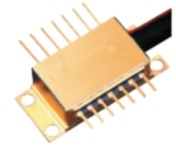


1101 DFB Laser with TEC

DFB-1310-DM-4



DFB Laser, 1310 nm, Up to 20 mW, Direct Modulation

The Optilab DFB-1310-DM-4 directly-modulated (DM) DFB laser is a cost effective 1310 nm wavelength laser source for 4 GHz analog or 5 Gb/s digital transmission optical link. The MQW DFB laser features 20 mW of output optical power, high Side Mode Suppression Ratio (SMSR), low residual chirp, and a built-in thermoelectric cooler, thermistor, and a rear-facet monitor photodiode for external optical power control.

FEATURES

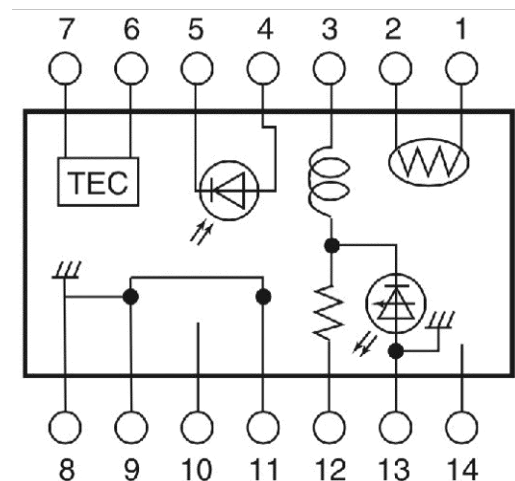
- Up to 4 GHz Analog Bandwidth
- 5 Gb/s Digital Transmission
- 20 mW Output Power Typical
- Built-in TEC, Thermistor & Monitor PD
- Side Mode Suppression Ratio > 40 dB

USE IN

- Analog Link Up to 4 GHz Bandwidth
- 5 Gbps Digital Communication
- CW 1310 nm Laser Source
- Directly Modulate Optical Link

FUNCTIONAL DIAGRAM

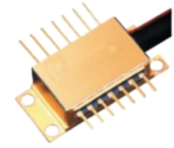
Pin#	Desc	Pin#	Desc
1	Thermistor	8	Case Ground
2	Thermistor	9	Case Ground
3	LD- (Bias)	10	NC
4	Monitoe Anode	11	Laser Ground
5	Monitoe Cathode	12	Laser Modulation-
6	TEC+	13	Case Ground
7	TEC-	14	NC



Order notes to our customers: The default parameters are as follows. For special needs, please contact sales.
1) Connector FC/APC, 900 um, 1 m by default for all devices except for high power devices.
2) Slow axis working, fast axis blocked, connector key is aligned to slow axis by default for PM devices.

1101 DFB Laser with TEC

DFB-1310-DM-4



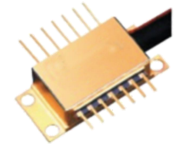
Wavelength Range	1310±2 nm
Optical Output Power	20 mW typ.; 17 mW min.
Threshold Current	20 mA max. @CW
Laser Set Temperature	15 °C min.; 40 °C max.
Forward Voltage	1.6 V typ.
Series Resistance	25 Ω typ.
Slope Efficiency	0.20 mW/mA
Threshold Power	0.15 mW
Monitor Current	0.10 mA min.; 1.0 mA max.
Side Mode Suppression	40 dB typ.
Laser Linewidth	5 MHz typ.
Rise/Fall Time (10%-90%)	100 ps typ.
3 dB S21 Bandwidth	4.0 GHz typ.
In-Band Ripple (Window)	±1.5 dB max.
RF Return Loss	-10 dB from DC to 2.5 GHz
Optical Isolation	35 dB typ.
Relative Intensity Noise	-145 dB/Hz
Optical Connectors (Optional)	FC/APC or Others
Optical Fiber Type	SM Fiber-28 (Standard)
TEC Current	1.0 A max.
TEC Voltage	2.4 V max.
Cooler Power	2.4 W max.
TEC Resistance	2.0 Ω min.; 3.2 Ω max.
Thermistor Resistance	7.7 k Ω min.; 12.6 k Ω max.
Thermistor B Constant	3,270 K min.; 3,450 K typ.; 3,630 K max.
Operating Temperature	-30 °C to +65 °C
Storage Temperature	-50 °C to +75 °C
Reverse Voltage	2 V
PD Reverse Voltage	20 V
PD Forward Current	10 mA
TEC Voltage	2.5 V
TEC Current	1.4 A
Lead Soldering Time	10 Sec @ <260 °C
Operating Humidity	95% @ < 30 °C

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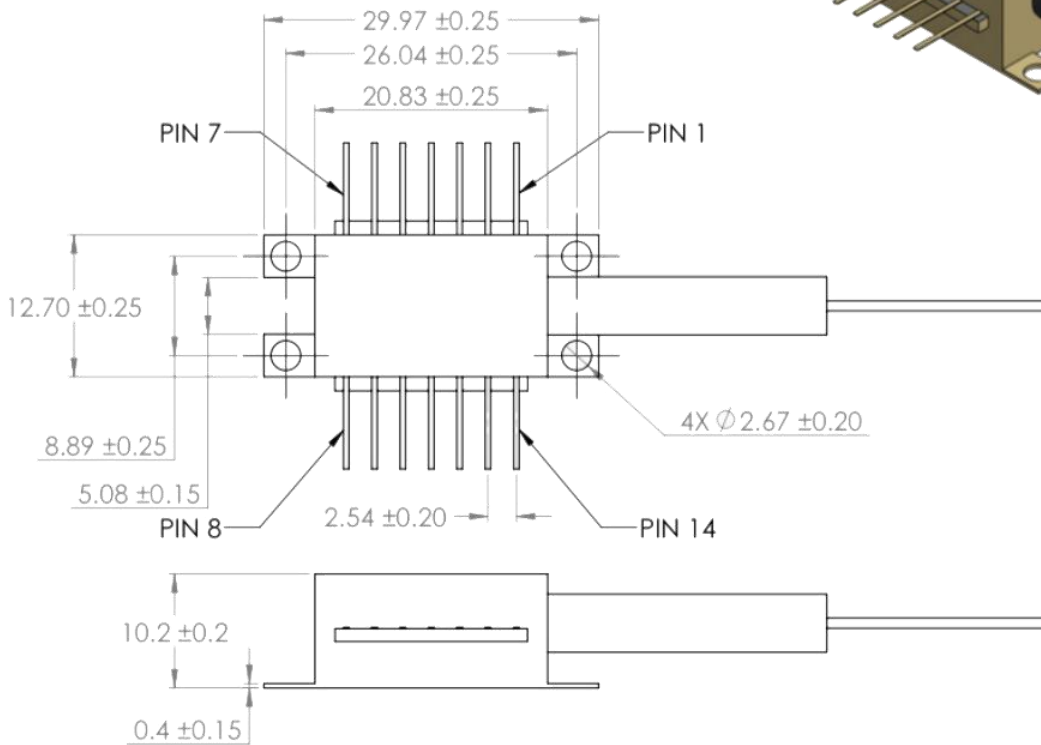
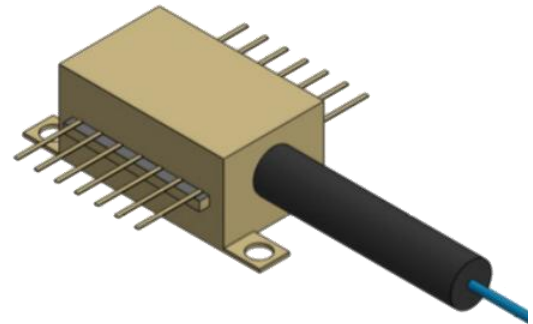
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1101 DFB Laser with TEC

DFB-1310-DM-4



MECHANICAL DRAWING



Unit: mm

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