

1550nm Narrow Linewidth Coaxial Laser with TEC

1. Features

- 1550nm Narrow Linewidth Laser direct modulation with cooled DFB-LD as Transmitter;
- Low noise, Low distortion;
- Low threshold current;
- Built-in InGaAs/PIN monitor;
- High reliability, Long operation life.

2. Applications:

- Lidar ranging system;
- Driverless system.

3. Absolute Maximum Ratings (Tc=25℃):

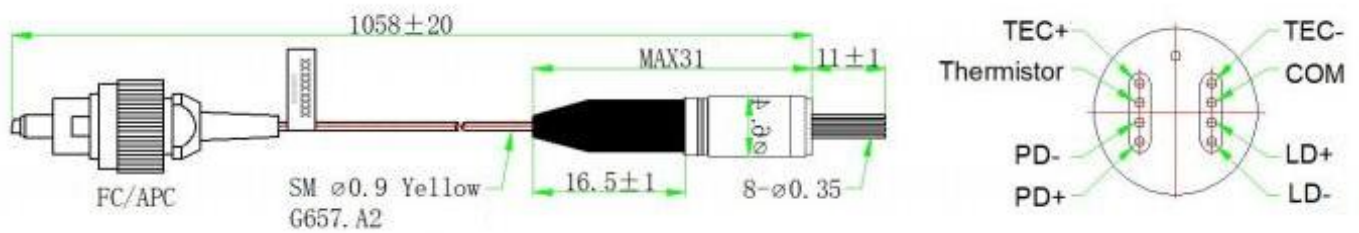
Parameter	Symbol	Ratings	Unit
LD Direct forward current	I_{FL}	400	mA
LD Reverse voltage	V_{RL}	2	V
PD Forward current	I_{FD}	2	mA
PD Reverse voltage	V_{RD}	15	V
Operating case temperature	T_{OP}	-40 ~ +85	℃
Storage Temperature	T_{ST}	-40 ~ +85	℃
Lead soldering(Temperature)/(Time)	-	260/10	℃/Sec
Fiber bend radius	-	60	mm

4. Optical-Electro Characteristics(Tc=25℃):

Parameter	Symbol	Test Condition	Min	Typ.	Max	Unit
Output optical power/SMF	P_O	$I_{OP}=I_{TH}+20\text{ mA}$	2	-	-	mW
Threshold current	I_{TH}	CW	-	50	-	mA
Forward voltage	V_F	CW	-	-	3	V
Center wavelength	λ_C	$I_{OP}=I_{TH}+20\text{mA}$	1547	1550	1553	nm
Rise/Fall time	T_r/T_f	$I_{OP}=I_{TH}$, 20%-80%	-	0.1	0.15	nS
Monitor current	I_M	$I_{OP}=I_{TH}+20\text{mA}$	100	-	1000	μA
Monitor dark current	I_D	$V_{RP}=5\text{V}$, DC	-	-	100	nA
Self-heterodyne linewidth measurement	$\Delta \nu$	CW, $P_O=P_F$	-	-	500	KHz
Slope efficiency	SE	CW, $I_{OP}=I_{TH}+20\text{mA}$	0.1	-	-	W/A
Tracking error	TE	CW, $I_M=\text{Constant}$	-1.5	-	1.5	dB
Side mode suppression ratio	SMSR	CW, $I_{OP}=I_{TH}+20\text{mA}$	30	35	-	dB

Optical isolation	I _{SO}	-	30	-	-	dB
TEC	Q _{MAX}	-	-	-	0.6	W
	I _{MAX}	-	-	-	0.9	A
	V _{MAX}	-	-	-	1.2	V
	Δ T	-	-	40	-	K
Thermistor resistance	R _{TH}	-	-	9.9	-	kΩ

5. Outline Diagram and Pin Assignments



6. Order Information

BLD-ND5502H-IFA(TEC)

BLD	-X	XX	XX	X	-X	XX	(XX)
Product type	LD Type	Wavelength	Power	PIN-OUT	Isolator	Connector	TEC
Laser Diode	ND: Narrow linewidth DFB	55: 1550nm	02: 2mW	H: Type H	I: With	FA: FC/APC SA: SC/APC	TEC