

Testing report, WT&T reference number: INV-AUG10



Ref: INV-AUG10

Date: 08.25.2010

Optical fiber-coupled broad-band source (Model: LE-4-1520)
Testing report

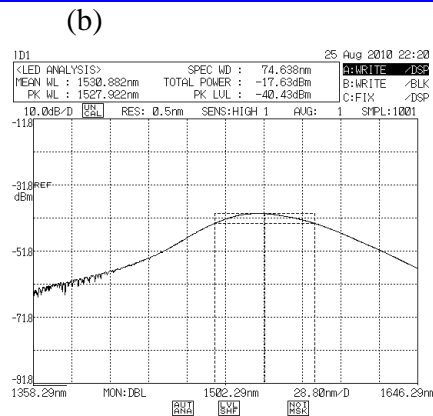
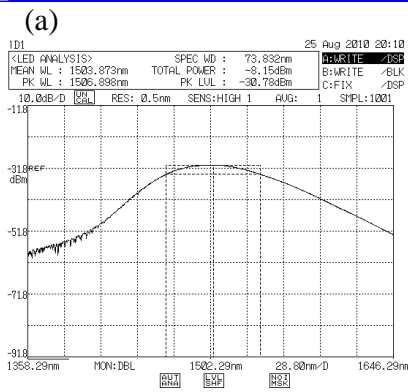
Part Number:	LE-4-1520
Unit Number:	WLE4042
Package type	AL-5
Temperature stabilization	Active air cooling
Output	FC/APC-receptacle, smf-28 optical fiber
Connector/receptacle	FC/APC
Dimensions (X*Y*Z), cm	8x4.7x20
Length of output fiber pigtail, m	N/A
Operating wavelength, nm	~ 1500-1520
Spectral width, (-3 dB), nm	~ 73
Cold start central wavelength shift, nm	<0.8
Long-term (10 hrs) operating wavelength drift, nm	< \pm 1.0
Short term power instability, dB*	~0.01
Min/Max output power in "ON" mode, uW**	~12/~100
Remote control voltage (RCA-connector) , V***	+ (4 to 5)
Ambient temperature, °C	25
Operating voltage:	5 V DC

* Measured after ~ 15 min of thermal stabilization of the source, operating at maximum output power.

**Power measured at the output of the module with ~2 m long FC/APC connectorized smf-28 fiber patch-cord

*** Impedance of remote control input is ~ 500 Ohm. Max repetition rate:~ 1 kHz (POSITIVE POLARITY square pulses)

Spectra



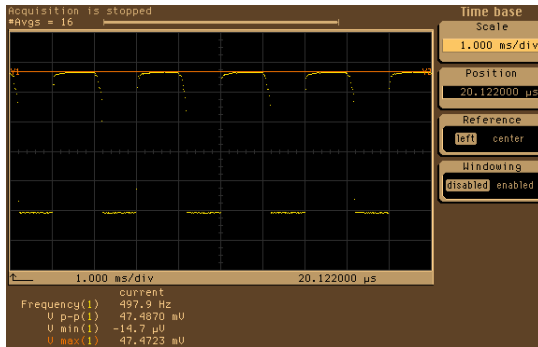
Model LE-4-1520 source spectra (log scale, uncalibrated power), measured at the end of ~2 m long smf-28 fiber FC/APC- FC/PC connectorized patch-cord using an OSA. OSA spectral resolution is 0.5 nm. (a) maximum output power (b) minimum output power.

WARNING:

- Do not look directly into FC receptacle or fiber output of the source under microscope.
- STATICS SENSITIVE DEVICE!
- Do not use excessive force when tightening FC/APC- connector on fiber extension
- Use only FC/APC connectorized fiber to connect to the source.
- Keep module output receptacle clean and covered with dust cap to avoid optical damage.

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« On/Off » remote control



Optical waveform of the source (Model LE-4-1520) operating in remote control mode, measured through ~2 m long smf-28 fiber FC/APC connectorized patch-cord using an oscilloscope and InP photo-detector. Remote control pulses voltage is ~ +5V, f~ 500 Hz.

Broad-band source has been using following equipment:

OSA:	AQ-6315A (ANDO)
Oscilloscope:	54750A (Agilent)
Optical power meter:	ML910B (Anritsu)
Temperature measurement	Multiscan 1200 (Omega)
Pulse generator	9100 (LeCroy)
Optical splitter	ODB-1 (WT&T)
Photo receiver:	TIA-500 (TTI)
Objective:	Model-011 (WT&T)
T&M/Quality control:	Operator 2

Note: broad-band source output power is sensitive to the optical feedback and fiber pigtail handling.
Device has been burn-in tested for ~ 24 hrs.

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