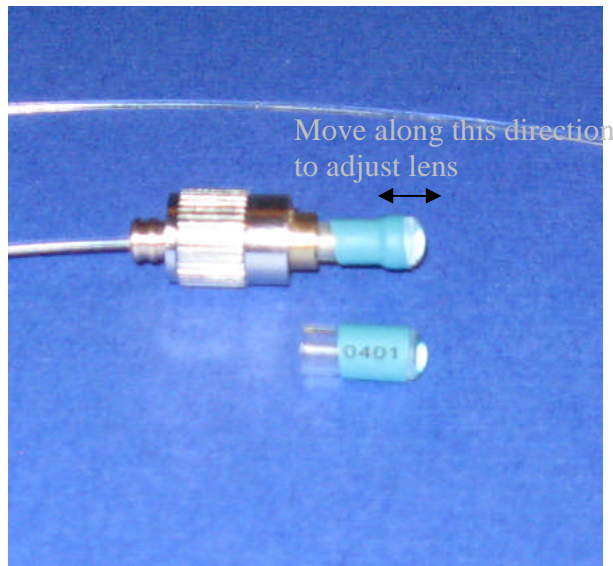


Miniature collimator for POF fiber: large aperture Model 011-TU2

Testing report



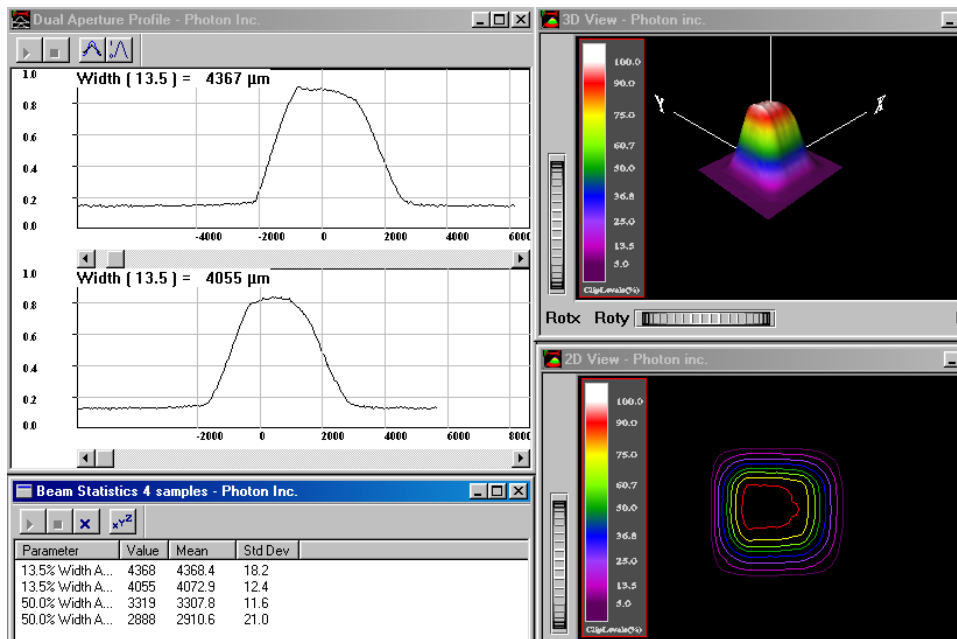
Model 011_TU2 with glass lens

Part Number:	Model 011-TU2			
Unit Number:	WTO0218	WTO0219	WTO0220	WTO0221
Package type	4, plastic	4, plastic	4, plastic	4, plastic
Connectors compatibility	FC-, SC-, ST	FC-, SC-, ST	FC-, SC-, ST	FC-, SC-, ST
Dimensions, mm	~11x5.5	~11x5.5	~11x5.5	~11x5.5
Lens material	BK7	BK7	BK7	BK7
Test power, dBm	+10dBm	+10dBm	+10dBm	+10 dBm
Max power, dBm	~23	~23	~23	~23
Test wavelength	~637 nm			
Fiber/connector	FC/UPC 980/1000 POF fiber; NA~0.5			
Beam FWHM (@40 cm collimation)*, cm	~6.5	~6.5	~6.5	~6.5
Beam FWHM (@10 mm focusing)*, mm	~3	~3	~3	~3
Test temperature	21C	21C	21C	21C

***Measurement conditions:** LED source @ ~637 nm is coupled to multi-mode fiber patch-cord. Collimator has been attached to the end of patch-cord's FC/PC fiber connector. Collimator has been adjusted to quasi-collimation or focusing mode (sliding

along connector ferrule) at set distances between collimator output and beam profiler (~400 mm for collimated beam measurements).

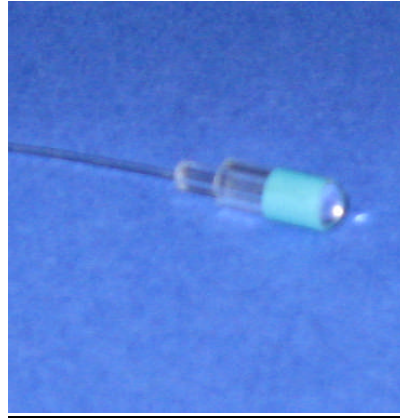
Focusing mode: beam profile measurements at distance of ~10 mm from the lens. Multi-mode POF 980/1000 um fiber, device was adjusted to focusing. Typical beam profile:



Unit has been tested using following equipment:

Light sources: LE-1R; (WT&T)
Beam profiler: Beam Pro & Beam Scan (Photon Inc)
Temperature control: 1200 (Omega)
T&M/Quality control: Operator 2

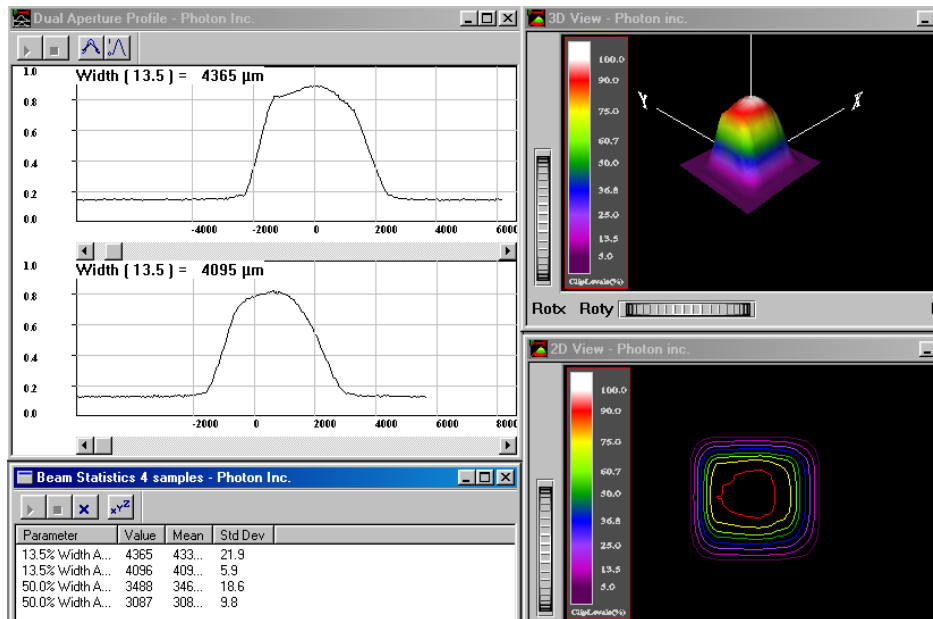
Brief Info: Model 11 (snap-on fiber collimator) consists of an optical lens assembly and can be attached directly to FC-, SC- or ST type optical connector as shown in the photo. Please notice that FC connectorized fiber pigtail is not included. It collimates or focuses beams from different multi- or single-mode fiber patch-cords, or couples collimated beams into SM, MM or PM optical fibers. Model 011-TU2 contains large aperture glass optical lens, controllable along Z-axis only, providing collimation or focusing adjustment.

Optical fiber collimator with glass body: Model 015-TU2**Testing report**

Part Number:	Model 015-TU2		
Unit Number:	01	02	03
Package type	5, glass	5, glass	5, glass
Connectors compatibility	-	-	-
Dimensions, mm	~22 x5.7	~20x5.7	~22x5.7
Lens material	BK7	BK7	BK7
Test power, dBm	+10dBm	+10dBm	+10dBm
Max power, dBm	~30	~30	~30
Test wavelength	~637 nm		
Fiber/connector	980/1000 POF bare fiber; NA~0.5, flat polished		
Back-reflected signal, dB	N/A	N/A	N/A
Beam FWHM (@5 mm collimation)*, mm	~3.1	~3.1	3.1
Test temperature	21C	21C	21C

***Measurement conditions:** LED source @ ~637 nm is coupled to multi-mode fiber patch-cord. Collimator has been attached to the end of patch-cord's FC/PC fiber connector. Collimator has been adjusted to quasi-collimation (sliding along connector ferrule) at set distances between collimator output and beam profiler (~5 mm for collimated beam measurements).

Focusing mode: beam profile measurements at distance of ~5 mm from the lens. Multi-mode POF 980/1000 um fiber, device was adjusted to collimation. Typical beam profile:



Unit has been tested using following equipment:

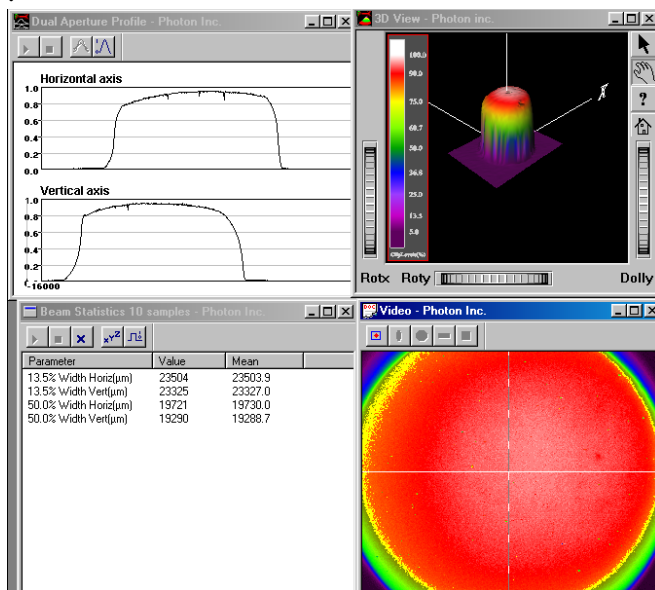
Light sources: LE-1R; (WT&T)
Beam profiler: Beam Pro & Beam Scan (Photon Inc)
Temperature control: 1200 (Omega)
T&M/Quality control: Operator 3

Model 016: Large aperture fiber collimator

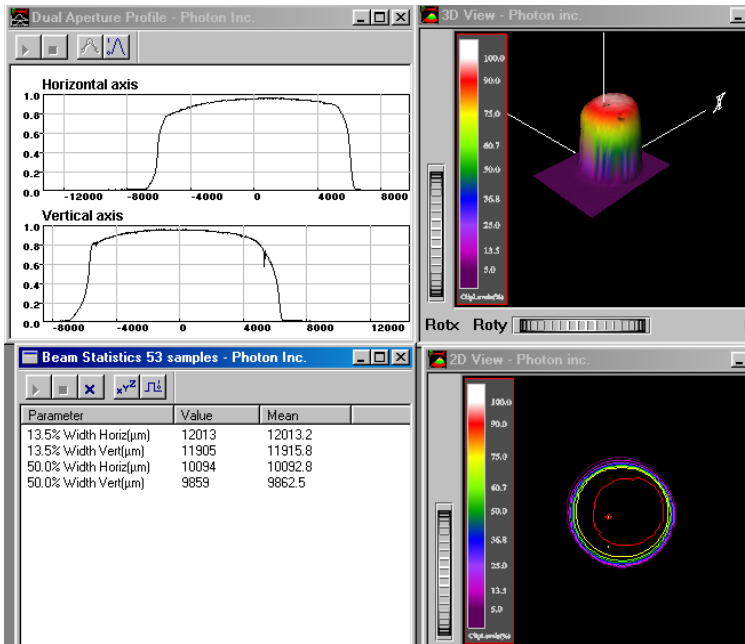
Extended testing report

Part Number:	Model 016
Unit Number:	WTO6008
Package type	COAX
Receptacle	FC-style
Test fiber	FC/AC-FC/PC POF 980/1000 um, 1 meter long.
Test power	13 dBm
Focusing range, m	~ 0.25-1.2
Test wavelength	“white light source”
Beam FWHM (@1 m)*, mm	~19.8
Beam FWHM (@0.5 m)*, mm	~9.9
Beam FWHM (@0.25 m)*, mm	~4.5
Beam FWHM (@0.1 m),** mm	~19.0
Insertion loss, dB	~3.6
Test temperature	21C

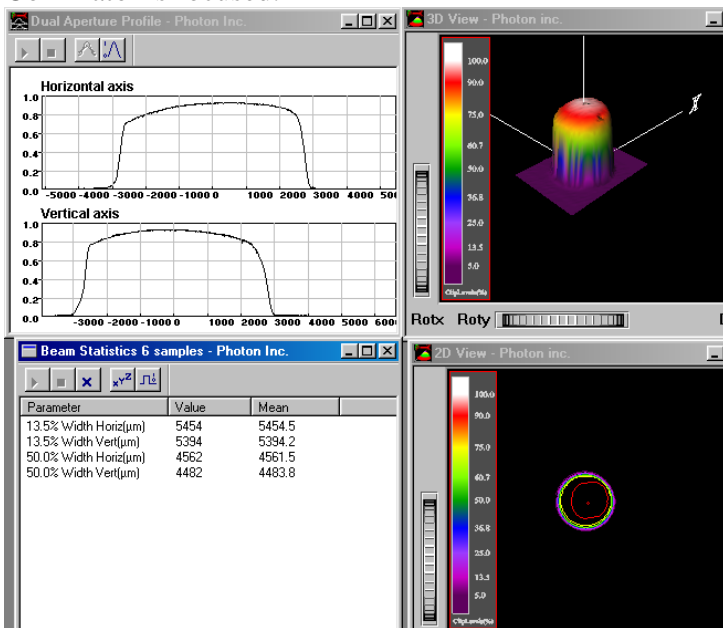
- *collimator focus has been adjusted to optimal value
- **Out of focus position



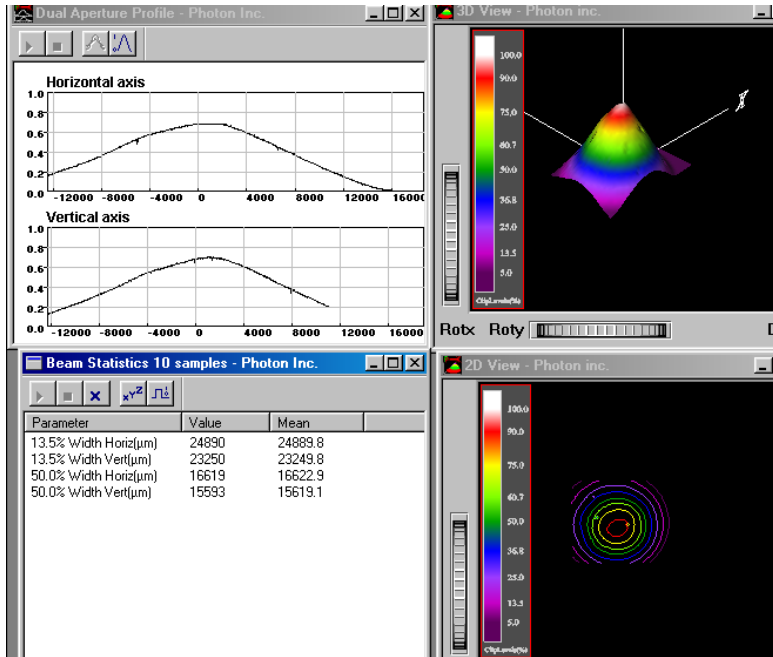
Optical field profile, measured at distance of ~ 1 m from the objective aperture. Collimator is focused.



Optical field profile, measured at distance of ~ 0.5 m from the objective aperture. Collimator is focused.



Optical field profile, measured at distance of ~ 0.25 m from the objective aperture. Collimator is focused.



Optical field profile, measured at distance of ~ 0.25 m from the objective aperture. Collimator is out of focus.

Unit was tested using following equipment:

WL sources:	LE-1W-CC; (WT&T)
Return loss measurement:	ODB-4R (WT&T)
Beam profiler	BeamScan; BeamPro (Photon Inc)
Temperature control	1200 (Omega)
T&M/Quality control:	TM 4



Model 016 Large aperture fiber collimator with mechanical positioning holder (sold separately). Collimator size: ~70x95x100 mm