

PML-16-C

16-Channel Photomultiplier Head

16- channel photomultiplier head for bh time-correlated single photon counting modules

1 x 16 arrangement of detector channels

Simultaneous measurement in all 16 channels

Instrument response width 150 ps FWHM

Max. count rate > 5 MHz

Gain control and overload shutdown via bh DCC-100 card

No external high voltage required

The PML-16-C is based on bh's proprietary multi-dimensional time-correlated single photon counting technique. The detector records 16 signals simultaneously into a single TCSPC channel. For each photon, the PML-16-C delivers a timing pulse and the number of the PMT channel in which the photon was detected. These signals are fed into the TCSPC module, which builds up the photon distribution versus the time and the channel number. The technique avoids any time gating or channel multiplexing and thus achieves a near-ideal counting efficiency. The PML-16C detector is part of the bh MW-FLIM multi-wavelength FLIM systems and the PML-SPEC multi-wavelength detection systems. Unlike its predecessor, the PML-16, the PML16-C generates the operating voltage of the PMT internally. Power supply, gain control, and overload shutdown are provided by the bh DCC-100 detector controller card.

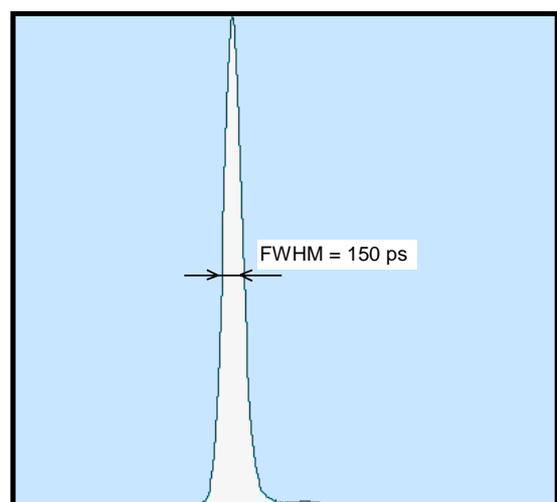
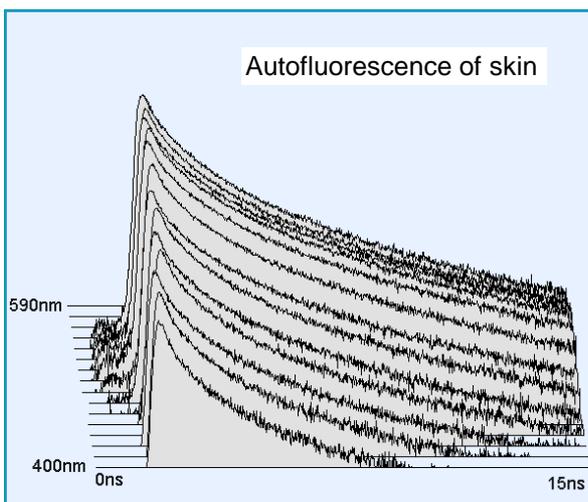


Applications:

Autofluorescence of biological tissue

Time-resolved multi-wavelength laser-scanning microscopy

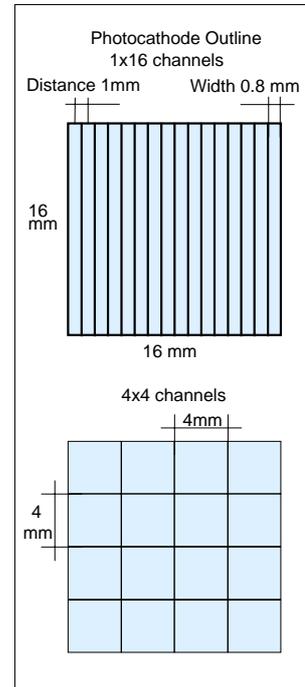
Diffuse optical tomography



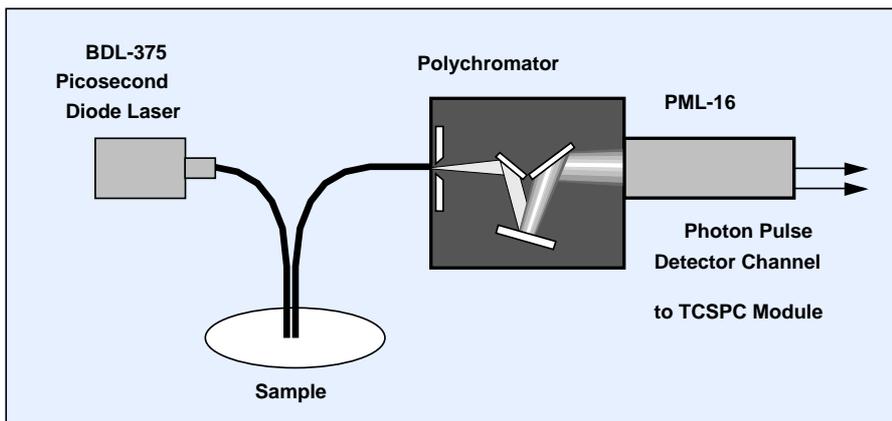
PML-16-C

Specification

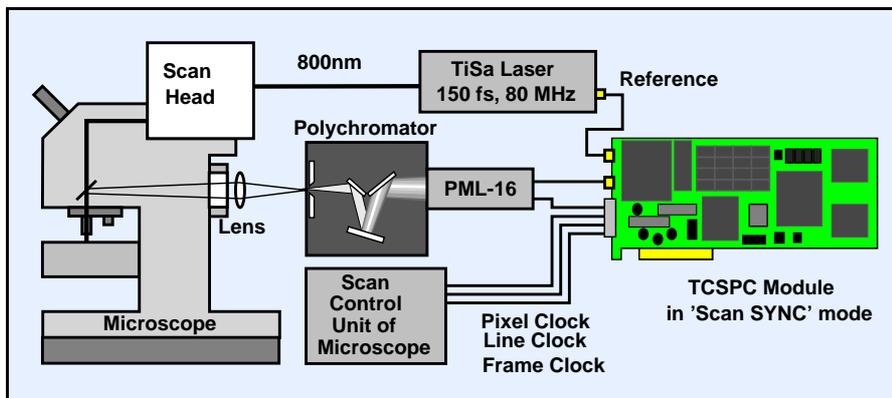
Number of Channels	16
Arrangement	Linear (1 by 16), optional quadratic 4x4
Active Area (each channel)	Linear 0.8 × 16 mm, quadratic 4 by 4
Channel Pitch	1 mm
Spectral response	PML-16-C-0: 300 to 600 nm (bi-alkaline) PML-16-C-1: 300 to 850 nm (multi-alkaline) Other cathode versions: contact bh negative
Timing Output Polarity	negative
Average Timing Pulse Amplitude	40 mV
Time Resolution (FWHM)	150 ps (typical value)
Time Skew between Channels	< 40 ps rms
Timing Output Connector	SMA, 50Ω
Routing Signal	4 bit + Error Signal, TTL/CMOS
Routing Signal Connector	15 pin Sub-D / HD
Power Supply	± 5V and +12V from DCC-100 card
Dimensions	52 mm × 52 mm × 145 mm



Applications



Time- and wavelength-resolved tissue fluorescence spectrometer



Multi-spectral time-resolved two-photon laser scanning microscope

Please see also:

SPC-134 through SPC-830 time-correlated single photon counting modules
PML-Spec Multi-spectral fluorescence lifetime detection system
MW-FLIM Multi-spectral FLIM systems
BDL-375-SM, BDL-405-SM, BDL-473-SM picosecond diode lasers