### **Controllers for Passively Q-switched Lasers**

- Triggered Microchip Lasers (STx) only -

### **Key features**

- External laser pulse triggering capability
- 3 different packages
  - Desktop for laboratory applications
  - Module and Board for OEM integration
- Dual bipolar thermal PID regulation
- Laser diode temperature and voltage protection
- RS232 control for operation and diagnosis
- Real-time control (TTL)
- Interlock management for laser safety
- Auto-adaptation to the laser head
- CDRH and CE compliance



Desktop MLC-03A-DP1 for CDRH certified lasers and 100-240V AC



Module MLC-03A-MP1 for OEM lasers using 12V DC



Board MLC-03A-BP1 for OEM lasers using 12V DC

# For your application, find your pulsed laser solution

## teem photonics™

### **Technical specifications:**

		MLC-03A-DP1	MLC-03A-MP1	MLC-03A-BP1	
Main Specifications	Input voltage	AC 100 to 240V	to 240V DC 12V		
	Max Current	0.5A@230V 3.4A@12V <sup>(1)</sup>			
	Input voltage fluctuation	5%			
	Mains frequency	60 Hz / 50 Hz N/A			
	Power supply input	IEC60320 Main socket with earth connection  MOLEX mini Fit Jr. Series 5569 header, please use MOLEX series 5557 receptacle for connecting +12			
	Mains input fuse	Temporized T1Amp 3.5A			
	Maximum power consumption (W)	52 41			
	Efficiency	-	>70%	>75%	
	Primary to secondary electric isolation	1500 V AC input to case / 400 V AC input N/A to output			
	Laser diode secondary fuse	3.5A	3.5A N/A		
Output specifications	Laser diode current	0.1 to 3.0A			
	Thermoelectric cooler current capability	0 to $\pm 2A^{(1)}$			
	Thermoelectric cooler voltage capability	+9V cooling -9V heating			
	Temperature stability	<0.06°C			
	TEC electric response time	<0.1s			
	Laser diode temperature safety limits	Set-up point ±3°C (typical)			
Mechanical	Weight	1.2kg	0.3kg	0.1kg	
specifications	Dimensions (mm)	145x120x70	130x98x28	105x95x14.5	
EMC standards	Emission	EN 55011		-	
LMC Standards	Immunity	IEC 61000-6-2		-	
Safety Electrical & radiation		IEC 61010-1 -		-	
Maximum Heat dissipation		$<15W^{(1)}$		(1)	
Control		RS232 control serial communication <sup>(3)</sup> Utility digital control connector			

	Neter				
Notes					
(1)	Current and Power consumption with current limits set to $I_{Diode}$ =2.5A, $I_{TEC}$ =2A				
(2)	Measured on a 3.5 Ohms TEC cooler				
(3)	The RS232 protocol is an ASCII protocol				
(4)	CDRH certification is valid for CDRH TEEM PHOTONICS certified laser up to Class 4				

# For your application, find your pulsed laser solution

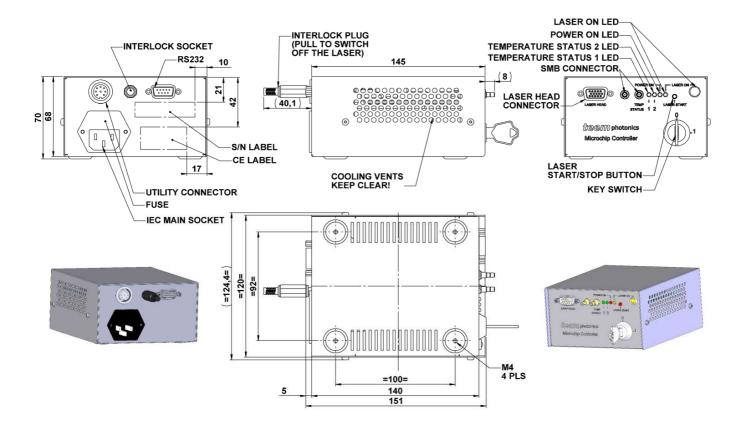


### **Complementary information & options:**

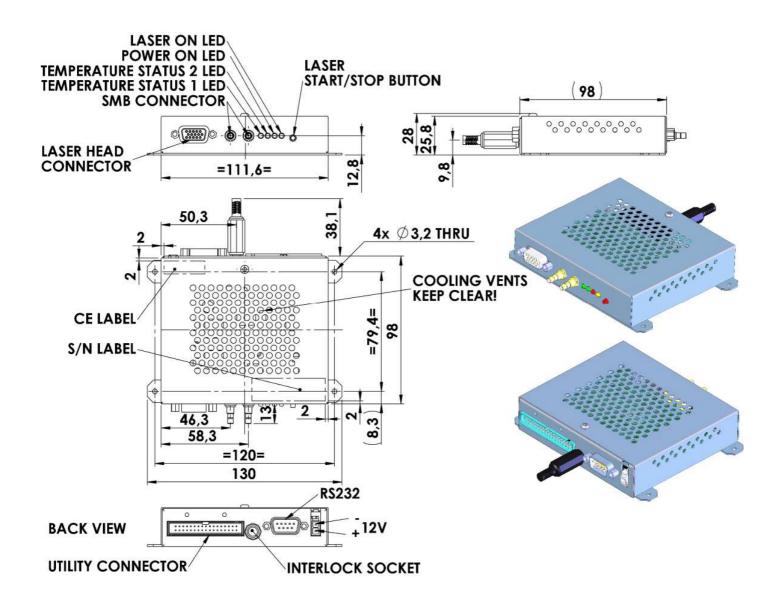
Environment Parameters				
Operating temperature	-10°C to +50°C non condensing			
Maximum relative Humidity <40°C	80%			
Maximum relative Humidity >40°C	60%			
Pollution degree (according to IEC 61010)	2			
Storage temperature	-40°C to +85°C non condensing			
Shock of 11ms according to IEC 68-2- 27 (non operating)	25g			
Vibration 5Hz to 500Hz sinusoidal according to IEC 68-2-6	2g			

Certifications						
Model	Туре	RoHS	CE	CDRH		
MLC-03A-DP1	Desktop	Yes	Yes	Yes		
MLC-03A-MP1	Module	Yes	Yes	No		
MLC-03A-BP1	Board	Yes	No, OEM only	No		

#### **Desktop Controller Mechanical Drawings: MLC-03A-DP1**



#### Module Controller Mechanical Drawings: MLC-03A-MP1



### **Board Controller Mechanical Drawings: MLC-03A-BP1**

