

## DESCRIPTION

The PLMR3 series module incorporates a highly linear MQW DFB laser emitting at 1310 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 intermediate and long reach applications.

## FEATURES

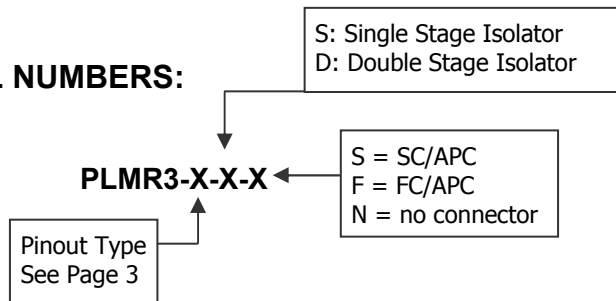
- High linearity distributed feedback (DFB) laser
- Low RIN noise
- Internal optical isolator
- Internal monitor photodiode
- Wide operating temperature range
- RoHS compliant



## APPLICATIONS

- CATV return path
- RF over fiber

## MODEL NUMBERS:



## MAXIMUM RATINGS

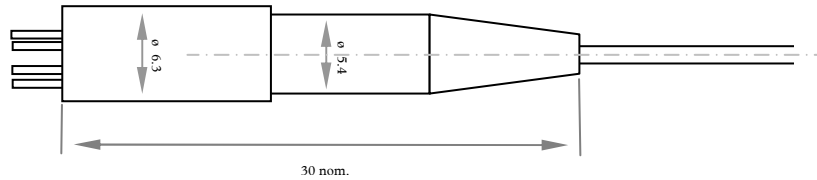
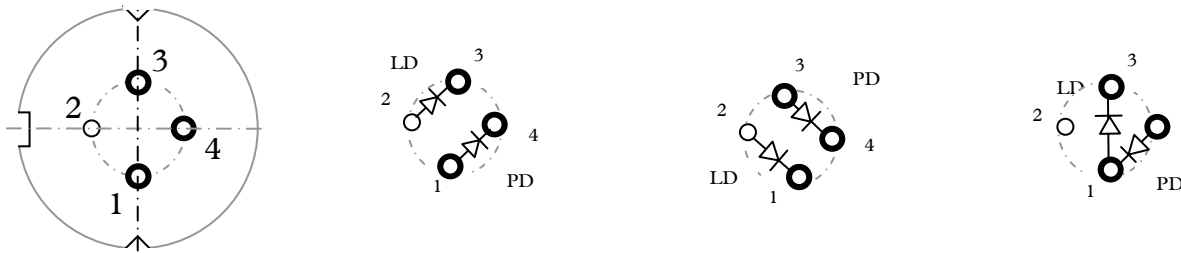
PARAMETER	CONDITION	LIMIT
Storage Temperature	Continuous	-40 to +85 °C
Monitor Photodiode Reverse Voltage	60 seconds	15 V
	Continuous	10 V
Forward DC Laser Current	Continuous	100 mA
Reverse DC Laser Voltage	Continuous	1 V

**ELECTRO-OPTICAL CHARACTERISTICS**

(Over operating temperature range, unless otherwise specified)

PARAMETER	SYMBOL	CONDITIONS	MIN	MAX	UNIT
Operating Temperature	$T_{OP}$	$I_F = I_{OP}$	-20	+85	°C
Threshold Current	$I_{TH}$	$T = 25\text{ °C}$ $T = 85\text{ °C}$	--	15 40	mA
Operating Current	$I_{OP}$	$T_{OP} = 85\text{ °C}$	-	90	mA
Operating Voltage	$V_{OP}$		--	2.1	V
Operating Output Power	$P_o$		-	6	mW
Monitor PD Responsivity	$r_{MPD}$	--	10	200	$\mu\text{A/mW}$
Monitor PD Dark Current	$I_D$	$I_{OP} = 0\text{ mA}$	--	0.2	$\mu\text{A}$
Operating Wavelength	$\lambda_{OP}$	$I_F = I_{OP}, T = T_{OP}$	1290	1330	nm
Side Mode Suppression	SMSR	$I_F = I_{OP}$	30	--	dB
Optical Isolation	ISO		30	--	dB
Tracking Error	$E_R$		-1	+1	dB
Bandwidth			1.1		GHz
2 <sup>nd</sup> Order Intermodulation	IMD2	See Note Below	--	-50	dBc
3 <sup>rd</sup> Order Intermodulation	IMD3		--	-57	dBc
Relative Intensity Noise	RIN	$f = 5 \sim 300\text{ MHz}$	--	-145	dB/Hz

Note: Test conditions:  $P_o$  at rated power, 25 °C, OMI = 10%, 2-tone, 13 MHz and 19 MHz, received power = -4 dBm

**MECHANICAL SPECIFICATIONS (mm) and PINOUTS**

**PINOUT TYPES**


	Type A	Type B	Type C
1	PD Anode	LD Cathode	LD Anode / PD Cathode
2 (Case Ground)	LD Anode	LD Anode	Case Ground
3	LD Cathode	PD Anode	LD Cathode
4	PD Cathode	PD Cathode	PD Anode

- SMF-28 optical fiber, flame retardant Hytel coating, 0.9 mm diameter
- Fiber Length: 1-meter minimum, with SC/APC or FC/APC connector termination
- Type A, B, C, and custom pin configurations available. Mounting bracket optional.

**TYPICAL OPTO-ELECTRICAL CHARACTERISTICS**

L-I-V curves

