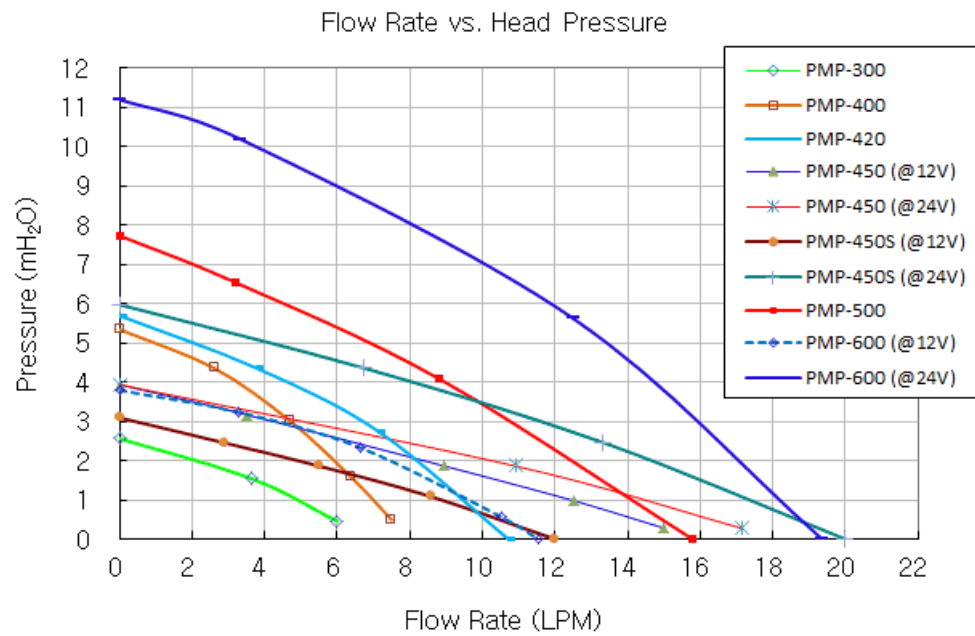


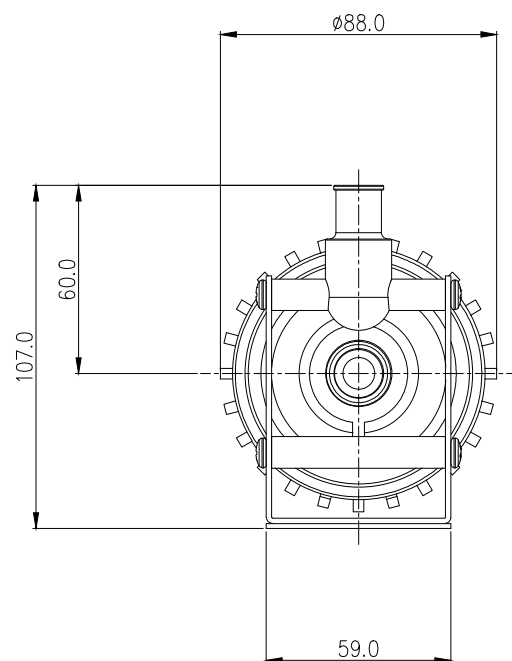
The reliable PMP-450S is Koolance's highest-flow 24V pump which can also run at 12V. (If pump speed will be externally throttled from 12V or 24V, [PMP-450](#) is recommended for smoother operation.)

- Maximum Flow Rate: 12L/min (3.2 gal/min) @ 12V, 20L/min (5.3 gal/min) @ 24V
- Maximum Head Pressure: 3.2m (10.5ft) @ 12V, 6m (19.7ft) @ 24V
- Motor: Brushless DC, electronically commutated, spherical motor
- Power: 10-24VDC, 3-50W, 0.13-2.1A
- Startup Voltage: 9 to 13.2 VDC
- Maximum System Pressure: 3.5 kgf/cm<sup>2</sup> (50 PSI)
- Maximum Temperature: 60°C (140°F)
- Electrical Connector: 4-pin Molex power supply connection + 3-pin (single lead) tach
- Hose Connections: 13mm (1/2in) ID hose barbs
- Wetted Materials: PPO, Carbon/Allumina Ceramic, EPDM or Viton, 316 SS
- Noise: Less than 40dBA
- Weight: 862g (1.9lbs)
- MTBF 50k hours

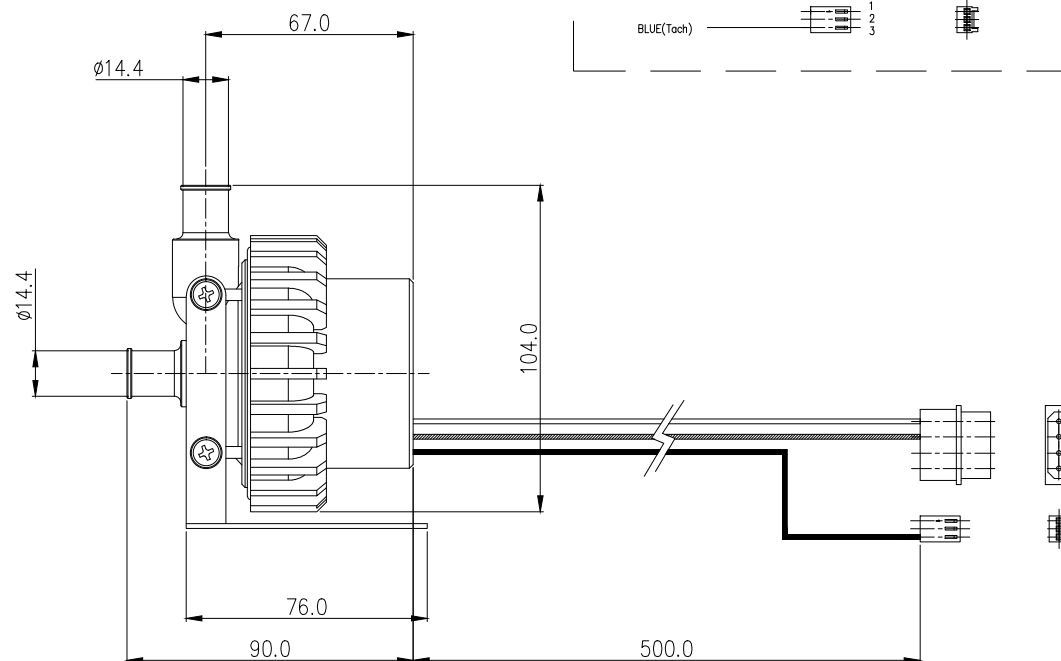
General	
Weight	1.20 lb (0.54 kg)
Max Pressure Tolerance @ 25°C	3.5kgf/cm <sup>2</sup> (50 psi)
Max Temperature Tolerance	60°C (140°F)
Wetted Materials	PPO, Carbon/Allumina Ceramic, EPDM or Viton, 316 SS
Pumps	
Expected Lifetime	50,000 hrs. MTBF
Max Flow Rate	12L/min (3.2GPM) @ 12V, 20L/min (5.3GPM) @ 24V
Max Power	26W @ 12V, 55W @ 24V
Max Static Head	3.2m (10.5ft) @ 12V, 6m (19.7ft) @ 24V
Native Hose Connection	Barbs for ID 13mm (1/2in)
Speed Knob	no
Tachometer	yes


General	
Type	Magnetic Centrifugal
Voltage	10-24 VDC






- 24VDC, 1.5A
- YELLOW(+) ———— 1  
BLACK(–) ———— 2  
————— 3  
————— 4
- BLUE(Tach) ———— 1  
————— 2  
————— 3



					
REV	DATE	CONTENTS	REVD BY	CHKD BY	APPD BY
REVISION					

NO.		DESCRIPTION			PART NO.		QTY.		REMARKS	
 <b>KOOLANCE®</b>					UNIT	MM	ITEM Pump			
					SCALE	N/S	TITLE Assy			
DATE	DRAWN BY	BY	BY	APPRO BY	3RD ANGLE					
MAR.25.2021	S.J.LEE			J.S.PARK	KK CODE NO. PMP-450		DRAWING NO. —			REV —