

## DESCRIPTION

The PLMF3 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 or externally cooled, low cost light source for analog CATV **forward** path, as well as intermediate and long reach applications.



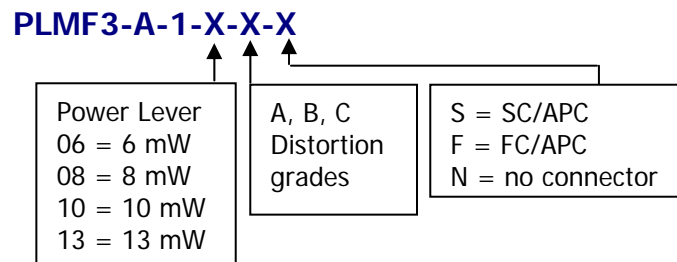
## FEATURES

- Low RIN noise
- Internal optical isolator
- Internal monitor photodiode
- Wide operating temperature range
- RoHS compliant

## APPLICATIONS

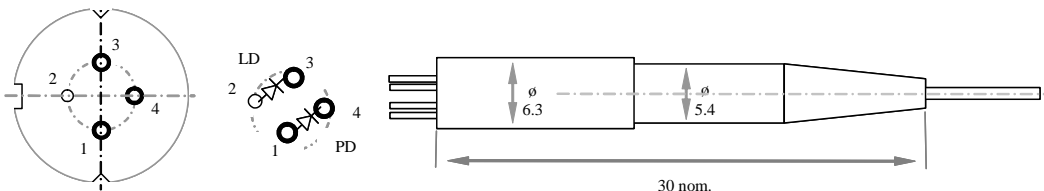
- CATV forward path
- RF over fiber

## MODEL NUMBERS:



## MECHANICAL SPECIFICATIONS (mm) and PINOUTS

(in mm unless otherwise noted)



- SMF-28 optical fiber, flame retardant Hytrel coating
- Fiber Length: 1-meter minimum
- Mounting bracket optional

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

**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	$P_o$	See power grades			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
Relative Intensity Noise	RIN		--	-145	dB/Hz
Bandwidth			2.7		GHz
Carrier to Noise	CNR	Note (1)	51		dB
Distortion	CSO	Note (1)	A	-53	dBc
			B	-57	
			C	-60	
CTB	Note (1)	--	-65	dBc	

Note (1) Test conditions:  $T=25\text{ °C}$ , 79 channels unmodulated NTSC carriers, 0 dBm received power

**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