

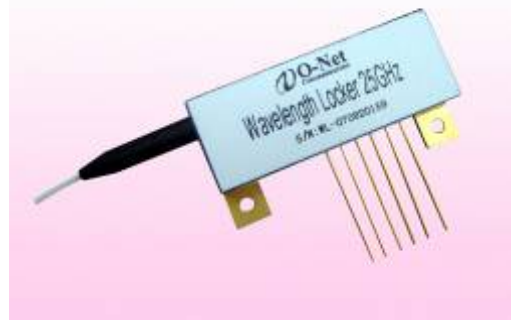
WAVELENGTH LOCKER

O-Net's wavelength locker is based on athermal Fabry-Perot cavity with 25GHz and/or 50GHz free spectral ratio (FSR). The design is special for a calibrated frequency discriminator for controlling the wavelength of DFB laser to any ITU channel in the C+L band on a 25 GHz or 50GHz grid. The device is compliant to RoHS Directive.

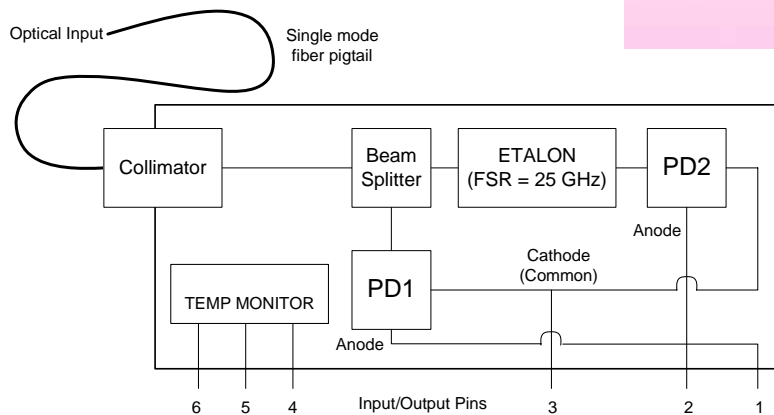
Features

- High precision locking accuracy
- Low polarization dependence
- High stability over temperature

Wavelength Locker



Function Diagram



Absolute Maximum Ratings

Absolute Maximum Ratings are those values, beyond which, some damage to the devices may occur to the devices. Exposure to conditions above the Absolute Maximum Ratings listed in the table may negatively impact the reliability of the products.

Parameter	Specification	Unit
Case Storage Temperature	-40~+85	°C
Maximum Optical Power Handling	10	dBm
Fiber Bend Radius	Min 25	mm
Package Lead Soldering (250°C)	Max 10	sec
Fiber Tensile Load (10 sec. Max.)	5	N
ESD threshold (HBM)	250	V

Recommended Operating Conditions

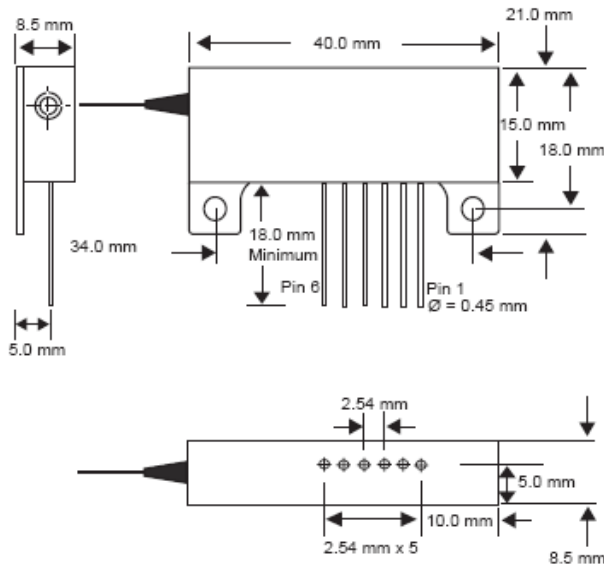
Parameter	Specification	Unit
Case Operating Temperature	-5~+75	°C
Rate of Change of Case Temperature During Operation	25	°C/min
Input Power	-25~+7	dBm
Relative Humidity, at 40°C non-condensing	5~95	%

Optical & Electrical Specifications

Parameter	Specification	Unit
Channel Spacing	25 50	GHz
Wavelength Range	1520~1620	nm
Central Wavelength	ITU grid	
Central Wavelength Accuracy	+/-1.25 +/-2.5	GHz
Locking Slope at ITU Point	0.50~0.85 0.48~0.72	dB/GHz
Polarization Dependent Accuracy	Max 0.4 0.6	GHz
Capture Range ¹	~9 ~17	GHz
Return Loss	Max -45 -45	dB
Responsivity of Reference PD1	0.19-0.52 0.16-0.32	mA/mW
Responsivity of Etalon PD2	0.19-0.52 0.16-0.4	mA/mW
PD Dark Current at 5Vr, 25°C	Max 1	nA
Temperature Monitor Supply	4-10	V
Temperature Monitor Output	7-13	mV/°C

1: absolute value of minimum frequency difference between ITU point and adjacent points with same ratio of PD responsivities.

Package Dimensions



Pinout

Pin	Description
1	Monitor PD1 anode (+)
2	Etalon PD2 anode (+)
3	PD1, PD2 cathode (-)
4	Temperature sensor supply voltage
5	Temperature sensor monitor
6	Temperature sensor ground