EP1490-DM-T Series

1490nm Discrete Mode Lasers - TO Can

FEATURES

- Single wavelength emission in 1490nm band
- High Immunity to Optical Feedback compared with DFB-type lasers
- Wide Operating Temperature Range
- InAlGaAs composition for reliable uncooled operation
- High Bandwidth - up to 2.5Gbps

APPLICATIONS

- High Speed Access Optical Links
- High Speed Datacoms
- FTTX
- PON
- Digital Transport Links (SDH/SONET)

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

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Threshold Current	I_{th}		13	17	mA	CW, T=25°C
			26	34		CW, T=70°C
			36	48		CW, T=85°C
Operating Current	I_{op}		35	44	mA	CW, P_O = 5mW
Peak Wavelength	λ	1480	1490	1500	nm	CW, P_O = 5mW, $T_{min}<T<T_{max}$
Wavelength Temperature coefficient			0.10		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	0.18	0.23		mW/mA	CW, P_O = 1 to 5mW
Forward Voltage	V_f		1.4	1.6	Volts	I = I_{op}, T=25°C
Output Power at Threshold				200	μW	T=25°C
Beam divergence (perpendicular)	$(\theta_{\perp})$		30		degrees	CW, P_O = 5mW
Beam divergence (parallel)	$(\theta_{//})$		25		degrees	CW, P_O = 5mW
Rise time/fall time						
155 Mbps version				700	ps	I = I_{op}
1.25 Gbps version				250	ps	I = I_{op}
2.50 Gbps version				120	ps	I = I_{op}
Monitor output current	I_{mon}	75			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 B		0	70	°C
Grade F		0	85	°C
Grade Q		-40	85	°C
Storage Temperature		-40	85	°C

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PACKAGE:

The EP1490-DM-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.

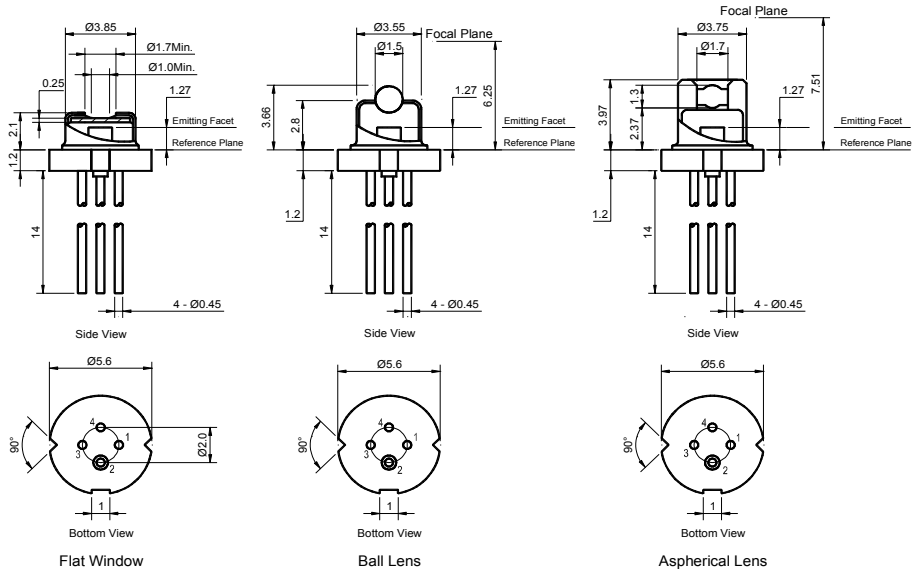

Fig. 1 - Package Outlines

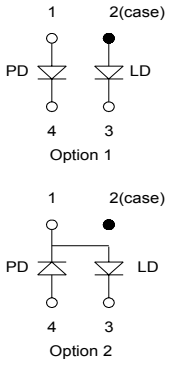

Fig. 2 - Pinout Options

HOW TO ORDER (example):

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

EP 1490 - DM - T - 157 - 562F - Q

- **EP** — Eblana Photonics
- **1490** — Wavelength Band
- **DM** — Discrete Mode
- **T** — TO Can package
- **157** — Data Rate
  - 157 = 15.5E7 (155Mbps)
  - 128 = 12.5E8 (1.25Gbps)
  - 258 = 25.0E8 (2.50 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
- **Q** — Performance Grade
  - B version 0..70 °C
  - F version 0..85 °C
  - Q version -40..85 °C

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