

1550 nm 2.5 Gbps RW-DFB Laser in TO-can Package

Description

BinOptics 155D-02x-LTxx-xx Series products are directly modulated 2.5Gbps 1550 nm ridge-waveguide (RW) Distributed Feedback (DFB) laser diode devices. Product is available in hermetic TO-56 package with aspherical lens and integrated InGaAs monitoring photodiode.

Key Features

- 1550 nm wavelength
- Direct modulation at 2.5 Gbps
- Uncooled operation
- Aspherical lens and 2 mm ball lens in TO-56 package are available

Key Benefits

- 4 to 6 mW optical power available
- -20°C to 85°C operating temperature range available

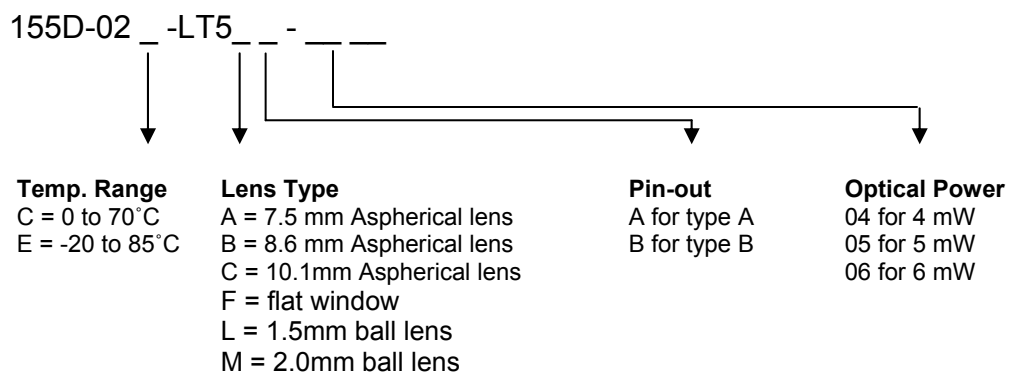
Applications

- Telecom
- Access, Ethernet, Fiber Channel

ELECTICAL/OPTICAL CHARACTERISTICS (T _c =25°C)						
Parameter	Conditions	Symbol	Min.	Typ.	Max.	Unit
Threshold Current	T _c =25°C	I _{th}		13	18	mA
	T _c =85°C			35	40	
Optical Output Power (-0x, x from 4 to 6)	I _{op} =I _{th} +20mA	P ₀	x	x+0.5		mW
Operating Voltage	I _{op} =I _{th} +20mA	V		1.2	1.6	V
Center Wavelength	I _{op} =I _{th} +20mA	λ _c	1530	1550	1570	nm
Side-mode Suppression Ratio	I _{op} =I _{th} +20mA	SMSR	35	45		dB
Temperature Dependence of Center Wavelength	CW	Δλ/ΔT		0.1		nm/°C
Beam Divergence Angle (FWHM, laser chip)	Parallel	θ _∥		17		deg.
	Perpendicular	θ _⊥		35		deg.
Rise Time (10-90%)	I _{op} =I _{th} +20mA	t _r			100	ps
Fall Time (10-90%)	I _{op} =I _{th} +20mA	t _f			150	
Monitor Photocurrent	I _{op} =I _{th} +20mA	I _m	0.05		0.6	mA
Dark Current (Photodiode)	V=5V	I _D			0.1	μA
Capacitance (Photodiode)	V=5V	C _t		10	20	pF
Focus Length Tolerance	2mm ball lens	ΔF		±0.2		mm
	Aspherical lens			±0.3		

Absolute Maximum Ratings						
Parameter	Conditions	Symbol	Min.	Typ.	Max.	Unit
Operating Temperature (155D-02C-LT5xx-xx)		T_{op}	0		70	°C
Operating Temperature (155D-02E-LT5xx-xx)		T_{op}	-20		85	°C
Storage Temperature		T_{st}	-40		100	°C
Optical Output Power	CW	P_o			40	mW
Laser Reverse Voltage		V_{rl}			2	V
Laser Forward Current		I_{op}			100	mA
Photodiode Reverse Voltage		V_{rd}			15	V
Photodiode Forward Current		I_{fd}			2.0	mA

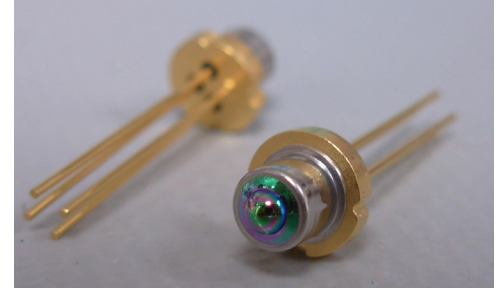
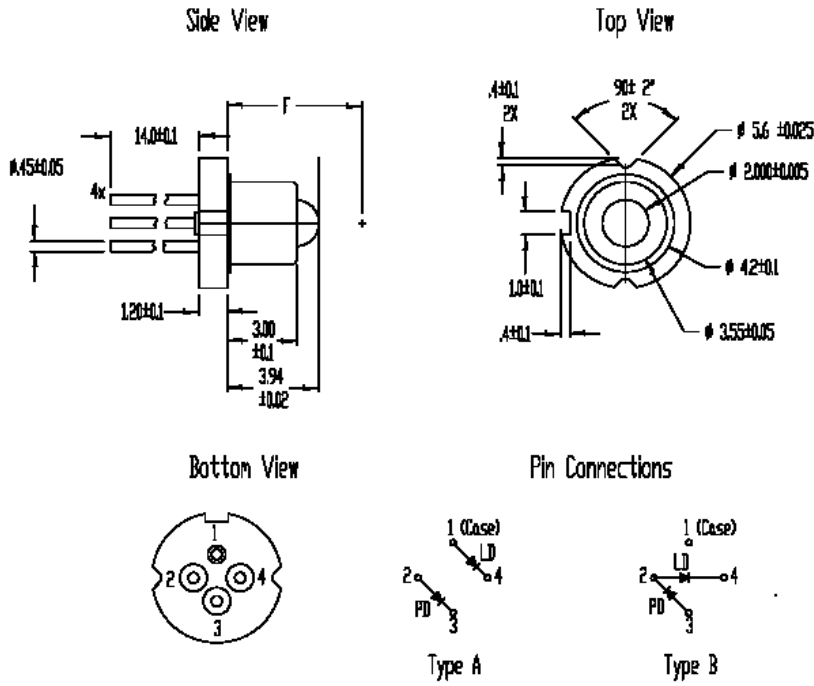
Ordering Information:



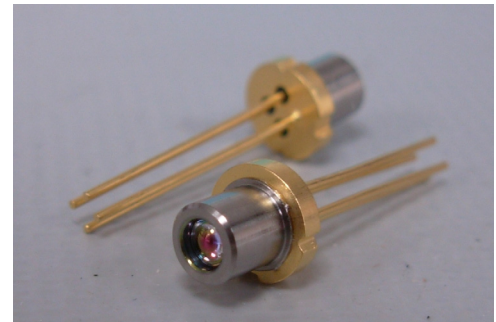
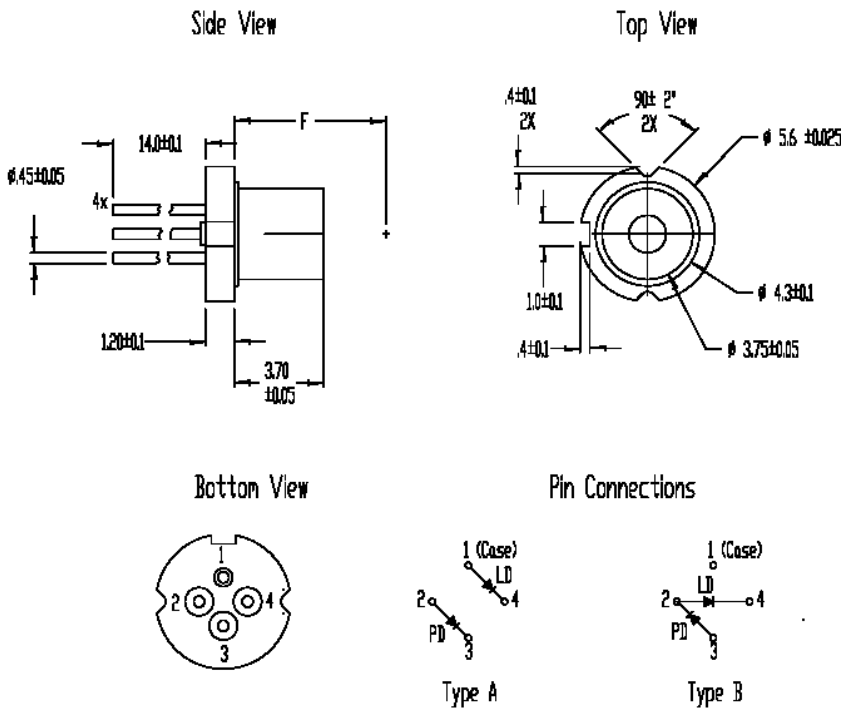
Package Dimensions (unit: mm)

155D-02x-LT5xx-xx

Package Option: 2.0mm Ball lens



Package Option: Aspherical lens



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Pre-release