Date: 17.03.2008
WT&T reference: 5L__-0407B

Fiber-coupled visible LED module LE1-RBG, Unit WLE1RBG083

(Customized unit with remote ON/OFF control option)

Testing report

Part Number:	LE1-RBG
Unit Number:	WLE1RBG03
Package type	OEM
Temperature stabilization	active
Fiber outputs	Multi-mode POF primary- coated/2.2mm jacketed 0.98 mm core diameter, >1 m long
Output connectors	FC/APC
Number of output channels	3
Number of modulation inputs	3 (separate, fully isolated)
Mean wavelength, Ch.1 nm	~ 461
Spectral FWHM, Ch 1 , nm	~ 22
Mean wavelength, Ch 2 nm	~521
Spectral FWHM, Ch 2 , nm	~ 36 nm
Mean wavelength, Ch 3 nm	~627
Spectral FWHM, Ch 3 , nm	~ 19 nm
Cold start central wavelength shift, nm	<0.5
Long-term operating wavelength drift, nm	±1.5
Optical power Ch1 (min/max), mW *	~ 1/10
Optical power Ch2 (min/max), mW *	~1.2/10.8
Optical power Ch3 (min/max), mW *	~1.2/12.8
Maximum output power instability, dB	± 0.2
Remote control "ON/OFF" repetition range, kHz	0 – 1.9
Remote control signal voltage, V**	4-5
Module dimensions, X/Y/Z, cm	19x16.5x5.5
Maximum pulling force of fiber pigtails, kg	1
Power , V*A	5.26 V DC, 3.6A
Ambient temperature, ^{o}C	21

* Output power has been measured at the end of FC-connectorized fiber pigtails.
** Please refer to the module manual notes for details about device remote control Impedance of remote control inputs is ~ 375 Ohm. Electrically-isolated. Each remote control drives only one corresponding channel.

WARNING: DEVICE IS PRODUCING SUBSTANTIAL OUTPUT POWER. Do not look into fiber (directly or under microscope) outputs when device is in operation.

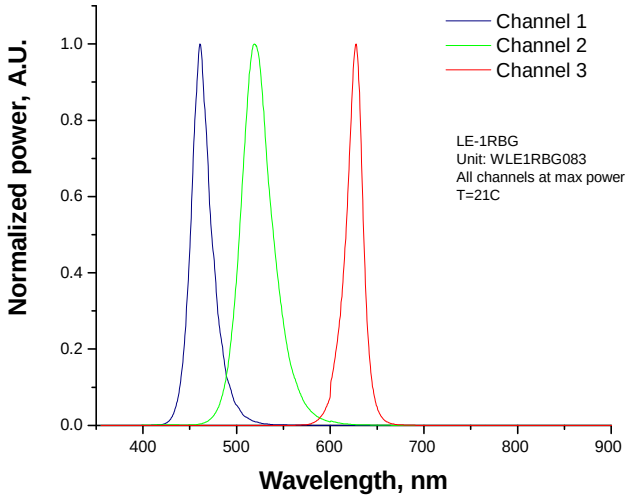
WARNING: USE ONLY FC/APC CONNECTORIZED OPTICAL PATCH-CORD FOR EXTENSION OF THE MODULE FIBER OUTPUTS.

Please clean FC/APC connectorized fiber pigtails before making connections (when applicable). If coiling, keep fiber coil radius larger than 12 cm.

Keep LED output connector clean and covered with dust cap to avoid optical damage.

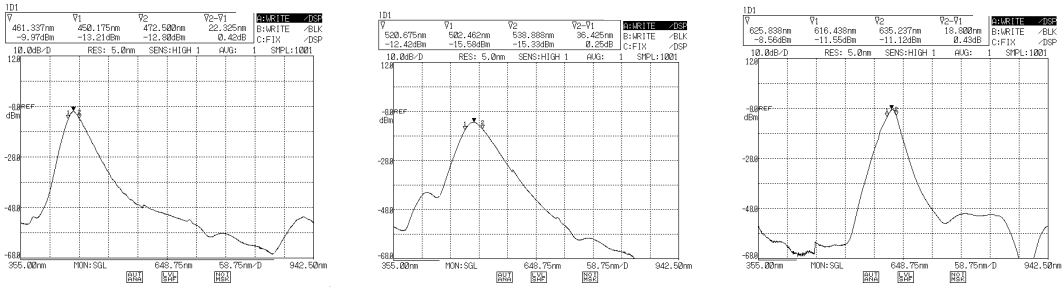
STATICS SENSITIVE DEVICE!

DO NOT PULL OR TWIST OPTICAL FIBER PIGTAILS!

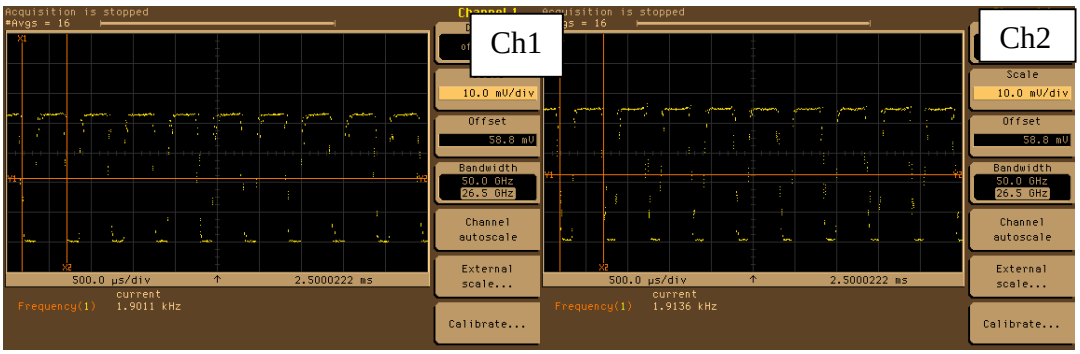


Normalized optical spectra (linear scale) for all 3 channels, measured using an OSA (res.: 5.0 nm). Output power is set to maximum value for all channels

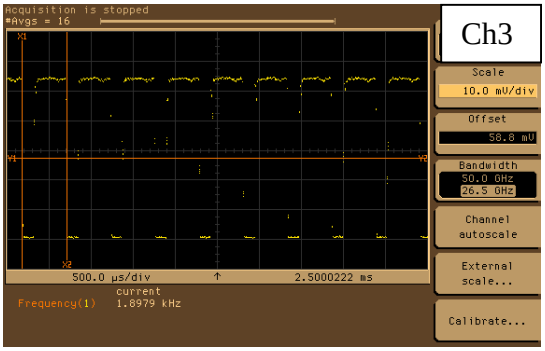
Ch. 1 Ch.2 Ch.3



Uncalibrated optical spectra of all 3 channels in Log-scale, measured using an OSA. All channels output optical power was set to maximum value.



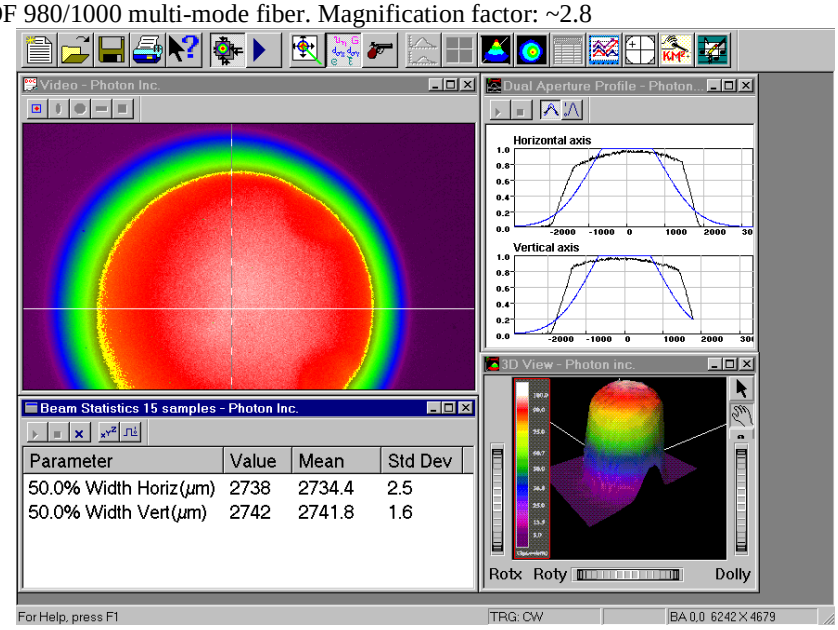
Optical waveform of remotely controlled LED source Channel 1 and Channel 2. Remote control signal: 4V, 1.9 kHz square pulses.



Optical waveform of remotely controlled LED source Channel 3 Remote control signal: 4V, 1.9 kHz square pulses.

Typical near optical field profiles, measured using Model 011 snap-on objective attached to POF 980 FC-connectorized output fiber pigtails.

POF 980/1000 multi-mode fiber. Magnification factor: ~2.8



Module has been tested using following equipment:

OSA:	AQ-6315A (ANDO)
Optical power meter:	ML910B (Anritsu)
Temperature AU	Multiscan 1200 (Omega)
Functions generator	LeCroy 9100 (LeCroy)
Sampling scope	HP54750A (Agilent)
Optical splitter	ODB-1 (WT&T)
Photo-receiver:	TIA-500 (TTI)/DET210 (ThorLabs)
T&M/Quality control:	Operator 2

Note: module output POWER is sensitive to the fiber pigtail handling.
Device has been burn-in tested for ~ 72 hrs before shipping.

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