

### **New Product Introduction**



We are thrilled to share our latest innovation at PUI Audio as we continue to set the standard for cuttingedge audio solutions. Our new lead-free piezo benders comply with all RoHS regulations, are available in three sizes (20mm, 27mm, 35mm), and are designed with a range of resonant frequencies and mounting configurations.

Our new lead-free piezo discs have the same technical capabilities as traditional ones and a slimmer profile. This advancement opens possibilities in the medical, industrial, automotive, and consumer sectors. Leadfree benders are essential in medical and other sensitive environments where direct contact with humans is likely.







Lead-Free Piezo Introduction July 2023

## Key Features



Part	Dimensions	Max Voltage	Capacitance	<b>Resonant Frequency</b>
	(mm) <sub>(Ø)</sub>	(V <sub>P-P</sub> )	(pF)	(kHz)
ABLF2036B	20mm	30	25,000pF	3.6KHz
ABLF2036B-LW100	20mm	30	25,000pF	3.6KHz
ABLF2742B-LW200	27mm	30	20,000pF	4.2KHz
ABLF2746B	27mm	30	20,000pF	4.6KHz
ABLF2746B-LW100	27mm	30	20,000pF	4.6KHz
ABLF3529S-LW90	35mm	30	18,000pF	2.9KHz

#### What's a Bender?

The simplest of PUI Audio's products, our piezo benders offer the perfect solution where space is at a premium, multiple tones are required, and high output and low power consumption are necessary.

These externally driven elements are found in all varieties of products, from media players to smoke detectors. They can even be used as switches and contact microphones!









# Why Lead-Free?

- 1. Sustainable and Environmentally Friendly: Lead, a toxic substance with harmful effects on human health and the environment, poses significant concerns. By adopting lead-free piezo benders, you can eliminate the risks associated with lead contamination throughout the manufacturing process, usage, and disposal stages.
- 2. Regulatory Compliance: Many countries and regions have implemented stringent regulations and guidelines governing the use of lead in electronic components. Choosing lead-free piezo benders ensures compliance with these regulations, preventing potential legal complications and market restrictions. The RoHS directive (Restriction of Hazardous Substances) in the European Union restricts the use of lead, cadmium, mercury, and other hazardous substances in electrical and electronic equipment. PUI Audio's lead-free piezo benders align with these guidelines, guaranteeing compliance.
- 3. Performance and Reliability: Lead-free piezo benders deliver exceptional piezoelectric properties, offering high responsiveness, precision, and durability. These components provide reliable and consistent performance, ensuring optimal application functionality.

When considering the adoption of lead-free piezo benders, it is crucial to understand the exemptions outlined in the RoHS directive.

PUI Audio products leverage up to three of these exemptions, such as the use of copper alloy containing up to 4% lead as an alloying agent in brass (6(c)) or lead in high melting temperature solders (7(a)).

Additionally, electrical and electronic components containing lead in glass or ceramic compounds, such as piezo electronic devices, are allowed under the 7(c)-I exemption. However, it is essential to note that PUI Audio's lead-free piezo benders aim to adhere to the highest environmental standards.

Reference: European Commission







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### **Conclusion**

By embracing these innovative lead-free piezo discs, customers will enjoy the benefits of improved environmental sustainability, compliance with regulations, and enhanced safety, all while maintaining technical excellence. This marks an exciting step forward in PUI Audio's commitment to providing superior audio solutions to meet the evolving needs of our global customers.

#### **Additional Resources:**

- How do you solder wires onto a Piezo Bender?
- How are Piezo Benders constructed?



