

PD-LD Inc. offers its' PL1650 DFB Series of coaxial style laser diodes with integral optical isolators. The addition of these isolators ensures a minimum optical isolation of 30dB at 1650nm over the entire operating temperature range. These lasers may be operated from -40 to 85°C while maintaining all of the DFB spectral characteristics. These units are available in ready-to-use, fiber-pigtailed packages and may be terminated with all standard optical connector varieties .

The InGaAsP DFB laser diodes offered by PD-LD are of proven design and manufacture. The semiconductor lasers have been qualified as per Telcordia GR-468. The highly stable YAG Laser welded packaging ensures a low tracking error of +/- 1.0 dB maximum over OTR -40 to 85°C .

These components are in compliance with RoHS Directives. The 1625nm DFB lasers couple 2mW optical power into 9/125um SMF and so are considered Class 1 Eye Safe as defined by the IEC825-1 & -2 and the CDRH 1040.10 definitions.

Optional board- or panel -mount flanges are available for pigtailed devices; contact PD-LD Sales.



Features

- Internal Monitor Photodiode
- Compact, reliable, coax fiber-coupled package
- 2 to 3 mW singlemode (9/125)
- 30 dB minimum side mode suppression
- 0.15 nsec typical rise/fall time

Applications

- Fiberoptic communications
- Fiberoptic test instrumentation
- Analog Signal transmission
- 2.7 GBs Optical Networks

PD-LD Part No. ¹	Wavelength (nm) Min. Typ. Max.	Min. Fiber Coupled Power (mW)	Threshold Current (mA) Typ. Max.	Operating Current (mA) Typ. Max.	Pin-Out Style
Continuous Wavelength InGaAsP Lasers @ 25C					
PL16N0021FCG-A-1-01	1635 1650 1665	2 mW	12 18	35 45	"H" Style

Parameter	Condition	Min	Typ	Max	Unit
Optical Isolation	Temp.= +25°C	30	45	—	dB
	Temp.= -40~+85°C	20	—	—	

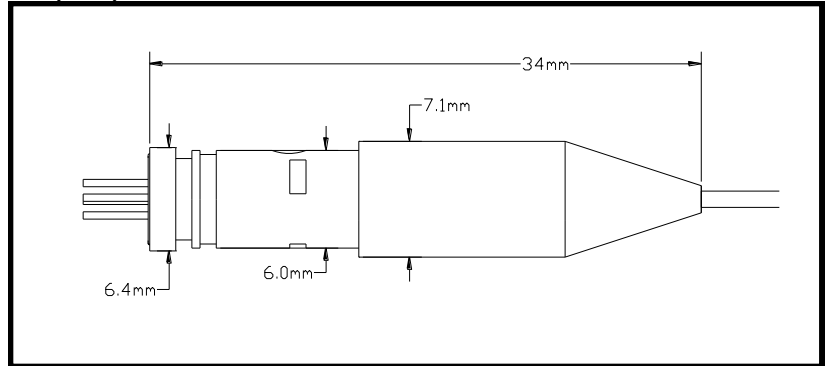
¹Examples only; most device/package combinations available. Changes to specifications may be made without notice. 10-11PL1650 Isolated DFB. Rev.A

Physical Dimensions (mm) & Pin Connection

Laser Diode Schematic

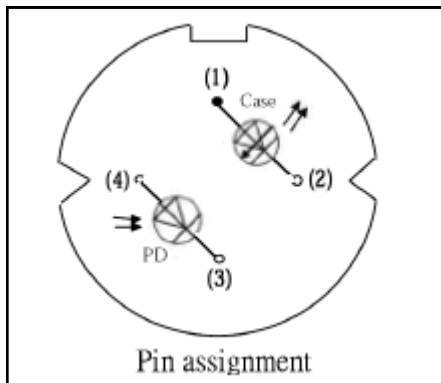
Coaxial-Pigttailed Laser Diode Package

Consult PD-LD for Available Board Mount (10181 or 10198) or Panel Mount Brackets (10219)



Laser Diode Lead Orientation : Bottom View

“H” Style Pin-out
PL16N Series



Ordering Information

Lasers - Pigtailed

PLWWPPPFCCB-0-I-LL

L = Laser

WWW=Wavelength and Pin-out
1650 nm DFB “H” PIN-OUT =16N

PPP = Fiber-Coupled Power
002 = 2.0 mW min

F = Fiber Type
1 = 9/125/900 SMF

B = Bracket Type
A = None
E = Panel Mount
G = Board Mount

O=Orientation
0=None
A=Bracket Shipped Loose (pigtailed units only)
Specify orientation as required

I=Single Stage Optical Isolator

LL = Fiber Pigtail Length in meters : 01= 1 meter, .5= 0.5 meter, ect.

CC = Connector Type: ST = ST/PC SC = SCPC SA=SC/APC FC = FC/PC FA = FC/APC FU = FC/UPC
OO = None Connector TA = ST/APC SA = SC/APC FA = FC/APC D4 = D4
BC = Biconic

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Absolute Maximum Ratings (Tc=25°C)

Parameter	Symbol	Value	Unit
Optical Output Power	P _O	5	mW
LD Reverse Voltage	V _{RLD}	2	V
LD Forward Current	I _{fl}	150	mA
PD Reverse Voltage	V _{RPD}	20	V
PD Forward Current	I _{FPD}	2	mA
Operating Temperature	T _{OPR}	-40 to 85	°C
Storage Temperature	T _{STG}	-40 to 100	°C

Electro-Optical Characteristics (Tc= 25°C except as noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Lasing Threshold Current	I _{th}	CW	8	12	18	mA
Operating Current	I _{op}	2 mW	25	35	45	W/A
LD Forward Voltage	V _f	I _f =35mA		1.1	1.60	V
Optical Output Power	P _o	I _{th} +25mA	2	-	-	mW
Wavelength	λ	2 mW	1635	1650	1665	nm
Wavelength Temperature Coefficient	λ _{ct}	I _f =35 mA		0.1		nm/ deg C
Side mode suppression ratio	SMSR	I _f =35 mA	30	43		dB
Monitor Output Current	I _m	I _f =I _{th} + 25 mA	10		500	uA
Monitor Dark Current	I _d	5V reverse bias			200	nA
Monitor Capacitance	C	5V reverse bias		5	7	pF

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