



WM-20 WAVEMETER Laser Wavelength Meter

PRODUCT BRIEF

FEATURES

- Absolute wavelength accuracy of 1 pm
- Entire C-band analysis
- Pulsed and CW lasers
- Up to 100MHz acquisition speed
- Wafer based technology

APPLICATIONS

- Accurate wavelength analysis of single frequency transmitters (DFB lasers and VCSELs)
- Accurate and fast tunable laser wavelength analysis and calibration
- Accurate wavelength calibration of optical spectrum analyzers (OSA)

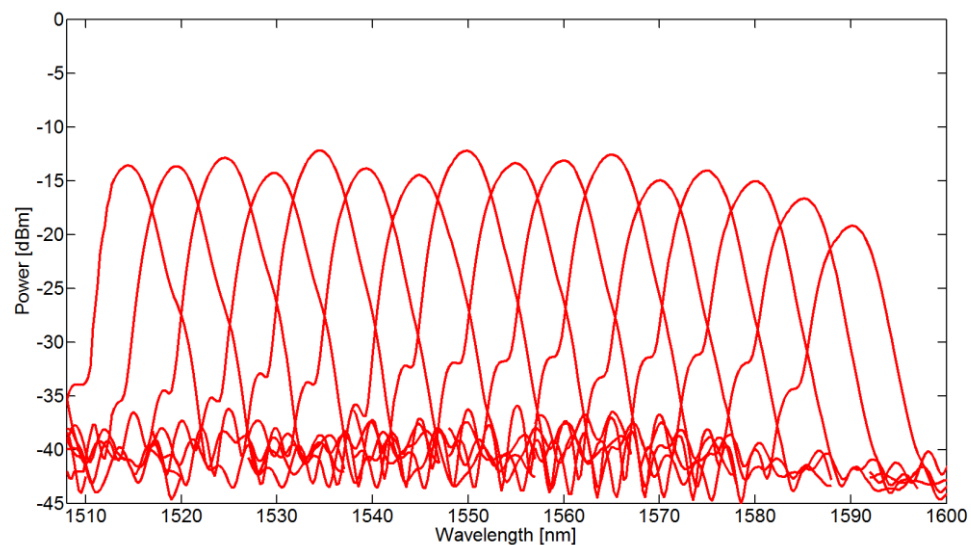
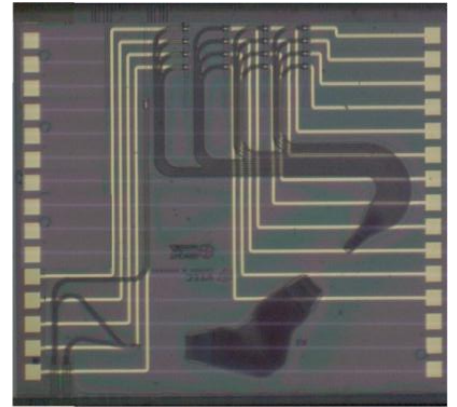
CUSTOMIZED CHIP PRODUCTS

Other designs available on request.

Draft Version: May 2014
Product Launch : 2015

OVERVIEW

The WM-20 wavemeter is based on proven technology that makes use of the photonic integrated arrayed waveguide grating (AWG) concept. Using photonic integrated technology an exceptional thermal stability and highly accurate measurements can be achieved. The wide operating wavelength range of 80 nm allows measurement over the entire C-band. Measurement accuracies can be obtained at high speeds of 100 MHz and higher. This speed is one million times faster than wavemeters currently on the market and allows for live monitoring of the laser wavelengths serving a multitude of high end applications.



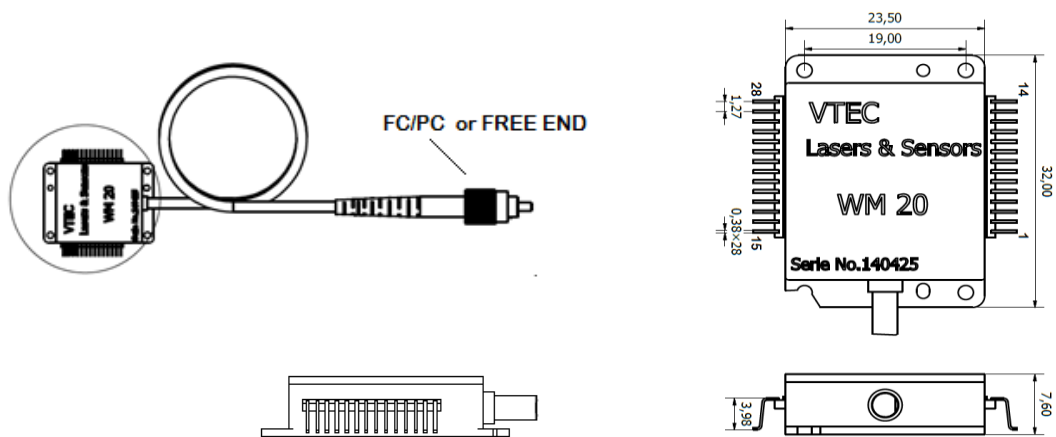
Intensity of the different AWG channels within the wavelength range of 1510 to 1600 nm. The AWG device contains 16 channels per Free Spectral Range

SPECIFICATION

OPTICAL SIGNAL	Pulsed and CW
WAVELENGTH	
Range	1515-1595 nm(FSR) 1440-1650 nm (Full range)
Absolute Accuracy	1 pm@1550 nm
POWER	
Calibration Accuracy	±0.5 dB, at 30 nm from 1515-1595 nm
Linearity	±0.3 dB @1515-1595 nm
OPTICAL INPUT SIGNAL	
Maximum Laser Bandwidth	1 GHz
Sensitivity	150 μW
Maximum Power	+18 dB
Return loss (FC/PC)	15 dB
INPUTS/OUTPUTS	
Optical Input Fiber	9/125μm single-mode fiber(FC/PC)
MEASUREMENT UPDATE	
Time (rate)	10 ns (100 MHz)
ENVIRONMENTAL	
Warm-Up Time	1 min
Temperature	+15 to +30 °C

All values are guaranteed values over all polarizations at all temperatures and end of life.

OUTLINE DRAWINGS



Pin Assignment							
1	PD1	8	PD 8	15	RPD	22	Thermistor(-)
2	PD 2	9	PD 9	16	PD13	23	-
3	PD 3	10	PD 10	17	PD14	24	-
4	PD 4	11	PD 11	18	PD15	25	-
5	PD 5	12	PD 12	19	PD16	26	GND
6	PD 6	13	-	20	-	27	-
7	PD 7	14	TEC(-)	21	Thermistor(+)	28	TEC(+)

Note: VTEC reserves the right to change the detail specifications and designs as may be required to permit improvements in its products. Specifications are subject to change without notice.

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