DESCRIPTION

The PLMR1XXC series module incorporates a highly linear MQW DFB laser emitting at ITU CWDM wavelengths from 1310-1610 nm, hermetically sealed in an industry standard coaxial package with a single mode fiber pigtail. This laser is especially suited as an uncooled, low cost light source for analog CATV return path, as well as RF over fiber applications.

FEATURES

- High linearity distributed feedback (DFB) laser
- Low RIN noise
- Internal optical isolator
- Internal monitor photodiode
- Wide operating temperature range
- RoHS compliant

APPLICATIONS

- CATV return path
- RF over fiber

MODEL OPTIONS

PLMR1XXC - X - N - Y - Z

XX:	Wavelength
31:	1310 nm
47:	1470 nm
49:	1490 nm
51:	1510 nm
53:	1530 nm
55:	1550 nm
57:	1570 nm
59:	1590 nm
61:	1610 nm

X:	Pin Out
A:	Type A

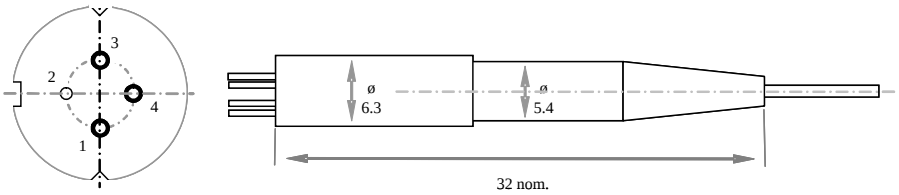
N:	Isolators
1:	Single
2:	Double

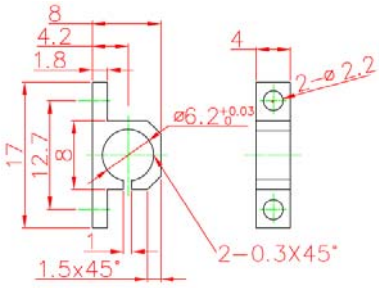
Y :	Output Power
2 :	≥ 2mW
3 :	≥ 3mW
4 :	≥ 4mW

Z :	Connector
S :	SC/APC
F :	FC/APC

MECHANICAL SPECIFICATIONS AND PINOUT CONFIGURATION

(in mm unless otherwise noted)





- SMF-28e optical fiber, flame retardant Hytrel coating, 0.9 mm diameter
- Fiber Length: 1-meter minimum, with SC/APC or FC/APC connector termination
- Custom pin configurations available.
- C-Clamp mounting bracket standard

PIN	Type A
1	PD+
2/GND	LD+
3	LD-
4	PD-

ELECTRO-OPTICAL CHARACTERISTICS						
PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Operating Temperature	T_{OP}	$I_F = I_{OP}$	-20		+85	°C
Threshold Current	I_{TH}	T = 25 °C T = 85 °C	--	8	15 50	mA
Operating Current	I_{OP}	T_{OP} = 85 °C	-		90	mA
Operating Voltage	V_{OP}		--		2	V
Operating Output Power	P_o	See model #s				mW
Slope Efficiency		T = 25 °C 2 mW model 3 mW model 4 mW model	 0.07 0.11 0.15	 0.10 0.14 0.18		mW/mA
Monitor PD Responsivity	r_{MPD}	--	50		2500	μA
Monitor PD Dark Current	I_D		--		0.2	μA
Wavelength Accuracy	λ_{OP}	$I_F = I_{OP}$ T = 25 °C	-3		+3	nm
Wavelength Temperature Sensitivity	$\Delta\lambda/\Delta T$				0.13	nm/°C
Side Mode Suppression	SMSR	$I_F = I_{OP}$	30		--	dB
Optical Isolation	ISO	Single Isolator	30		--	dB
		Double Isolator	43			
Tracking Error	E_R		-1		+1	dB
Bandwidth			3			GHz
Carrier to Noise	CNR	See Note (1)	51		--	dB
2nd Order Intermodulation	IMD2		--		-50	dBc
3rd Order Intermodulation	IMD3		--		-60	dBc
Relative Intensity Noise (2)	RIN		--		-145	dB/Hz

(1)Test conditions: P_0 at rated power, 25 °C, OMI = 10%, 2-tone, 13 MHz and 19 MHz
(2)Test conditions: zero link loss, CW

MAXIMUM RATINGS					
PARAMETER	SYMBOL	CONDITIONS	MIN	MAX	UNIT
Storage temperature	-	Continuous	-40	85	°C
Monitor Photodiode Reverse Voltage	-	60 seconds		15	V
		Continuous		15	V
Forward DC laser current	-	Continuous		150	mA
Reverse DC laser voltage	-	Continuous		1	V
Lead Soldering Temperature		10 seconds		260	°C

PRODUCTION VOLUME PACKAGING:

Lasers will be packaged in trays as shown below. Up to 10 devices can be carried in one tray.