

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

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Technical specifications:

		MLC-03A-DP1	MLC-03A-MP1	MLC-03A-BP1
Main Specifications	Input voltage	AC 100 to 240V	DC 12V	
	Max Current	0.5A@230V	3.4A@12V ⁽¹⁾	
	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 +12V	
	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 to output	N/A	
	Laser diode secondary fuse	3.5A	N/A	
Output specifications	Laser diode current	0.1 to 3.0A		
	Thermoelectric cooler current capability	0 to ±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 specifications	Weight	1.2kg	0.3kg	0.1kg
	Dimensions (mm)	145x120x70	130x98x28	105x95x14.5
EMC standards	Emission	EN 55011		-
	Immunity	IEC 61000-6-2		-
Safety Electrical & radiation	IEC 61010-1		-	
Maximum Heat dissipation	<15W ⁽¹⁾		<6W ⁽¹⁾	
Control	RS232 control serial communication ⁽³⁾ Utility digital control connector			

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

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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

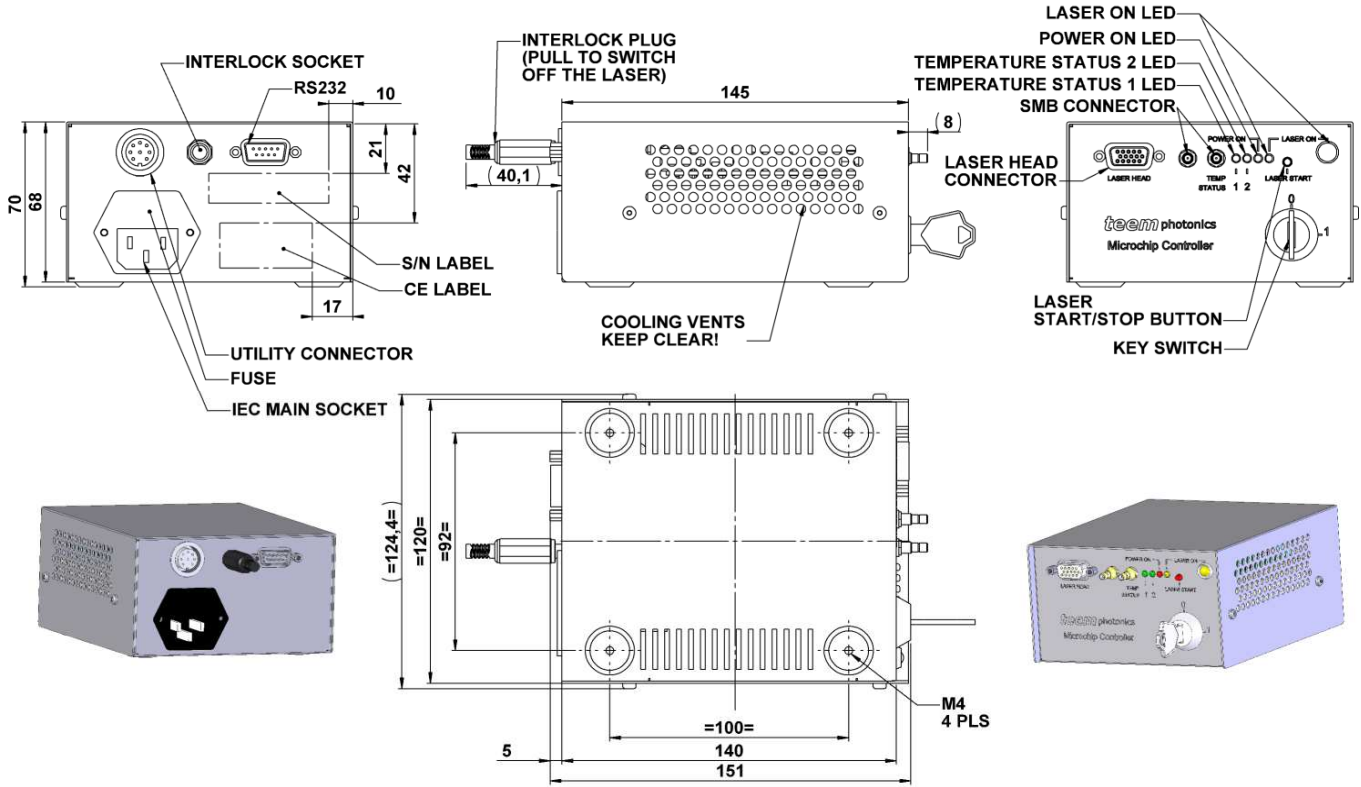
Certifications

Model	Type	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

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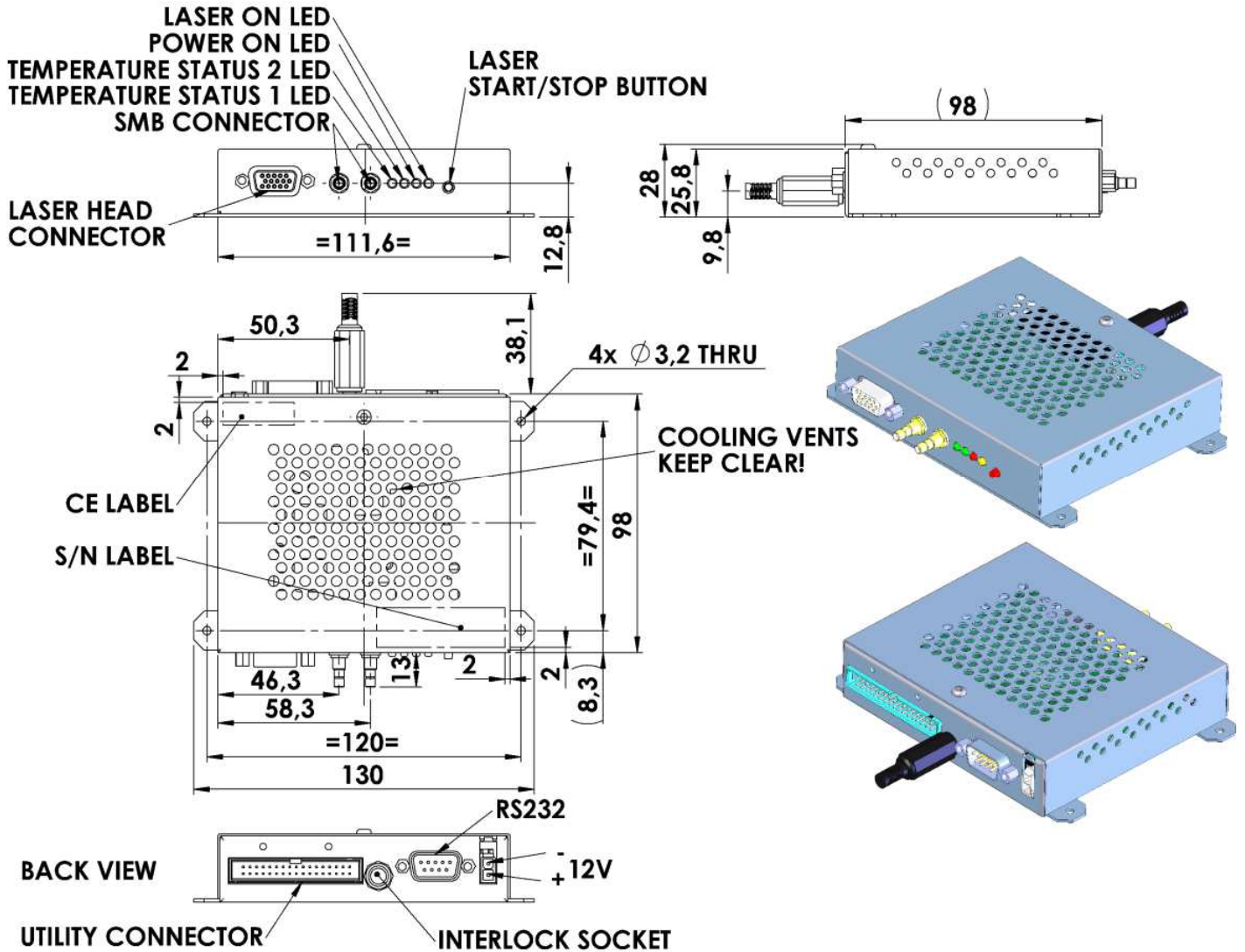
Desktop Controller Mechanical Drawings : MLC-03A-DP1



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Module Controller Mechanical Drawings : MLC-03A-MP1



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Board Controller Mechanical Drawings : MLC-03A-BP1

