



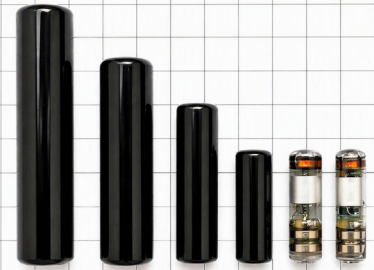
WAVE Series - 69kHz

Technology:  Acoustic

Product:  Tag

Sockeye salmon (*Oncorhynchus nerka*)

1 cm grid size



WAVE Series 69kHz PPM and BPSK Acoustic Transmitters

Lotek is proud to offer acoustic transmitters which utilize the Open Protocols **OPi** and **OPdi**. **OPi** uses pulse-position modulation, while **OPdi** leverages advanced digital binary phase-shift keying (**BPSK**) technology to ensure robust signal transmission. Each **OPdi** transmission includes an ID and checksum delivered in less than one millisecond, significantly reducing the risk of misidentification and interference from code collisions. With **OPi** and **OPdi** IDs managed by **VLIZ**, deployment is simplified and duplication concerns are eliminated, giving researchers and operators the confidence to integrate Lotek Wave tags across platforms with ease.

Options

- Low, Medium, or High output power
- Self-termination
- Basic and advanced on/off scheduling

Features:



Multiple protocol



Duty cycling

Interoperability:

Compatible with all OPi and OPdi enabled receivers regardless of manufacture brand.

ID Management:

IDs managed by Flanders Marine Institute (VLIZ).

Dual Mode:

OPi and OPdi within one tag. Minimizes impact to the animal.

Compatible with:

Lotek ORCA: Modular Acoustic Hydrophone Receiving System.

Product Applications

Migration and spawning activity of freshwater and marine species.



Model	Physical specifications ^[1]			Estimated life (days) ^[2]			
	Weight in air (g)	Weight in water (g)	Size (ØxL) (mm)	R64K ^[3] 60s interval	OPi ^[3] 60s interval	OPdi-69a ^[4]	
						2s interval	5s interval
W69-6-24	TBA	TBA	6.5 x 24	52	42	23	55
W69-7-24	TBA	TBA	7.7 x 24	66	54	29	69
W69-9-25	3.9	1.9	9.5 x 25	96	78	42	101
W69-9-28	4.7	2.5	9.5 x 28	154	126	69	163
W69-9-34	5.8	3.3	9.5 x 34	125	101	55	131
W69-9-40	7.0	4.0	9.5 x 40	330	269	148	347
W69-13-46	10.0	4.8	13.3 x 46	605	492	269	636
W69-13-63	16.0	8.2	13.3 x 63	921	752	414	968
W69-16-48	20.4	TBA	16.1 x 48	1323	1086	604	1389
W69-16-56	23.2	TBA	16.1 x 56	1750	1444	812	1834
W69-16-72	29.2	TBA	16.1 x 72	2622	2188	1259	2741

1. Size/weight specification tolerance typically $\pm 5\%$.
2. Estimated Life at medium output power.
3. Modulation Type: Pulse Position Modulation (PPM). Best suited for coarse scale temporal data collection.
4. Modulation Type: Binary Phase Shift Keying (BPSK). Suitable for both coarse and finescale temporal data collection.

Features and specifications subject to change without notice.

Technical specifications:

Transmitter frequency: 69 kHz $\pm$ 0.05%

Operating temperature range: -6°C to 40°C

Warranty

WAVE Series tags are warrantied to be free of defects in materials and workmanship under Normal Use for a duration of 80% of Estimated Life to a Maximum of 36 months.

For Warranty terms and conditions, please review our [Warranty Statement](#).

