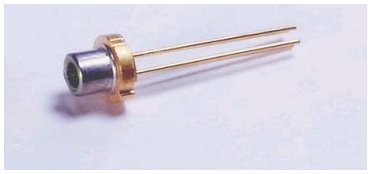
EP1310-LDM-T Series

1310nm Discrete Mode Lasers for LX4



FEATURES

- Single wavelength emission per the IEEE LX4 grid
- High Immunity to Optical Feedback compared with DFB-type lasers
- Wide Operating Temperature Range
- InAlGaAs composition for reliable uncooled operation
- High Bandwidth - up to 3.125Gbps
- Excellent RIN-OMA performance without optical isolation

APPLICATIONS

- LX4
- CWDM applications

ELECTRO-OPTICAL CHARACTERISTICS (T = 25°C unless stated otherwise):

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Threshold Current	I_{th}		12	18	mA	CW, T=25°C
			23	35		CW, T=70°C
			30	45		CW, T=85°C
Operating Current	I_{op}		32	42	mA	CW, P_O = 5mW
Peak Wavelength	λ	1269.0	1275	1282.4	nm	CW, P_O = 5mW, T_{min}<T<T_{max}
	λ	1293.5	1300	1306.9	nm	
	λ	1318.0	1325	1331.4	nm	
	λ	1342.5	1350	1355.9	nm	
Wavelength Temperature coefficient			0.09		nm / °C	CW, T_{min}<T<T_{max}
Side Mode Suppression Ratio	SMSR	30	40		dB	CW, T_{min}<T<T_{max}
Quantum Efficiency	η	0.20	0.25		mW/mA	CW, P_O = 1 to 5mW
Forward Voltage	V_f		1.3	1.6	Volts	I = I_{op}, T=25°C
Output Power at Threshold				200	μW	T=25°C
Beam divergence (perpendicular)	$(\theta_{\perp})$		28		degrees	CW, P_O = 5mW
Beam divergence (parallel)	$(\theta_{//})$		20		degrees	CW, P_O = 5mW
Rise time/fall time				120	ps	I = I_{op}
Monitor output current	I_{mon}	95			μA	
Monitor PD terminal capacitance				20	pF	

Note: Unless otherwise stated measurements perfomed with a flat form window.

ABSOLUTE MAXIMUM RATINGS:

PARAMETER	CONDITION	MIN	MAX	UNIT
Forward Current (PD)			2	mA
Forward Current Transient (LD)	1 μs max		150	mA
Reverse Voltage (LD)			2	Volts
Reverse Voltage (PD)			15	Volts
Case Temperature (T)		T_{min}	T_{max}	
Grade F		0	85	°C
Storage Temperature		-40	85	°C

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PACKAGE:

The EP1310-LDM-T product series is offered in a TO 56 package format - see package outline drawings below (Fig 1). The package pinout may be specified according to the options shown in Fig 2.

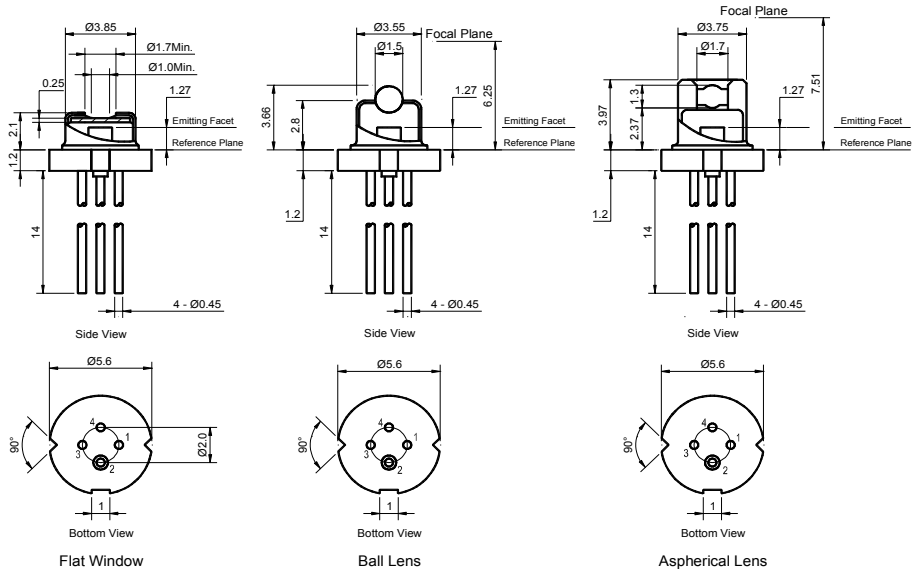

Fig. 1 - Package Outlines

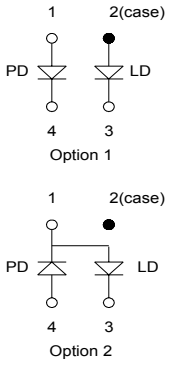

Fig. 2 - Pinout Options

HOW TO ORDER (example):

Please use the following example as a guide to building the appropriate part number for the device you require:

EP 1275 - LDM - T - 328 - 562F - F

- **EP** — Eblana Photonics
- **1275** — Wavelength Band (1275, 1300, 1325, 1350)
- **LDM** — Discrete Mode
- **T** — TO Can package
- **328** — Data Rate: 328 = 3.125 Gbps
- **562F** — Package Description: 56 = TO56 Can; 1 = Pinout option 1; 2 = Pinout option 2; F = Flat Window; B = 1.5 mm Ball Lens; A = Aspherical Lens
- **F** — Performance Grade: F version 0..85 °C

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