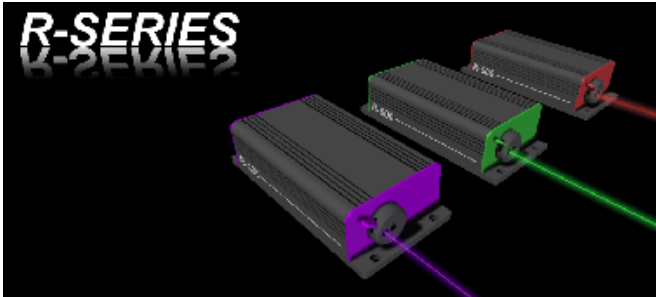
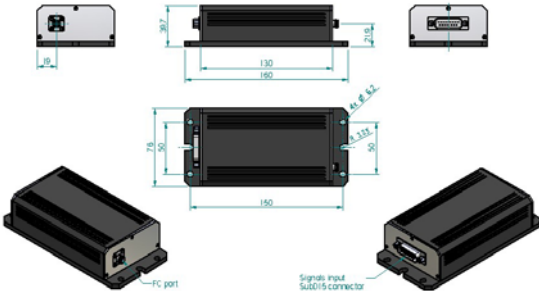


Division	LDM Laser Diode Modules
Product	R- Series NIR
Description	TEC Fibre Output Laser Diode Module, Near Infra Red range.
Main Features	- TEC cooled. - Wavelength and power stabilized. - Fibre output. - High quality lens and excellent beam performance. - Wide range of wavelengths available, typically 650, 808, 915, 940, 980nm. Other wavelengths from 405nm to 1550nm under request - Compact design. - Customisation: - Fiber pigtailed or detachable - Different Fiber connectors, SMA or FC - Collimators with high quality lenses ...
Some Applications	- Bio-medics. - Heating - Material processing - Pumping, fiber and Solid-State Lasers - Lighting - Imaging - Automatics & Robotics. - Guidance - Aerospace & Defence
Picture	 
Outline	  (Collimator optionally)

TEC FIBER OUTPUT LASER DIODE MODULES

R-SERIES

ORDERING LDM STANDARD PART NUMBER CODE

MC-WW PP H-A LLL

MC: Standard basic LDM	WW: Wavelength	PP: Optical power
H: Housing	A: Clear aperture: 2, 3, 4, 5, 6	LLL: Optics

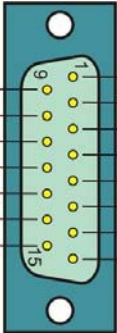
GENERAL SPECIFICATIONS FOR STANDARD LASER. OTHERS UNDER REQUEST

Model, examples	MC8150R	MC811KR	MC812K	MC815K	MC981KR
Wavelength (20°C) [nm]	810±5	810±10	810±10	810±10	980±5
Wavelength stabilization	± 0,1nm (By TEC)				
Po.max [mW] after fiber	250	750	1500	3000	200
Fiber core [μm]	62,5	50	100	400	50
NA	0.14	0.12	0.22	0.22	0.12
Connector type	FC or SMA	FC or SMA	SMA	SMA	FC or SMA
Op. current, typical [A] (at max.Po@25°C)	1,5	2	3	5	1
Op.temperature [°C]	15 to 45				
Storage temperature [°C]	-40 to 85				
Cooling	TEC				
Polarisation ratio	Random				
Output power stability	<0.5% RMS				
Reverse voltage protection circuit	Built in				
Feeding voltage	5±0,5 V _{DC}				
Expected lifetime	>10.000 Hours				
Laser product class	According with the radiant flux and EN-60825 classification, duly identified by labels.				
Housing	R type : Hard anodizing Al 45x75x160mm				
Fiber jacket	PVC Ø3mm / Ø5mm armoured optionally				
Power supply	220V AC to +5V DC				

Specifications could change depending on LD used.

I/O signals, pinout

I/O signals, pinout



GND Pwreg

OVERTEMP

UNDERTEMP

TEMP OK

PW REGULATION

LASER ENABLE

ERROR OUT

GND FEEDING

GND FEEDING

+5Vdc LD FEEDING

+5Vdc TEC FEEDING

+5Vdc TEC FEEDING

DIGITAL SIGNAL LEVELS:
UT, OT, TOK, LAS ON: "0" → 0 – 0,7V; "1" → 3 – 5V
TTL IN: "0" → 0 – 0,7V; "1" → 3,5 – 5V (typical)

PIN 1	OT-Over-temp out	"0"	Digital output	
PIN 2	UT-Under-temp out	"0"	Digital output	
PIN 3	TOK - Temp. OK out	"1"	Digital output	
PIN 4 (see table of modulation specs below)	Power regulation /Modulation input (optional)	Analogue	0-2,5V	Analogue Input
		Digital, TTL IN	TTL	TTL input
PIN 5	LASER ON Laser enable input	"1"	Digital input	
PIN 6	LASER OFF Error warning signal out Voltage feeding or temp sensor error	"0"	Digital output	
PIN 7,8	GND for Power Supply	Ground	Input	
PIN 9	GND for reference	Signal Ground	Output	
PIN 13	+5Vdc LD Feeding	+5V	Input	
PIN 14,15	+5Vdc TEC Feeding	+5V	Input	
Others	NC		NC	

POWER REGULATION / MODULATION MODES

	ANALOGUE	DIGITAL
Input signal, V _{mod} , typical	0.5 to 2V (For Power from 0 to PoMax)	TTL (for Power = [0 , Po Max])
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.

Iso **fiber output** is available on request (see below). Lower power or pre-focusing at factory on request.

FIBER PATCH-CORDS Types (to add at module p.n.)	-004S	-04SP	-005S	-006S	-050S	-010S
Minimum wavelength for single mode transmission	633-680	630-780	780-970	980-1550	MM	1350
Polarization maintaining	No	Yes	No	No	No	No
Coupling efficiency (% of Po), typical	30-50%	30-50%	30-50%	30-50%	40-60%	60-80%
Connector repeatability, typical	85%	85%	85%	85%	90%	95%
Mode field diameter [μm]	4.3 @ 633nm 4.6 @ 680nm	4.5	5.0 @ 850nm*	5.8 @ 980nm 6.2 @ 1064nm 10.4 @ 1550 nm	50±0.5	9,5
Numerical aperture	0,12	0.12	0.12	0.13	0.37	0,13
Cladding [μm]	125±2	125	125±2	125±2	150±2	125
Jacket [μm] / Protec slip [mm]	250 / 3	250 / 3	250	250 / 3	250 / 3	250/3
Min. bend diameter [mm]	25	25	25	25	25	25
Connector type	FC-PC					
Length, typical	2m					
Armored Ø 5mm	Under request					

* Special patch-cord for 830nm (5,6 m) also available

FOCUSABLE COLLIMATORS HEADS FC CONNECTORIZED. **OTHERS UNDER REQUEST**

OPTICS HEADS	Focal Length	Max. CA Effective. Do[x]	Lens type	N.A. max	Eff Typ	Focusing Range, typ. [mm]	Housing [mm] dimensions
-TxA10	10mm @ 670nm	from 2 to 6 mm	Glass aspheric lens	0.33	60 %	>40 to infinite	diam.14x55
-TxA15	15mm @ 670nm	6 mm	Glass aspheric lens	0,30	50 %	>200 to infinite	diam.14x55
-TxG25	25 mm @ 635 nm	6 mm	N/A	N/A	90%	>450 to infinite	diam.14x60
TLxx	Full angle aperture: 5,10,20,50 & 99°		Glass asph.+ cylind.	-	50 %	>50 to infinite	diam.14x60



Ordering Information:



800 Village Walk #316
Guilford, CT 06437
Ph: 203-401-8093

Email orders to: sales@xsoptix.com
Fax orders to: 800-878-7282