

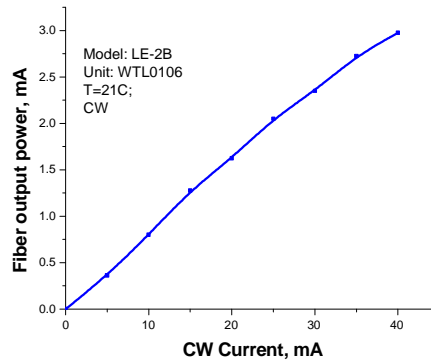
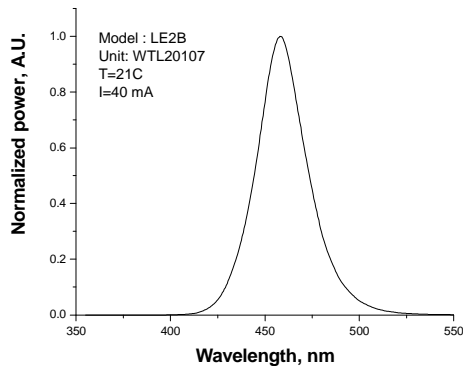


Date: 29.10.2009

WT&T reference number: 3C__-0401

Fiber-coupled visible LED module LE2-x
TESTING REPORT

Part Number:	LE-2B
Unit Number:	WTL20107
Package type	coax
Temperature stabilization	passive
Fiber pigtail:	Multi-mode POF primary- coated 0.98/1.0 mm
Connector	FC/PC
Number of fiber pigtails	1
Length of pigtail, m	~0.63
3 dB modulation bandwidth, MHz	~45
Maximum cw current, mA	~50
Maximum pulsed current, mA	<75
Mean wavelength, nm	~458
Spectral width (FWHM), nm	~29.5
Mean central wavelength nm	~458.8
Long-term operating wavelength drift, nm	±1.5
Ambient temperature, °C	21
cw optical power (@40 mA, 4.66V) mW	~2.4
Device impedance patched to 50 Ohm	yes
Maximum pulling of fiber pigtail, kg	0.5



LED spectra and output power (cw), measured at the end of FC/PC pigtail.

WARNING: USE ONLY FC/PC CONNECTORIZED POF OPTICAL PATCH-CORD FOR EXTENSION OF THE MODULE FIBER PIGTAIL. If coiling, keep fiber coil radius larger then 6 cm. STATICS SENSITIVE DEVICE! Keep LED output connector clean and covered with dust cap to avoid optical damage. Do not pull or twist optical fiber pigtail!

Please use only “B-output” of LE-2C3 LED driver to operate LE-2B module.

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Brief operation note for Model LE-2x fiber-coupled LED:

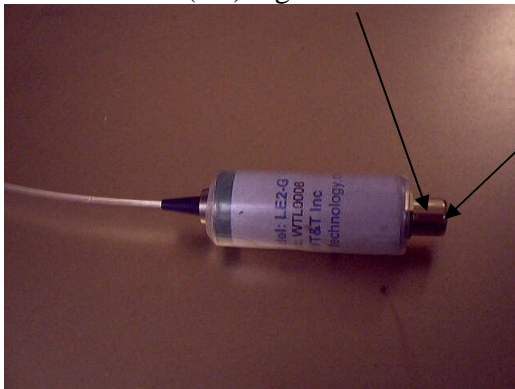
Model LE-2x fiber pigtailed LED is designed for operation in CW and pulsed mode. Light from LED source is delivered through ~ 0.6 meter long FC-connectorized optical fiber pigtail (POF 980 is a standard, device with smaller core diameter fiber pigtail can be assembled on request). Device has built-in electrical impedance-matching circuit and can be driven directly using electrical pulse generators, having 50 Ohm electrical outputs. Model LE-2x led is mounted in a coaxial (cylindrical) metal package, providing good passive thermal heat dissipation and ensuring enhanced output power (compared to miniature model LE-3x devices). Model LE-2x is shipped with RCA-type shielded electrical cable, used for connection to an external current driver or pulse generator. To operate device, user will need an external constant current supply, or an external functions generator. Both devices should be able to provide up to ~ 60 mA of current. Model LE-2x is static sensitive device. Please unpack and operate device in static discharge free environment and contact your local safety officer for guidance.

To operate device:

- Plugs provided cable to LED module and connect other side of electrical cable to your current source or pulse generator. Make sure that current supply or pulse generator is “powered-off”. Connect shield of the cable to “-“ and central wire to “+” of your external source.

LED cathode (“-“) – ground electrode

LED Anode (“+”)–central electrode

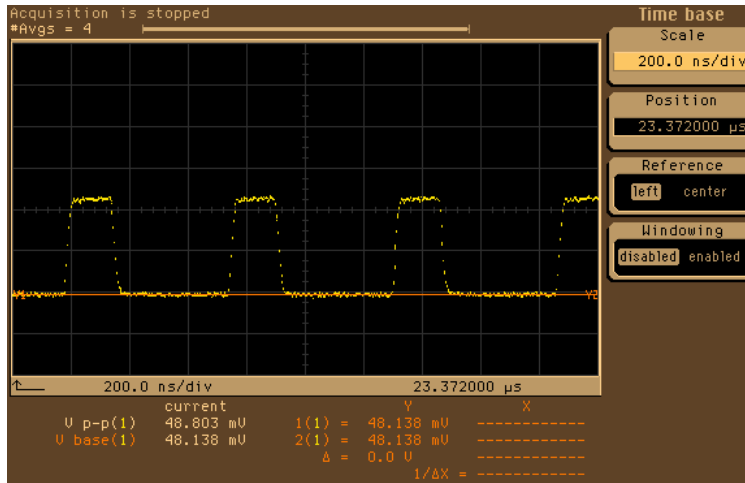


“RCA” connector pin-out

- Gradually increase current from the external current source to desired operating value. LED is in operation. When using LED with an external pulse generator, it is recommended to use voltage signal from 1 Ohm resistor connected in serial with LED using oscilloscope. One mV of voltage will corresponds to 1 mA of LED drive current. Please contact WT&T for further recommendations if required.
- To prevent permanent damage of LED, do not exceed maximum driving current, shown in the testing report.
- Device might be instantly damaged if polarity of the driving electrical signal is reversed.
- To ensure stable and long operation of model LE-2x LED, keep device away from external heat sources. Do not bend optical fiber pigtail and clean output FC-style connector before each connection.

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Contact WT&T Inc if you will have further questions. (Please use e-mail: info@wttechnology.com)



Optical waveform, measured using Si p-i-n detector and sampling scope.

Module has been tested using following equipment:

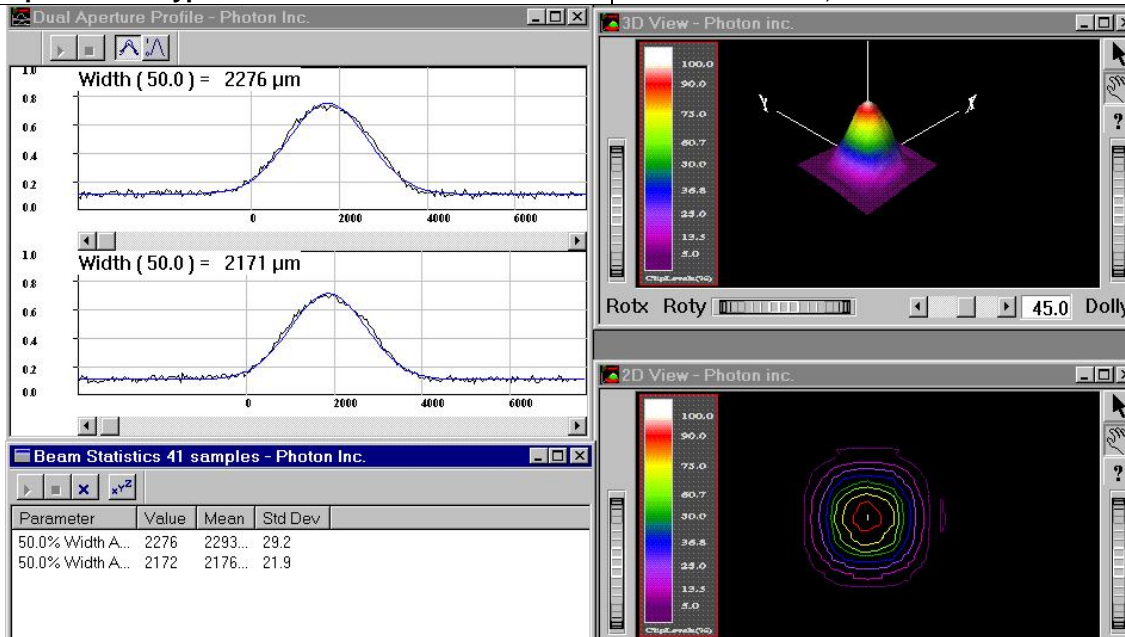
OSA:	AQ-6315A (ANDO)
Wavelength meter:	TQ8325c (Advantest)
Optical power meter:	ML910B (Anritsu)
Temperature AU	Multiscan 1200 (Omega)
LED driver	LE-2C3 (WT&T)
Optical splitter	ODB-1 (WT&T)
Sampling scope:	54750A (Agilent)
Photoreceiver:	TIA-500 (TTI)
Pulse generator:	8011A (Agilent)
T&M/Quality control:	Operator 2

Note: module output POWER is sensitive to the fiber pigtail handling.
Device has been burn-in tested for > 24 hrs before shipping.

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Appendix: TESTING REPORT of M 011: Snap-on collimator

Part Number:	Model 011
Unit Number:	WTO-0181
Package type	3
Adapter	FC/PC ; FC/SC; FC/ST
Measurement distance, cm	~2.0
Image size, FWHM, mm	~2x2
Measurement wavelength, nm	456
Optical fiber type	POF, 0.9 mm core size



Collimator has been tested using following equipment:

Beam profiler:	BeamScan (Photon)
Temperature AU	Multiscan 1200 (Omega)
LED driver	LE-2C3 (WT&T)
Optical splitter	ODB-1 (WT&T)
LED source:	LE-1B (WT&T)
T&M/Quality control:	Operator 2

Contact information: WT&T Inc.

WT&T Inc.
 Phone: (514) 804 08 22
 Fax: (514)551 0617
www.wttechnology.com
 e-mail: sales@wttechnology.com