



## DESCRIPTION

The PLMR3 series of modules incorporate highly linear MQW DFB lasers emitting at 1310 nm, hermetically sealed in industry standard coaxial packages with one single mode fiber pigtail in each. These lasers are especially suited as uncooled, low cost light sources for analog CATV return path, as well as intermediate and long reach applications.

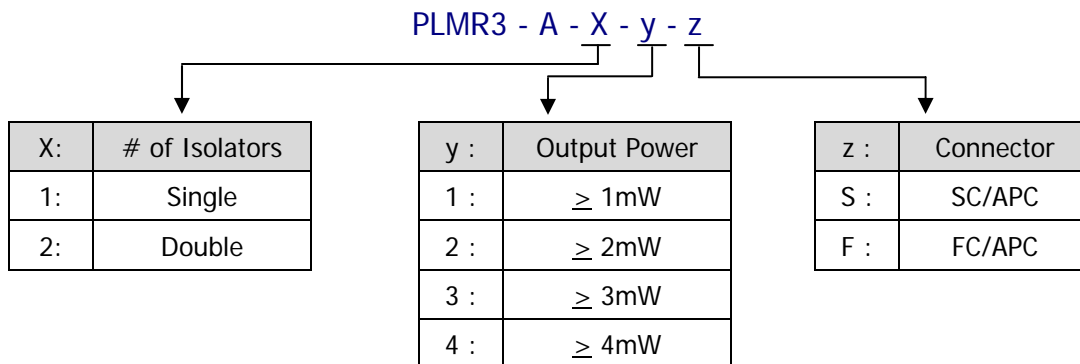
## FEATURES

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

## APPLICATIONS

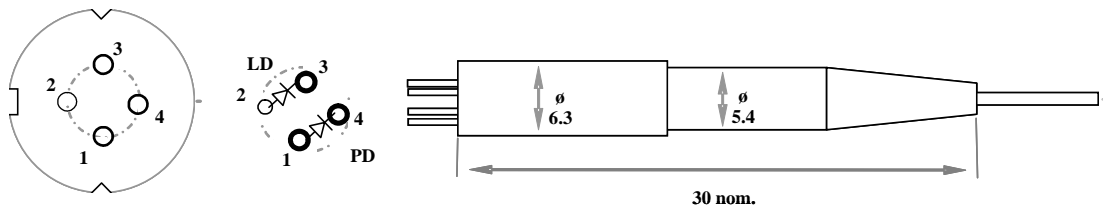
- CATV return path
- RF over fiber

## MODEL OPTIONS



## MECHANICAL SPECIFICATIONS AND PINOUT CONFIGURATION

(in mm unless otherwise noted)



- SMF-28 optical fiber, flame retardant Hytel coating, 0.9 mm diameter
- Fiber Length: 1-meter minimum with connector termination
- Custom pin configurations available. Mounting bracket optional.

PIN	Type A
1	PD Anode
2	LD Anode/Case Ground
3	LD Cathode
4	PD Cathode

ELECTRO-OPTICAL CHARACTERISTICS					
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	$I_{OP}$	$T = T_{OP}$	-	90	mA
Operating Voltage	$V_{OP}$		--	2.1	V
Operating Output Power	$P_o$	See model #			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	Single	30	--	dB
		Double	50		
Tracking Error	$E_R$		-1	+1	dB
Bandwidth			2		GHz
2 <sup>nd</sup> Order Intermodulation	IMD2	See Note (1)	--	-50	dBc
3 <sup>rd</sup> Order Intermodulation	IMD3		--	-57	dBc
Relative Intensity Noise	RIN	$f = 5 \sim 300\text{ MHz}$	--	-145	dB/Hz

<sup>(1)</sup>Test conditions:  $P_o$  at rated power, 25 °C, OMI = 20%, 2-tone, 13 MHz and 19 MHz, received power = -4 dBm

MAXIMUM RATINGS					
PARAMETER	SYMBOL	CONDITIONS	MIN	MAX	UNIT
Storage Temperature	-	Continuous	-40	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