

# MOD-01/03 & 01/04

Detector, Preamplifier, Shaping unit in a single Enclosure



## Short description + Technical Data



In a large number of OEM applications, Alpha- and Beta radiation detection units are required which are providing high noise immunity, simple interfacing and small form factors. The modules MOD-01/03 and MOD-01/04 offer a perfect solution for that. They combine a light-shielded, ion-implanted detector, a charge sensitive preamplifier and a shaping amplifier inside a rugged and small enclosure. Several detector sizes are available.

The Gaussian shaped output signal is perfectly suited for spectroscopy applications as well as simple counting systems.

The modules can be connected directly to our SPECTRA multi-channel analysers. In case of connection to existing NIM systems, an additional linear gain amplifier ( $G = 5$ ) can be necessary, depending on the kind equipment.

Because of the low power requirements the units are a very good choice for battery powered instrumentation. For example, the MOD-01/04 needs only a single operation voltage between 3 and 5.5 Volts and a bias voltage between 10 and 50 Volts. For Alpha counters, both, power supply and bias can be connected to 5 Volts.

### Technical Data

Type	01/03 - 150	01/03 - 400	01/04 - 150	01/04 - 400
Sensitive area [mm <sup>2</sup> ]	150	400	150	400
Bias voltage [V]	10 .. 35 (5*)	10 .. 35 (5*)	10 .. 35 (5*)	10 .. 35 (5*)
FWHM (Alpha) [keV]	< 20	< 30	< 40	< 60
Pulse width [ $\mu$ s]	12	12	50	50
Pulse rise time [ $\mu$ s]	5	5	20	20
Gain [mV/MeV]	180	180	100	100
Dimensions [mm]	34 (D) x 30.5	34 (D) x 30.5	32 (D) x 13.5	32 (D) x 13.5
Supply voltage [V]	+/- 5	+/- 5	+3 .. +5.5	+3 .. +5.5
Current [mA]	< +/- 15	< +/- 15	< 2	< 2
Electrical connection	5-wire cable axial or radial (max. 10m)	5-wire cable axial or radial (max. 10m)	4-wire cable radial (max. 10m)	4-wire cable radial (max. 10m)

\*) 5V only for Alpha gross counting, Alpha-Spectroscopy and Beta counting require at least 10V bias

This specification sheet is for information purposes only and is subject to change without notice. SARAD GmbH makes no warranties, expressed or implied, in this product summary. © SARAD GmbH. All rights reserved.

