

# Detector log video amplifiers

Labtech has extensive experience in the design and manufacture of Detector Log Video Amplifiers (DLVAs). These devices are used extensively in applications requiring an output voltage related to the power of a received RF signal. In order to cope with a wide range of input signals a log amplifier is used to provide a linear voltage output per dBm of input power. Typically the input range of a DLVA will operate over 50dB or more with a base sensitivity less than -40dBm whilst providing linear conversion within  $\pm 1$ dB for all power levels, frequencies and temperatures. Where greater sensitivity and power levels are expected the Extended Range DLVA (ERDLVA) offers even greater performance.

Part No GHz	Frequency range Video dB	Frequency flatness range dBm	Logging dynamic mV/dB	Log slope dB	Log linearity	Temp range	TSS dBm ns	Rise time ns	Settling time ns	Recovery time
<b>Standard detector log video amplifiers</b>										
LMV005	2 to 18	+/- 1	-40 to +5	50	+/-1	-54°C to +100°C	-42	25	50	250
<b>Extended range detector log video amplifiers</b>										
LMV001	2 to 18	+/-2	-70 to +10	50	+/-1	-40°C to +85°C	-71	25	60	300

A feature of DLVAs is that the performance is intimately tied to the performance of the system in which they are to be integrated. Therefore, Labtech offers its extensive experience to design bespoke parts that meet your requirement. The library of designs include:

- Multi-octave performance operating at frequencies up to 40GHz
- Dynamic range up to 60dB for DLVAs extending to 80dB for ERDLVAs
- Sequential DLVAs
- DC coupled and CW immune options
- Wide operating temperature range; -50°C to +85°C
- Small size and weight suitable for airborne applications
- Fast rise, settling and recovery times

Labtech produces its DLVAs in class 10000 clean rooms and offers options of hermetic sealing and full environmental testing.

design  
assembly  
manufacturing  
testing

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