ORTEC

ORTEC 276L

Low-power PMT base with preamplifier

PMT base with integral low-noise preamplifier, low-power voltage divider and focus control for scintillation detectors, ideally NaI(Tl). The preamplifier output is used for energy analysis and the anode output for timing or auxiliary energy analysis; a test input accepts pulses from a pulse generator.



PMT compatibility
10-stage, 14-pin; TRW 3B14 s ocket (JEDEC B14-38); directly c ompatible with many i ntegrated NaI-PMT assemblies [1]

Conversion gain
Nominally 5 µV/eV with a 2 × 2 in NaI(Tl) crystal and PMT gain of 10^6 [1]

Weight
.65 kg net [1]

Specifications

DETECTOR

PMT compatibility	10-stage, 14-pin; TRW 3B14 socket (JEDEC B14-38); directly compatible with many integrated NaI-PMT assemblies	[1]

PERFORMANCE

Integral nonlinearity	<±0.02% from 0 to +10 V	[1]
Output noise	<50 µV rms with an ORTEC main amplifier (e.g. Model 672) and 1 µs time c onstant	[1]

ELECTRONICS & SIGNAL

Preamplifier	Integral low-noise preamplifier, dc-coupled positive output (Z_o = 93 Ω) for energy analysis	[1]
Voltage divider	Total 5.6 MΩ, giving a bleeder current of 200 µA at a typical 1 kV; linear distribution to all stages	[1]
Detector bias	External positive high voltage: +2,000 V maximum (SHV); observe the rated voltage of the installed tube	[1]
utput rise time	<100 ns for test input or fast scintillator	[1]
Conversion gain	Nominally 5 µV/eV with a 2 × 2 in NaI(Tl) crystal and PMT gain of 10^6	[1]
Signal outputs	Preamp: positive pulse, Z_o = 93 Ω, dc-coupled (BNC); anode: negative pulse for timing or auxiliary energy analysis, Z_o = 1 kΩ, ac-coupled (BNC)	[1]

POWER & BATTERY

Power supply	Preamplifier: +24 V, 16 mA and −24 V, 16 mA via a captive 4 m cable (Amphenol 17-20090); compatible with all ORTEC main amplifiers and the 4 002P	[1]

MECHANICAL

Weight	0.65 kg net	[1]
Dimensions	Ø5.6 × 10.2 cm; captive 4 m power cable	[1]

ENVIRONMENT & RATINGS

Temperature instability	<±0.005%/°C, 0 to 50 °C	[1]

GENERAL

Decay time	50 µs time constant	[1]

Sources

[1] **276L Low-Power Photomultiplier Base**
RTEC (AMETEK) · product-page · More Information; Specifications – Inputs; Overview; Specifications – Outputs; Specifications – Voltage Divider · checked 2026-10-16
https://web.archive.org/web/20261016000000/https://www.ortec-online.com/products/electronic-instruments/phot...

Every value is taken from the manufacturer's own document; the number after the value refers to the source list. Always check against the latest datasheet before ordering.

The data comes from the manufacturer's published documents. Manufacturers may change specifications; the current configuration and performance are confirmed in the quotation.