

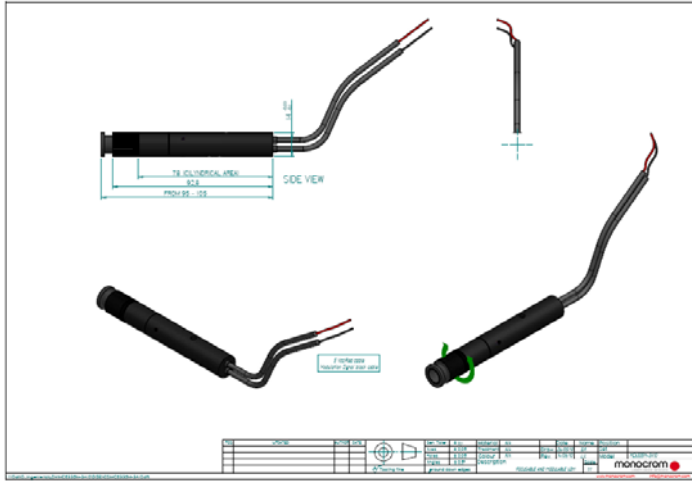


Updated by COF on 12 February 2012 / Checked by GVM

Product Division	 <b>LDM Laser Diode Modules</b>
Product	<b>M- Series NIR</b>
Description	<b>Modulatable &amp; Focusable Near Infrared Wavelength Laser Diode Module</b>
Main Features	<ul style="list-style-type: none"> <li>• Compact design</li> <li>• Low bore-sight</li> <li>• CW and modulatable</li> <li>• High quality lens, and excellent beam performance</li> <li>• Wide range of NIR wavelengths available</li> </ul>
Some Applications	<ul style="list-style-type: none"> <li>• Automatics &amp; Robotics</li> <li>• Guidance.</li> <li>• Bio-medics</li> <li>• Lighting</li> <li>• Imaging</li> </ul>
Picture	
Outline	 <p>Technical drawing showing side and top views of the laser diode module. Dimensions include: 14mm diameter, 78mm cylindrical length, and 90mm total length. Labels include 'SIDE VIEW', 'TE CYLINDRICAL AREA', and 'PROF. SP. 1:10'. A note indicates 'if not for use, remove light pipe end'. A table at the bottom right contains technical specifications and the Monocrom logo.</p>

## MODULATABLE & FOCUSABLE LASER DIODE MODULES M Series NIR

<b>ORDERING LDM STANDARD PART NUMBER CODE</b>	<b>MC-WW PP H-A LLL</b>
<b>MC:</b> Standard basic LDM	<b>WW:</b> Wavelength
<b>H:</b> Housing: M	<b>PP:</b> LD Optical power
	<b>A:</b> Clear aperture: 2, 3, 4, 5, 6
	<b>LLL:</b> Optics

GENERAL SPECIFICATIONS FOR STANDARD DIODE LASER MODULES M SERIES										
Model	7803	7805	7820	7850	8505	8390	9005	9810	9850	1005
Wavelength [nm]	780±5	780±5	780±5	785±10	850±10	830±10	905±5	980±10	985±10	1064±10
Po.max[mW] <sup>(1)</sup> with A10 lens	1.5	2,5	10	30	2,5	90	2,5	5	30	5
Iop.[mA] @max.Po	50	60	70	100	60	120	60	50	100	70
Temp.op [°C]	-10 to 60			-10 to 50			-10 to 50	-10 to 50	-10 to 40	
Storage temperature [°C]	-40 to 85									
Clear aperture	From 2 to 6 mm (to be specified at order)									
Divergence min	0,3 mrd (with A15 lens)									
Polarisation ratio, typical	>50:1									
Output power stability @ Po. Max <sup>(2)</sup>	<0.5%RMS									
Bore sight, typical	< 10 mrad									
Reverse voltage protection circuit	Built in									
Op. voltage for cw	5±5% Vdc (Other voltage, and external power regulator along the cable on request)									
Expected lifetime	>10.000 Hours									
Wires	200mm Flying leads or 200mm cable+standard connector. Modulation/Regulation: RG174 cable. If Only Regulation: Options: a) 3 pin Mini-DIN connector, b) Power regulator knob along the cable, c) Power regulation knob in the power supply									
Laser product class	According with the radiant flux and EN-60825 classification, duly identified by labels.									
Housing	M type : Black anodizing Al Ø14(+0/-0,1) x length 100 (±0,5)mm									

Conditions @ 25°C while not specified. Specifications could change depending on LD used.

- (1) Power with 2,5V-CW input signal at modulation wire  
 (2) From a stable input signal

OPTICS OPTIONS ( to add to the LDM type selected -LLL)																				
Lens	A10					A15					H18					L05	L10	L20	L50	L100
	Type																			
Type	Glass aspheric					Glass aspheric					Acrylic aspheric					Glass cylindrical line tracing				
Clear aperture (A) [mm]	2	3	4	5	6	2	3	4	5	6	2	3	4	5	6	5	6	4	6	4
Relative efficiency [%] (collimated)	20	30	70	80	100	10	15	20	40	60	10	20	30	40	60	64	70	60	70	60
Typ. Divergence [mrd]	0,5					0,3					0,8					0,3	0,4	0,6	0,7	0,8
Fan angle [°]	-					-					-					5	10	20	50	100
Focal length [mm]	10					15					18					50	40	10	8	5
Typ. Focusable range [mm] (depending on model)	70±30 to infinite					250±50 to infinite					150±40 to infinite					>20* to infinite				
Min. focusable diameter @ focus [µm]	70					150					150					120				
Main feature	High transmission					Low divergence					Low price					No line bowing				

Specifications could change depending on LD used.

\*Depending on type of collimator

POWER REGULATION / MODULATION MODES	ANALOGUE	DIGITAL
	Input signal, Vmod, typical	0.5 to 2V (For Power from 0 to PoMax)
Modulation range	CW to 10MHz (upper limit depending on LD used)	
Rise & fall time [ ns ], typical	<50ns	
Input impedance	560 Ohm	
Resistor to add in parallel for HF	50 Ohm ( @ >1MHz)	
Po with 0Vdc input signal	0W	
Po without modulation input (coaxial cable unplugged)	>50% of PoMax	

Specifications could change depending on LD used.

