

LabSmith uProcess™ Thermal Control

- *uTE-series* thermal-electric modules for controlled heating and cooling
- *uTS-series* temperature sensors for on-chip or in-fluid temperature measurement
- Interfaces with uProcess software for coordinated micro-system control

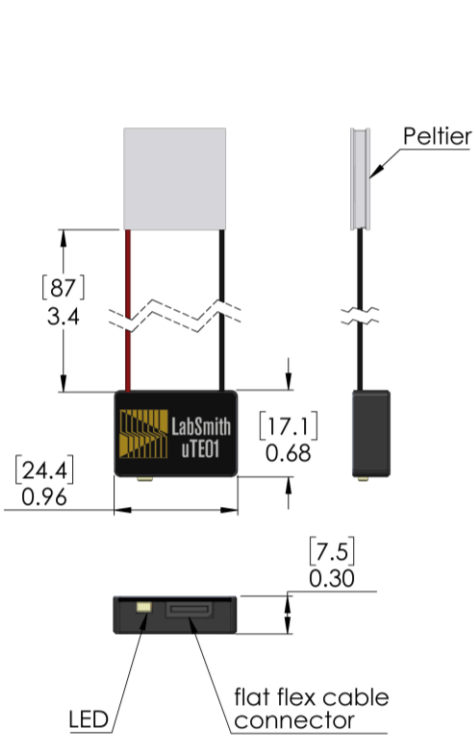
uTE-Series Thermal-Electric Module		Part Number Specification: uTE01-[PELTIER]		
Required Interface	4PM01 four channel power manifold (connects via 6-pin flat flex ribbon cable)			
Mounting holes	two M2x0.4 threaded holes, 12.7 mm (0.5") spacing			
Maximum Temperature / ΔT	130° C / 67° C			
Peltier Options [PELTIER]	Size (mm)	Qmax (W)	Vmax (V)	I _{max} (A)
040808	8.3 × 8.3 × 2.3	4.3	3.9	2.0
132020	20 × 20 × 4.0	13	3.7	6
151530	15 × 30 × 3.7	15	4.2	6

uTS-Series Temperature Sensor		Part Number Specification: uTS01-[TC]-[L]		
Temperature Range	−150° C — 200° C			
Accuracy	0.5° C			
Resolution	0.001° C			
Sensor type	K type thermocouple			
Required Interface	4AM01 four channel analog module (connects via 6-pin flat flex ribbon cable)			
Length in cm [L]	20 or 60 cm (custom lengths available)			
Mounting hole	2.8 mm (0.11") through-hole for mounting to uProcess breadboard via 2-28-1/4" screw			
Sensor Options [TC]	Wire Gauge	Tip Diameter (mm)	Tip Insulation	Wire Insulation
STD	36	0.3 - 0.4	None	PFA
INS	24	2.5 - 3.0	FEP	FEP

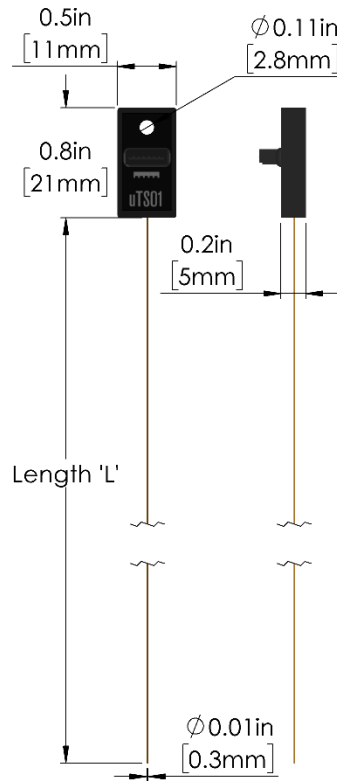
Accessories	
EIB200: USB Interface for computer control of <i>4AM01</i> , <i>4PM01</i> , and other devices via uProcess software. LabVIEW™ drivers, SDK (C++), and I2C interface available.	
4AM01: Analog manifold for control of up to 4 <i>uTS</i> temperature sensors or <i>uPS</i> pressure sensors.	
4PM01: Power manifold for automatable and closed-loop control of up to 4 <i>uTE</i> thermal-electric modules or other loads.	
Voltage range:	−5 to 5 V
Current range:	−4 to 4 A
Maximum Power:	15 W
uTE heat sink: <i>HS-0808</i> (8.9 × 8.9 mm) or <i>HS-2020</i> (20 × 20 mm) anodized aluminum heat sink with adhesive backing.	
uProcess breadboard (uPB-05, uPB-08, uPB-12, or iBB): Optional platform for mounting uProcess devices and CapTite™ components.	

Thermal Control Specifications

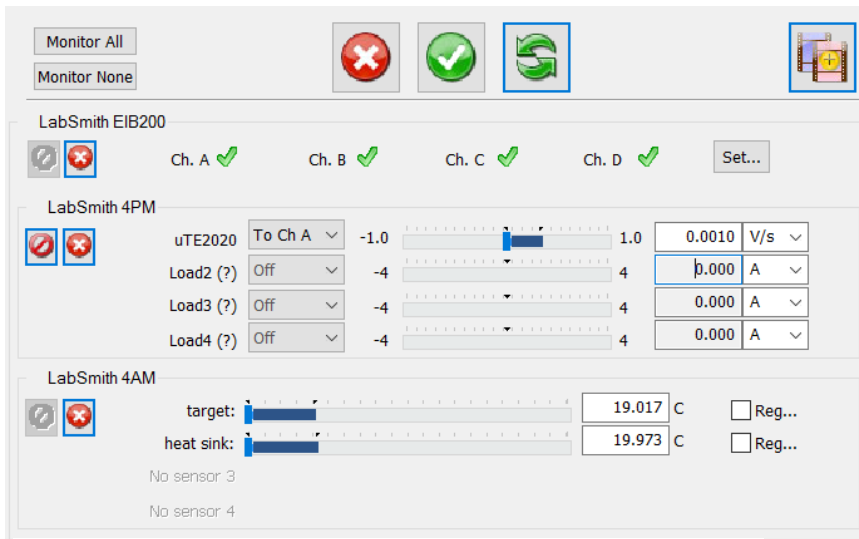
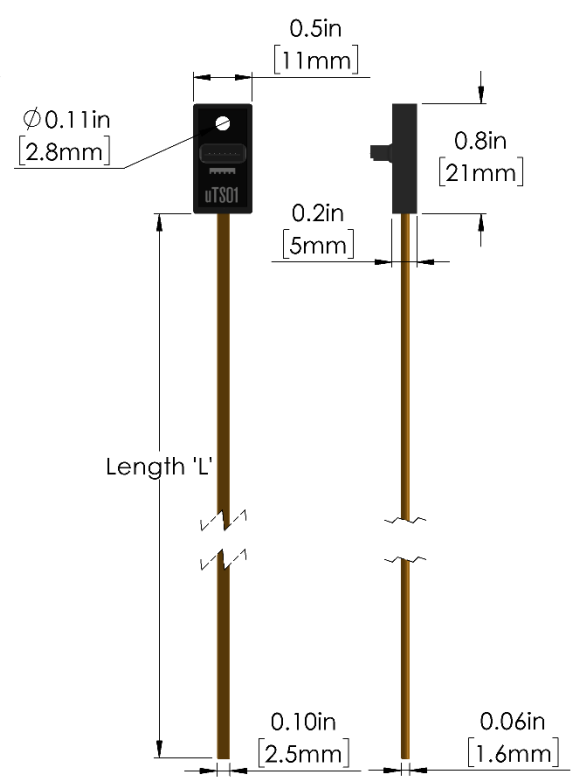
uTE01-[PELTIER]



uTS01-STD-[L]



uTS01-INS-[L]



uProcess Software thermal control and monitoring interface

Contact us for more information

LabSmith, Inc.
6111 Southfront Road, Suite E
Livermore, CA 94551 USA

www.labsmith.com
sales@labsmith.com
Tel: 1(925) 292-5161

