



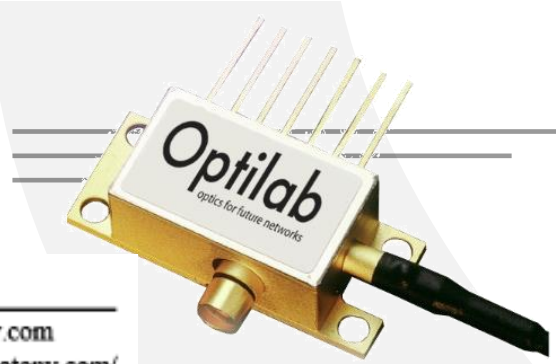
# DFB-1550-EAM-12

## Kokyo

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## EAM DFB Laser Diode, 12 GHz, 5 mW

### OVERVIEW

The Optilab DFB-1550-EAM-12 laser diode is a cost effect and compact laser solution for optical transmission applications. Consisting of a DFB laser with an integrated Electro-Absorption Modulator (EAM), this allows for modulation speeds of over 12 GHz on one 7-pin butterfly package device. Including a thermoelectric cooler (TEC), temperature thermistor, optical isolator and a GPO RF connector. Contact Optilab for more information.

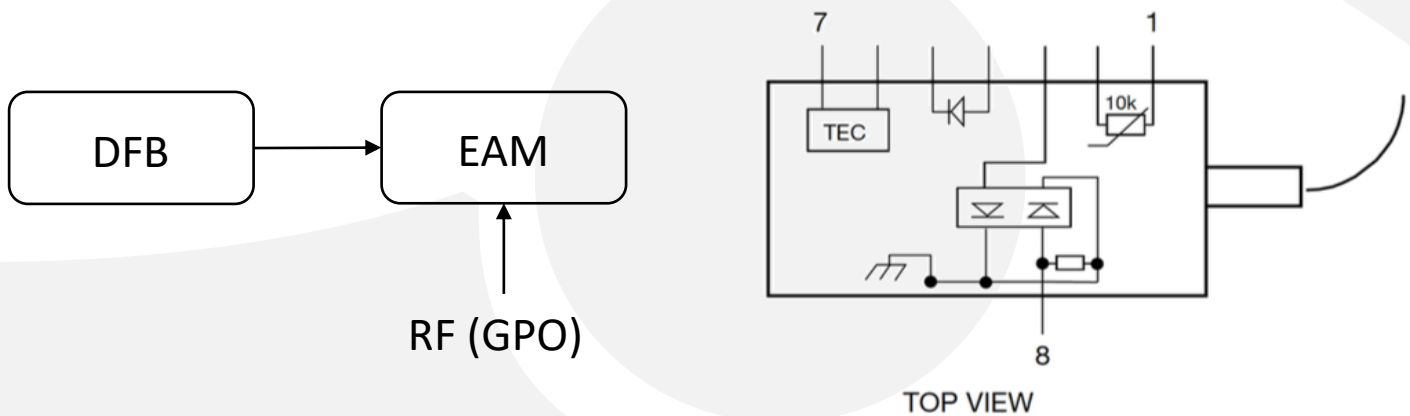
### FEATURES

- 1550 nm DFB + EAM Modulator
- Hermetic, 7 pin butterfly package
- Single-mode fiber pigtail
- 12 GHz bandwidth
- 5 mW output power
- TEC Cooler

### APPLICATION

- Optical Communication
- RFoF
- Microwave Link
- Pulse Source

### FUNCTION DIAGRAM





# DFB-1550-EAM-12

## SPECIFICATIONS

### GENERAL

Wavelength Range	1555nm +/- 10nm 1532nm +/- 10nm
Output Power	5 mW typ.
Extinction Ratio	10 dB min.
Side Mode Suppression. Ratio	40 dB min.
Optical Isolation	30 dB min.
Operating Current	100 mA max.
Threshold Current	15 mA typ.
Forward Voltage	2 V max.
Modulation Bandwidth	12 GHz min.
Rise/Fall Time	40 ps max.
Monitor Current	0.1 mA min.
Thermistor Resistance	10 k $\Omega$ typ.
TEC Voltage	2.5 V max.
TEC Current	1.2 V max.
TEC Power	3 W max.

### MECHANICAL

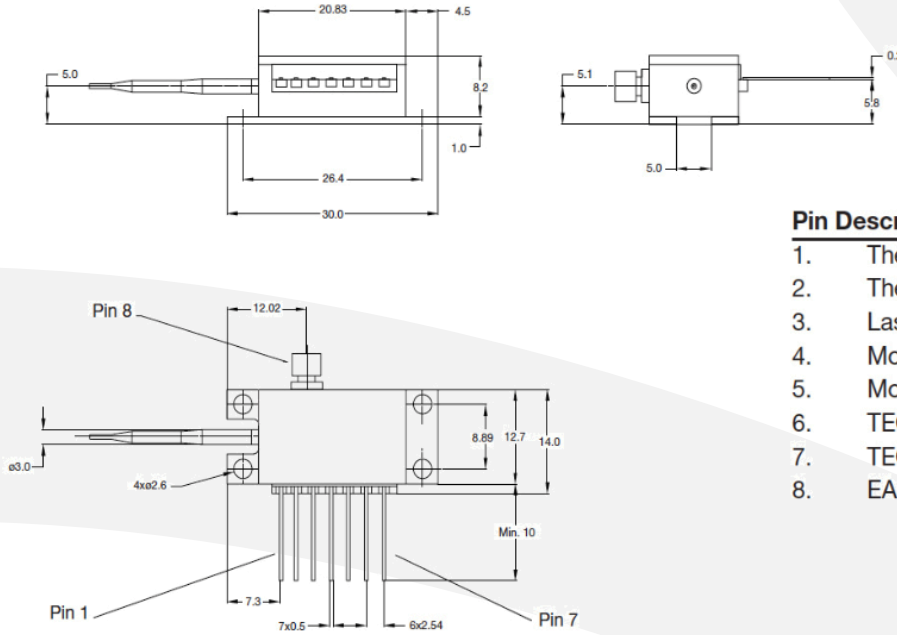
Operating Case Temperature	-10 °C to +70 °C
Storage Temperature	-50 °C to +85 °C
Optical Connector	FC/APC
Fiber Type	SMF-28, 900 um buffer
RF Connector	GPO





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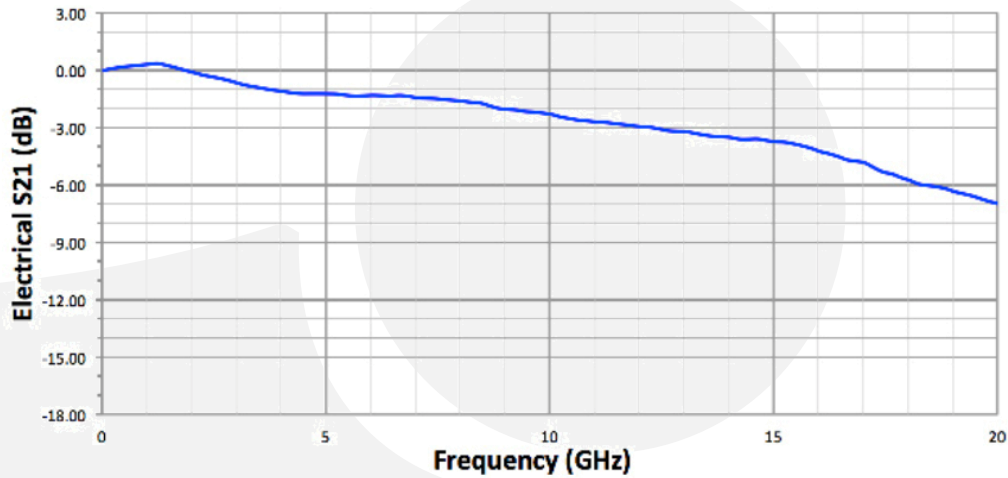
## MECHANICAL DRAWING



### Pin Description

1. Thermistor
2. Thermistor
3. Laser DC bias (+)
4. Monitor (-)
5. Monitor (+)
6. TEC (+)
7. TEC (-)
8. EA modulation (-)

## TYPICAL S21 BANDWIDTH





# DFB-1550-EAM-12



## BIAS SETTING MODES FOR DFB

Based on sophisticated phase measurement of this small dither signal, DFB-1550-EAM-12 provides four selectable operating modes: quadrature (Quad +), inverted quadrature (Quad -), minimum (Min), or maximum (Max) points.

