

MOTORIZED FILTER WHEELS

We offer a range of ultra-fast, high-precision motorized filter wheel modules with integrated controller for the most demanding optical imaging applications.



Belt Drive

VFW1007 / VFW1010



Direct Drive

VFW3007 / VFW3010 / VFW3012



Ultra Fast
Switching



Built-In Smart
Controller



Easy to Use

ABOUT OUR PRODUCT

Featuring our innovative motion control algorithm and enhanced encoder resolution technology, our motorized filter wheel modules deliver smooth filter transitions with ultra-fast switching speeds. The compact, long-lasting design ensures superior precision and proven reliability, backed by stringent reliability testing. These filter wheels are ideal for a wide range of applications, including fluorescence microscopy, spectroscopy, machine vision, and more.

Features

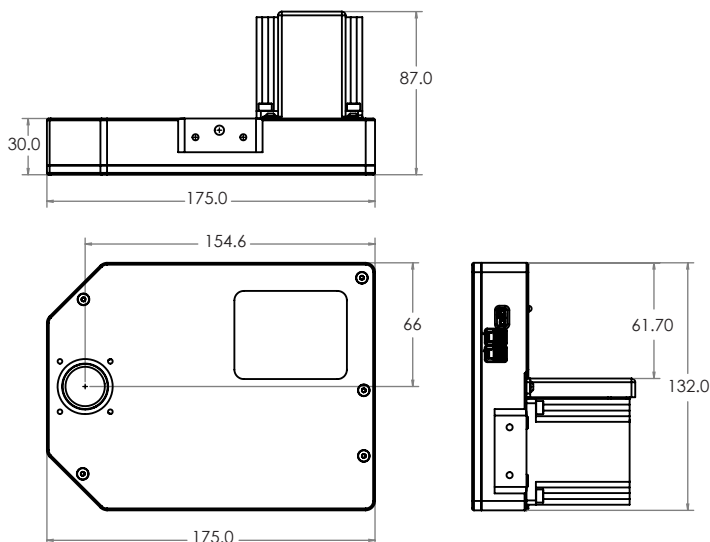
- Ultra-fast switching with adjacent filter switching times ranges from 35ms to 72ms across models
- Convenient with built-in smart controller
- Easy to use with supplied software Application Programming Interface (API)
- Versatile to fit many applications
- Flexible with capability to daisy-chain with other V-BMB modules
- Available with filter holders in three sizes: 12.5mm, 25mm, and 32mm



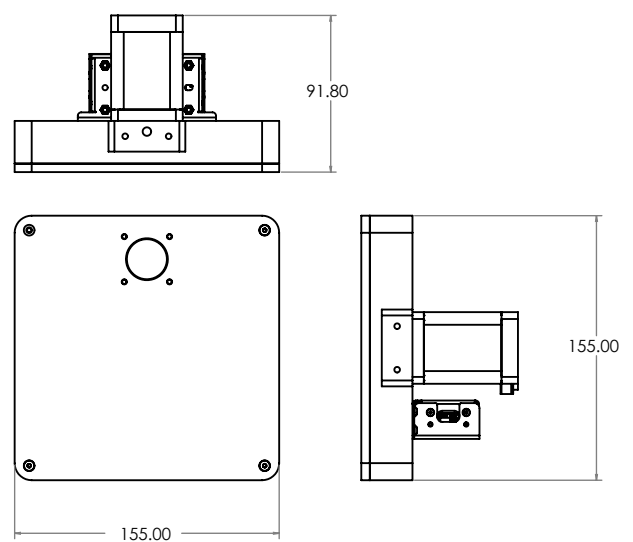
Specifications

	VFW1007	VFW1010	VFW3007	VFW3010	VFW3012
No. of Filter Holder Positions	7	10	7	10	12
Switching Time (Adjacent Filter), ms	45	35	72	60	56
Motor Drive System	Nema-23 Stepper Motor, Belt Drive		Nema-17 Stepper Motor, Direct Drive		
Range	360°				
Controller	Built In, Daisy-Chain with other V-BMB products				
Accuracy (Unidirectional)	0.2°				
Repeatability	<0.04°				
Backlash	<0.19°		Not Applicable		
Speed Resolution	0.0035°/sec				
Maximum Speed	2800°/sec				
Limit or Home Sensing	Hall sensor for home/index				
Communication Interface	USB / RS-485 / TTL UART				
Daisy-Chain Capability	Yes				
Input Voltage	24-48VDC				
Input Max Current, A	2.0				
Compatible Filter Diameter, mm	31-32	25	31-32	25	12.5
Compatible Filter Thickness, mm	Up to 6.5				
Weight, kg	1.7		1.5		
Dimension, WxDxH, mm	175 x 87 x 132		155 x 91.8 x 155		

VFW1007 / VFW1010



VFW3007 / VFW3010 / VFW3012



VBMB PTE LTD (V-BMB)

All product specifications are subject to change without notice. Last updated: JAN-2026
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