option only if low cut-off frequency is DC. An additional electronic system is integrated that will adjust the output signal to keep it centered on 0V. The "zero" correction mechanism is triggered manually or externally using falling edge TTL signal. See datasheet of RD-HS series for details)</i></p> <p><input type="checkbox"/> No <input type="checkbox"/> Yes (+1 000€)</p>
13	Electronic component kit	<p><i>(AltRD allows the user to change electronic components of the amplifier to adapt and optimize the amplifier to the user needs. This kit contains high quality resistors and capacitors to change the gain and the bandwidth, as well as low temperature soldering paste. Order the component kit if you plan to replace components yourself. In that case, the warranty is void even if the change is done under the supervision of AltRD).</i></p> <p><input type="checkbox"/> No <input type="checkbox"/> Yes (+100€)</p>
14	Battery charger SkyRC B6AC V2	<p><input type="checkbox"/> No <input type="checkbox"/> Yes (+120€)</p>