



Q-MACS Basic IRDM

The Q-MACS Infrared Detector module is a compact detector device for infrared absorption spectroscopic purposes. It includes an ultra-low-noise pre-amplifier, which is available in two bandwidth versions for detection of fast and continuous wave signals respectively. The temperature controller, for driving the thermo electric cooling elements, is available in digital and analogue implementation. The analogue temperature controller provides lowest noise behaviour, but requires the use of water cooling for long term runs. The detector exterior dimensions are very small-sized. The Q-MACS Infrared Detector Module allows on-line measurements and can be utilized for research and industrial applications.



general

dimensions	25mm x 25mm x 50mm
weight	62g
supply voltage	+5V/2A on Binder RD04 Serie 707
detectors	e.g. Vigo PVI-2TE/3TE, PCI-2TE/3TE

pre-amplifier IRDM-600

input voltage	±2mV
output voltage	±0.2Vp-p @ 50Ohm, SMA connector
gain	38 dB
bandwidth	10kHz - 600MHz
bias	adjustable up to 10mA

pre-amplifier IRDM-5

input voltage	±4mV
output voltage	±2Vp-p @ 1MOhm, SMA connector
gain	60 dB
bandwidth	10Hz - 5MHz
bias	adjustable up to 10mA

temperature controller

max. TEC voltage	1.8V
max. TEC current	±1.5A
temperature range	200K to 240K, 235K typ.
heat sink	air or water cooling