

Testing report, WT&T reference number: INV\_10.10



REF: INV\_10.10  
Date: 03.10.2010

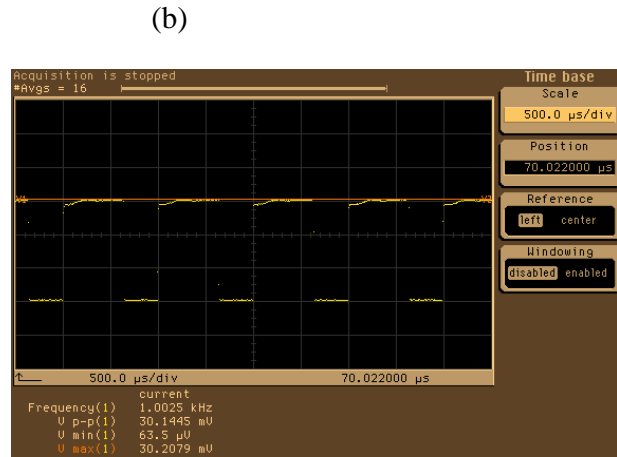
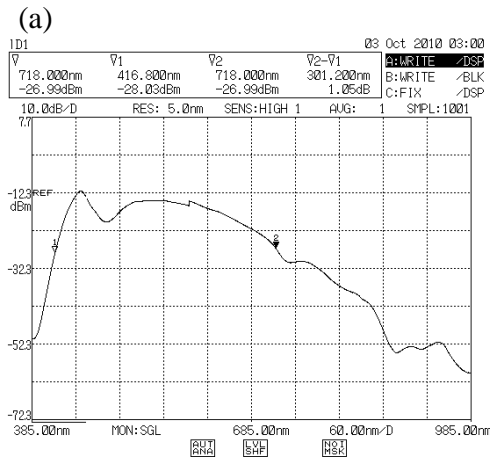
Optical fiber-coupled LED source (Model: LE-1W-CE)  
Testing report

Part Number:	LE-1W-CE
Unit Number:	WLE1W147
Package type	AL-5
Temperature stabilization	active
Output	Fiber pigtail, 980/1000 um POF, N.A.~0.47; 3 mm jacketed
Connector	FC/PC
Dimensions (X*Y*Z), cm	8x4.7x16
Length of output fiber pigtail, m	~1
Operating wavelength, nm	"white light"
Spectral width, (-15dB), nm	~ 301
Cold start central wavelength shift, nm	<0.8
Long-term (10 hrs) operating wavelength drift, nm	<±0.5
Short term power instability, dB	~0.01
Min/Max output power in "ON" mode, mW*	~3.3/37.2
Remote control voltage (RCA-connector) , V**	+ 5
Ambient temperature, °C	21
Operating voltage:	~5 V DC

\*Power measured at the output of the module POF fiber pigtail

\*\* Impedance of remote control input is ~ 500 Ohm. Max repetition rate:~ 1.1 kHz (square pulses)

**Spectra and « On/Off » remote control**



(a)LED source (Model LE-1W-CE) spectra (log scale, uncalibrated power), measured through ~1 m long POF 980/1000 um core size fiber using an OSA. OSA resolution is 5.0 nm. (b) Optical waveform of LED source (Model LE-1W-C) operating in remote control mode , measured through ~1 m long POF 980/1000 um core size extension fiber using an oscilloscope and Si detector. Remote control pulses voltage is ~ 5V, f~ 1 kHz.

**WARNING:**

- DO NOT LOOK DIRECTLY INTO FC/PC CONNECTORIZED FIBER OUTPUT OF THE SOURCE DIRECTLY OR UNDER MICROSCOPE. USE EYE PROTECTION GOGGLES.
- STATICS SENSITIVE DEVICE!

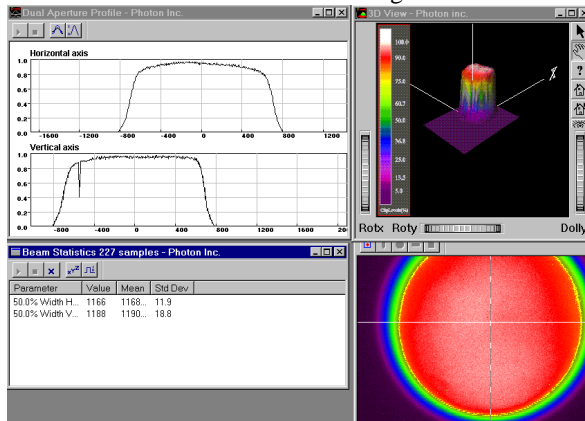
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- Do not pull or twist optical fiber pigtail! Do not use excessive force when tightening FC- connector on fiber extension
- Keep LED output connector clean and covered with dust cap to avoid optical damage.
- Do not look directly into receptacle or output of optical fiber. Use eye protection goggles.

### Near field profile

Typical Near optical field profile, measured using Model 011S snap-on objective and LE-1W-C broadband source, connected to POF 980/1000 FC/PC-connectorized fiber extension patch-cord.

POF 980/1000 multi-mode fiber. Magnification factor: ~1.2 (distance from objective lens ~ 8 mm)



### Components were tested 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)
Optical field measurement:	BeamPro (Photon Inc.)
T&M/Quality control:	Operator 4

Note: LED module output power is sensitive to the fiber pigtail handling.

Device has been burn-in tested for ~ 24 hrs.

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