

## DESCRIPTION

The TLMA3 and TLMA5 series consist of highly linear MQW DFB lasers emitting at 1310 nm and 1550 nm respectively, hermetically sealed in industry standard TO packages. These lasers are especially suited as uncooled, low cost light sources for analog CATV return path, as well as cellular WCDMA.

## FEATURES

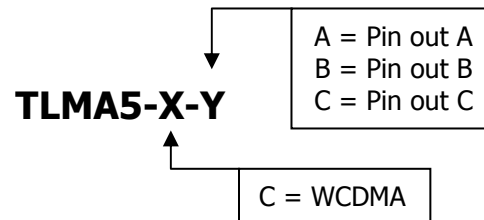
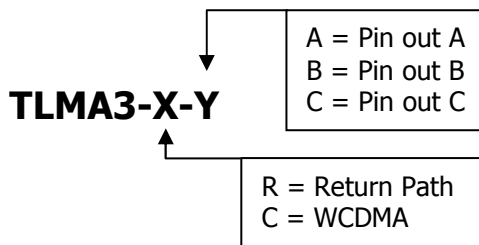
- High linearity distributed feedback (DFB) Laser
- Internal monitor photodiode
- Wide operating temperature range
- RoHS compliant

## 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

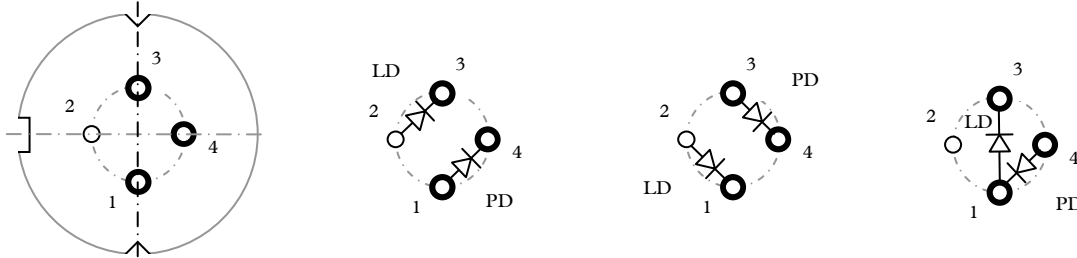
(Over operating temperature range, unless otherwise specified)

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	$P_o$		-	20	mW
Monitor PD Responsivity	$r_{MPD}$	--	5	200	$\mu\text{A/mW}$
Monitor PD Dark Current	$I_D$	$I_{OP} = 0\text{ mA}$	--	0.2	$\mu\text{A}$
Operating Wavelength (TLMA3)	$\lambda_{OP}$	$I_F = I_{OP}, T = T_{OP}$	1290	1330	nm
Operating Wavelength (TLMA5)	$\lambda_{OP}$	$I_F = I_{OP}, T = T_{OP}$	1540	1560	nm
Side Mode Suppression	SMSR	$I_F = I_{OP}$	30	--	dB
Bandwidth			2.2		GHz
Linearity TLMA3-R	IMD2	See Note (1) Below	--	-50	dBc
	IMD3		--	-60	dBc
Linearity TLMA3-C Linearity TLMA5-C	IMD2	See Note (2) Below	--	--	dBc
	IMD3		--	-60	dB
Relative Intensity Noise	RIN	$f = 5 \sim 300\text{ MHz}$	--	-145	dB/Hz

**Notes:**

1. Test conditions:  $P_o$  at rated power, 25 °C, OMI = 10%, 2-tone, 13 MHz and 19 MHz, received power = -4 dBm
2. Test conditions:  $P_o$  at rated power, 25 °C, OMI = 20%, 2-tone, 936 MHz and 958 MHz

## MECHANICAL SPECIFICATIONS (mm) and PINOUTS



PIN #	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

Type A, B, C, and custom pin configurations available

## MECHANICAL DRAWINGS

