

## Controllers for Passively Q-switched Lasers - Triggered Microchip Lasers (STx) only -



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

### **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

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### **TECHNICAL SPECIFICATIONS**

		MLC-03A-DP1	MLC-03A-MP1	MLC-03A-BP1	
	Input voltage	AC 100 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		
Main	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		
Specifications	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		
	Laser diode current	0.1 to 3.0A			
	Thermoelectric cooler current capability	0 to ±2A <sup>(1)</sup>			
Output	Thermoelectric cooler voltage capability	+9V cooling -9V heating			
specifications	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	Emission	EN 55011 -		-	
standards	Immunity	IEC 61000-6-2 -		-	
Safety Electrical & radiation		IEC 61	1010-1	-	
Maximum Heat dissipation		<15W <sup>(1)</sup> <6W <sup>(1)</sup>			
Control		RS232 control serial communication <sup>(3)</sup> Utility digital control connector			

#### NOTES

(1) Current and Power consumption with current limits set to IDiode=2.5A, ITEC=2A

(1) Content and Power Consumption with content minutes set to 10006-2.3A, FEC-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



### **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				

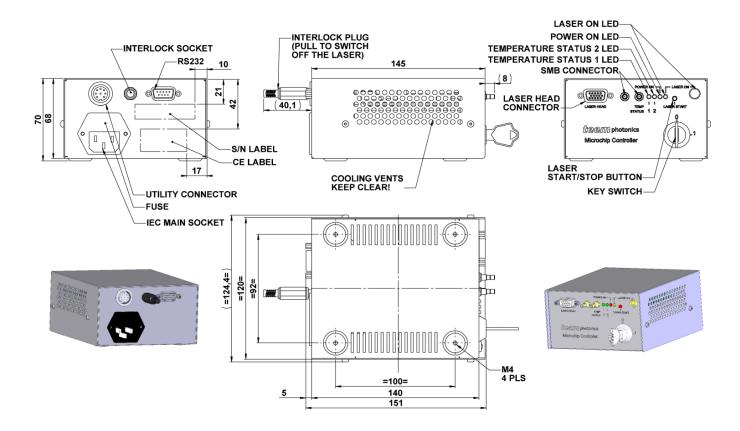
Certifications						
Model	Туре	RoHS	CE	CDRH		
MLC-03A-DP1	Desktop	Yes	Yes	Yes		
MLC-03A-MP1	Module	Yes	Yes	No		
MLC-03A-BP1	Board	Yes	No, OEM only	No		

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# DESKTOP CONTROLLER MECHANICAL DRAWINGS: MLC-03A-DP1

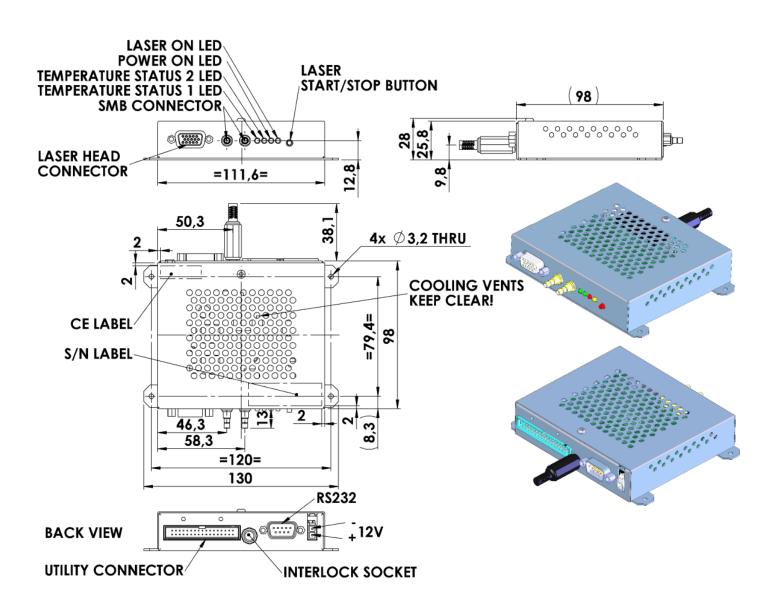


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## MODULE CONTROLLER MECHANICAL DRAWINGS: MLC-03A-MP1

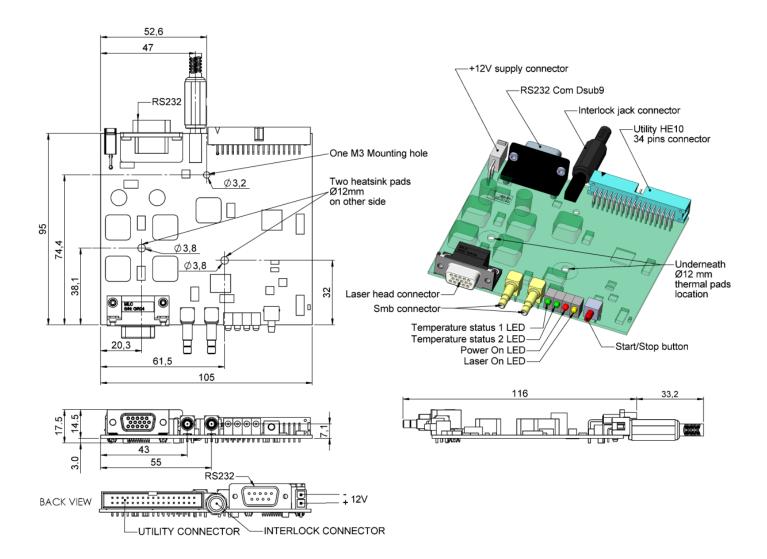


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# BOARD CONTROLLER MECHANICAL DRAWINGS: MLC-03A-BP1



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