

# Reliable measurements.



## LE-3Dlite MkIII

**Compact, high performance  
three-component 1 Hz seismometer  
(also available as 1DV MkIII)**

**Quality exists**  
when the price is long forgotten.

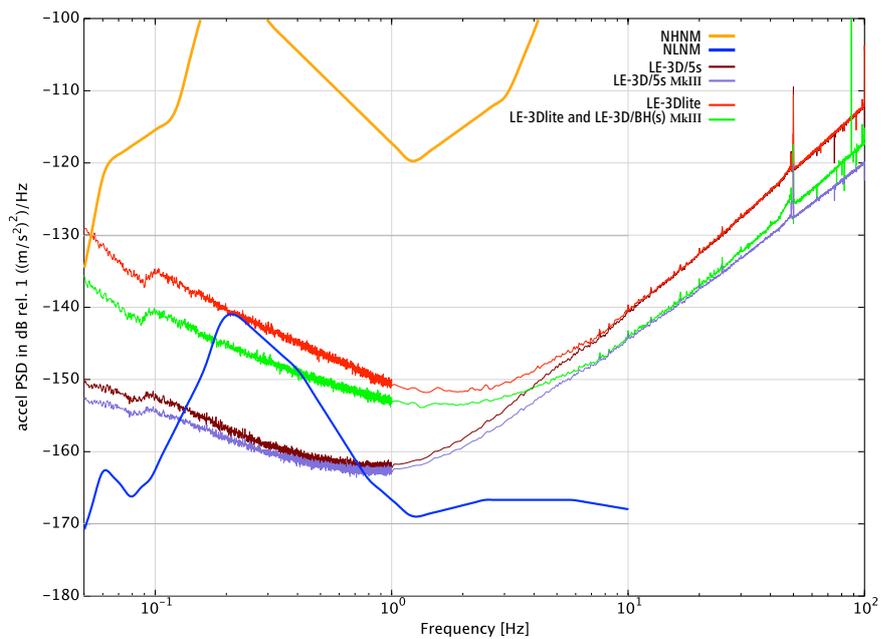
**le** **lennartz**  
**electronic**

Lennartz seismometers have a 30+ years track record all over the world, and it was the LE-3D »classic« that started it all. Now in its fourth evolutionary incarnation, the LE-3Dlite MkIII offers the time-proven workhorse reliability of the original LE-3D paired with improved handling features, water tightness, and compatibility across the entire Lennartz sensor product line. Noise performance and power consumption have been further improved (even better than MkII). Ideally suited for mobile applications of any kind, LE-3Dlite MkIII is also the sensor of choice in many observatory stations, and has replaced clumsy mechanical sensors. At a fraction of the bulk and weight, and with vastly superior handling properties, there really isn't much of a competition between mechanical and electronic. Here's a comparison between LE-1DV and a well-known classic mechanical 1D design:



But using a modern electronically enhanced seismometer has more advantages: Each sensor is individually adjusted and calibrated to less than 1% deviation from the theoretical transfer function and transduction factor, so sensors are perfectly interchangeable without the need to keep track of which sensor was connected to which station at which time. Mechanical sensors have much greater parameter variance, both between individual instruments and over time.

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Noise graphic courtesy of Dr. Rudolf Widmer-Schnidrig, BFO (Black Forest Observatory)

Lennartz sensors are extremely stable in the long term. An affordable recalibration service is offered for those needing written proof of the fact.

Also, contrary to most mechanical sensors, Lennartz sensors do not require any kind of transportation locking, nor do they require excessive settling time. A useful signal

is present just a few seconds after power-up.

Poles and zeroes of the transfer function are supplied with the instrument, making deconvolution easy. Given a reasonable signal-to-noise ratio, LE-3Dlite MkIII data can be deconvolved down to 20 seconds and beyond.

### Technical data LE-3Dlite (and 1DV) MkIII

<b>Power supply:</b>	10...16 V DC unstabilized
<b>Typical power consumption @ 12 V DC:</b>	6 mA (3D), 2.5 mA (1D)
<b>Transduction factor:</b>	±800V/m/s differential, precisely adjusted
<b>Frequency band (-3 dB points):</b>	1...100 Hz
<b>Damping:</b>	.707 critical, precisely adjusted
<b>Dimensions*:</b>	97 mm diameter, 68 mm height (1DV: 76 mm dia./68 mm height)
<b>Weight:</b>	1.5 kg (1D: 1.1 kg)
<b>Temperature range:</b>	-15...+60 °C
<b>RMS noise @ 1 Hz:</b>	< 3 nm/s
<b>Dynamic range:</b>	139 dB

\*cylindrical part only, not including adjustable feet, connector, and eyebolt



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