

## LPD PRECISION DISPENSE PUMP

The Lee Company's new LPD Series Precision Dispense Pump is a miniature, chemically inert, variable volume pump that offers consistent performance in a compact package. This new pump was designed to offer greater design flexibility and significant cost savings to the medical and scientific industries. Designed to be completely maintenance free, the LPD Series pump can be located wherever the fluidic requirements dictate, regardless of maintenance accessibility.

The LPD Series pump is offered in two different models – standard and high performance. The standard model is equipped with a home sensor, whereas the high performance model includes a home sensor and encoder for applications requiring feedback.

Performance parameters can be optimized to meet specific application requirements. Contact your Lee Sales Engineer for additional technical assistance and application information.

- Compact Design
- Standard and High Performance Models
- Home Sensor on All Models
- Multiple Dispense Volumes Available: 50  $\mu$ L, 250  $\mu$ L, 1000  $\mu$ L and 3000  $\mu$ L
- Speed: 4000 half steps/second
- Fluidic Interface: 1/4-28 Flat Bottom Boss
- Wetted Materials: Piston (TZP), Port Head (PMMA or PEEK), Seal (UHMW PE and 316 SS\*)
- \* Applicable to the 3000  $\mu$ L dispense volume only.
- Integrated Backlash Compensation on All High Performance Models Except the 3000  $\mu$ L Dispense Volumes



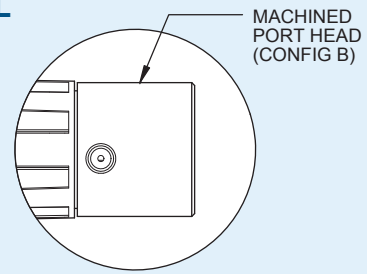
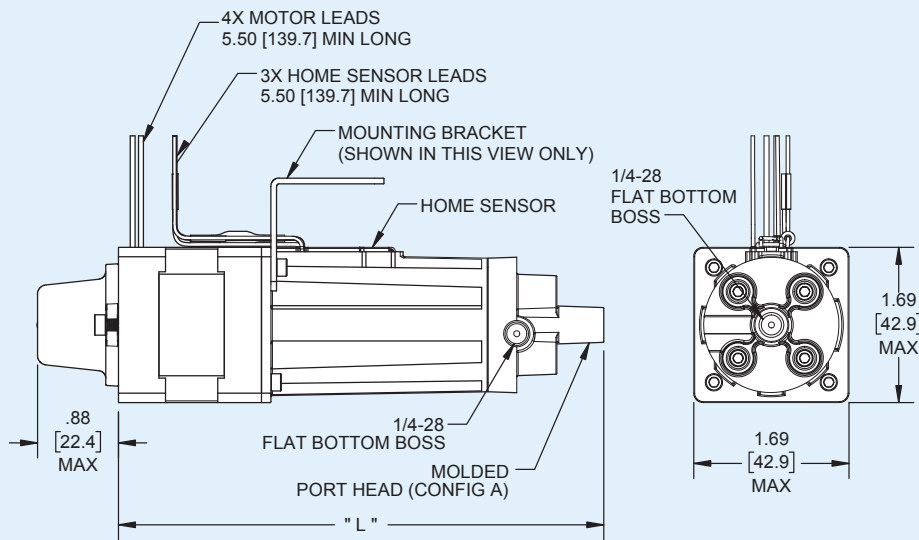
- A Pump Driver Kit is Available for Application Development. (Reference Lee Part Number LSKX0502150C)

MODEL	PART NUMBER	VOLUME ( $\mu$ L)	PORT HEAD		FULL STEP DISPENSE RESOLUTION ( $\mu$ L/step)	DISPENSE ACCURACY	PRECISION (CV)	MAXIMUM DISCHARGE PRESSURE (psig)	ENCODER	
			MATERIAL	CONFIGURATION *						
STANDARD PERFORMANCE	LPDA2720150L	50	PMMA	A	0.04	$\pm 0.6\%$ at total volume $\pm 4\%$ at 10% volume	$\leq 0.04\%$ at total volume	60	No	
	LPDA2750150L		PEEK	B						
	LPDA2720125D	250	PMMA	A	0.2					
	LPDA2750125D		PEEK	B						
	LPDA2720110H	1000	PMMA	B	0.5					
	LPDA2750110H		PEEK	B						
	LPDA2720130H	3000	PMMA	B	1.0		$\leq 0.4\%$ at 10% volume	95		
	LPDA2750130H		PEEK	B						
HIGH PERFORMANCE	LPDA1720350L	50	PMMA	C	0.04	$\pm 0.5\%$ at total volume $\pm 1\%$ at 10% volume	$\leq 0.01\%$ at total volume	60	Yes	
	LPDA1750350L		PEEK	D						
	LPDA1720325D	250	PMMA	C	0.2					
	LPDA1750325D		PEEK	D						
	LPDA1720310H	1000	PMMA	D	0.5		$\leq 0.1\%$ at 10% volume			
	LPDA1750310H		PEEK	D						
	LPDA1720330H	3000	PMMA	D	1.0		$\pm 0.6\%$ at total volume $\pm 4\%$ at 10% volume	$\leq 0.04\%$ at total volume $\leq 0.4\%$ at 10% volume		95
	LPDA1750330H		PEEK	D						

NOTES: \* See reverse side for configuration details

# LPD PRECISION DISPENSE PUMP

## STANDARD PERFORMANCE MODEL

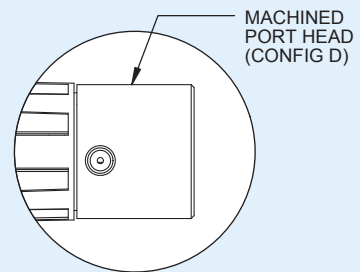
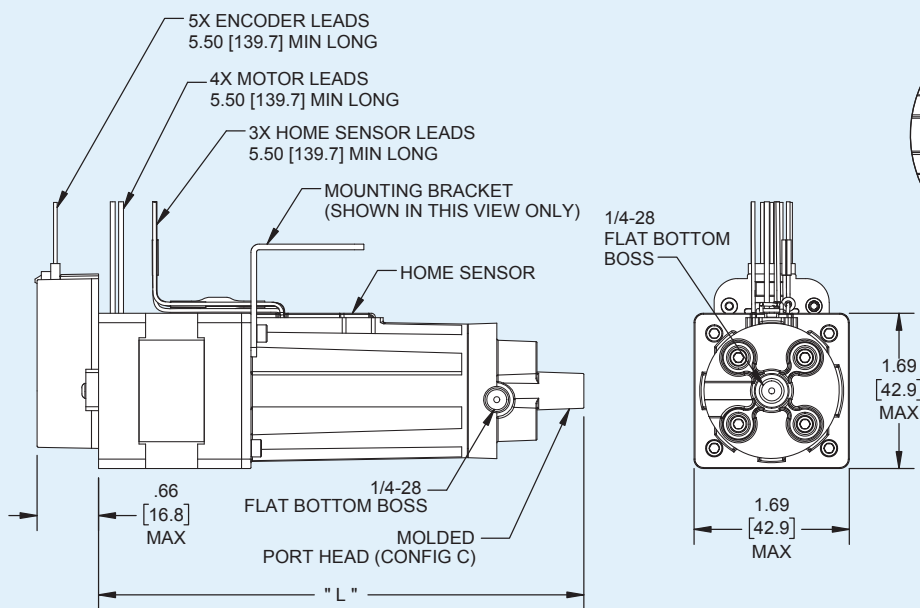


Volume (μL)	Maximum Length "L"
50	5.24" [133.1 mm]
250	5.24" [133.1 mm]
1000	5.65" [143.5 mm]
3000	6.21" [157.7 mm]

### NOTES:

- (1) PMMA Molded Port Head Design shown.
- (2) All dimensions are in inches [mm].

## HIGH PERFORMANCE MODEL



Volume (μL)	Maximum Length "L"
50	5.24" [133.1 mm]
250	5.24" [133.1 mm]
1000	6.15" [156.2 mm]
3000	6.21" [157.7 mm]

### NOTES:

- (1) PMMA Molded Port Head Design shown.
- (2) All dimensions are in inches [mm].

The LPD Precision Dispense Pump is just one part of The Lee Company's complete line of precision fluid control products that includes miniature solenoid valves, micro dispense valves, nozzles, fixed and variable volume dispense pumps, integrated manifolds and other precision fluid handling components.

### Solenoid Pumps



- Dispense volumes can range from 10 to 175 μL
- Self-priming
- Low power consumption
- Compact size
- Speeds up to 5 Hz

### Micro Inert Valves



- 2 & 3-way chemically inert valves
- Response time as low as 10 ms
- Low power consumption
- Multiple material and port options available
- 10 million cycles minimum