

# Lightwave Equalizer

## LE2000

**FIBERPRO's** Lightwave Equalizer, LE2000, allows the user to create arbitrary filter shapes for optical testing, measurement, and characterization.

It gives the user control of center frequency, passband, phase, and power level in spectrum slices of 12.5 GHz centered on the ITU-T Grid.

Based on High Definition Liquid Crystal (HDLC) technology, LE2000 has no moving parts and offers superior reliability compared to other filters that must rely on moving optical or mechanical elements to tune wavelengths, so that optical performance is very repeatable, stable, and features fast response times.



## Features

- Direct and instantaneous filter control
- Accurate tuning of center frequency, phase and attenuation level
- Multiple center frequencies can be set directly over entire band
- Programmable using supplied GUI
- Reliable all-LC design with no moving parts
- Low Insertion Loss, low PDL and high isolation with very steep filter shapes.



Filter Shape Examples

# Specifications

Parameter	Model	
	LE2000-10, 20	LE2000-1H
Wavelength Range	C-band : 1527.60 to 1565.50 nm, 191.50 THz to 196.25 THz L-band : 1572.06 to 1608.76 nm, 186.35 THz to 190.7 THz	
Bandwidth Setting Range	C-band : ≤ 0.1 nm to 38 nm, 12.5 GHz to 4800 GHz L-band : ≤ 0.1 nm to 37 nm, 12.5 GHz to 4400 GHz	
Number of Addressable Filter Slices <sup>1)</sup>	C-band : 384 L-band : 352	
Bandwidth of Each Filter Slice	0.1nm, 12.5 GHz	
Center Frequency Accuracy of Each Filter Slice	± 0.02nm, ± 2.5 GHz	
Dynamic Range of Attenuation Control for Each Filter Slice	0 to 20 dB	0 to 40 dB
Attenuation Step Size	0.1 dB	
Attenuation Accuracy	≤ 0.5 dB or 5% of attenuation,	
Insertion Loss	≤ 3.5 dB, typ. ≤ 4.5 dB, max.	≤ 7.0 dB, typ. ≤ 8.0 dB, max.
Polarization Dependent Loss	≤ 0.15 dB, typ. ≤ 0.3 dB, max. <sup>2)</sup>	
Extinction	≥ 40 dB	≥ 60 dB
Return Loss	> 40 dB (PC connector), > 50 dB (APC connector)	
Response Time	≤ 50 msec.	
Max. Input Power	≤ 27 dBm	
Connectors	FC/PC, FC/APC, SC/PC, SC/APC	
Operating Temperature	15 ~ 45 °C	
Power Consumption	< 15VA	
Interface	USB	
Dimensions (W x D x H)	234mm x 410mm x 108mm (With rubber cover) 212mm x 380mm x 86mm (Without rubber cover)	

1) Filter slices are centered on ITU-T Grid and can be combined to make arbitrary filter shapes.

2) Up to 10dB attenuation.

\* Above specifications are subjected to change without prior notice.

## Ordering Codes

### LE2000-(1)-(2)-(3)

1. Channel ➡ 10(1ch), 1H(1ch high extinction), 20(2ch)
2. Band ➡ C(C-band), L(L-band)
3. Connector type ➡ F/P(FC/PC), F/A(FC/APC), S/P(SC/PC), S/A(SC/APC)



Graphic User Interface



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