

### UHP-Mic-LED Beam Profile Measurements

#### Introduction

The Ultra High Power (UHP) LEDs can be used as a collimated light source for applications such as fluorescence microscopy or as fiber coupled LED source when equipped with fiber optic adaptor (FCA) or with a liquid light guide (LLG).

This document is focused on measurement of the UHP-Mic-LED beam as it emerges from the LED head. See AN010 for Measurement of the beam emitted from a fiber collimator connected to the UHP-Mic-LED head using an FCA adaptor and fiber.

#### UHP-Mic-LED Output Beam Measurements Conditions

The spatial distribution measurements in this document were performed by placing the UHP-Mic-LED at nominal distance of 500cm from a screen. The Nova II Ophir Power meter used to perform the power measurements featured a PD300-UV head covered by a custom-made metal plate with a 3mm clear aperture. The spatial location on the screen was measured using a simple tape measure with a centimeter scale.

#### UHP-Mic-LED Output Beam Pictures

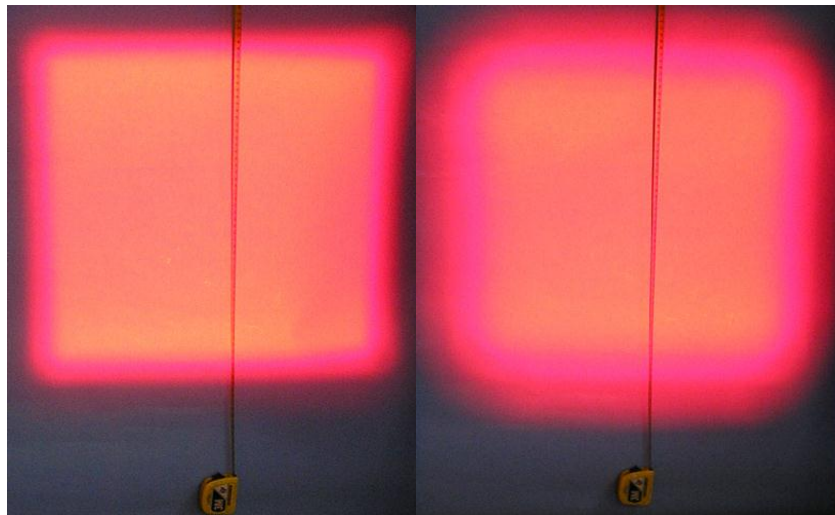


Fig 1: **UHP-Mic-LED-630**: Left – collimated output. Right – Slightly defocused output.  
(Note: the image does not accurately represent the actual beam profile. See beam profile measurements for real data)

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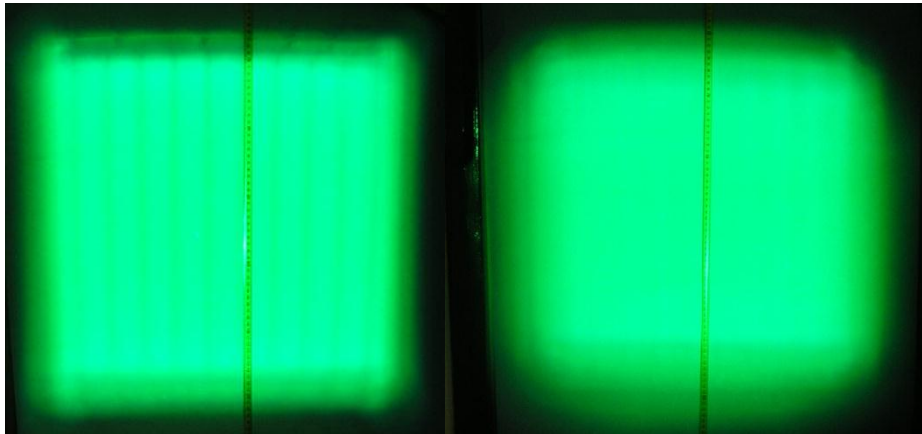


Fig 2: **UHP-Mic-LED-520**: Left – collimated output. Right – Slightly defocused output.  
(Note: the image does not accurately represent the actual beam profile. See beam profile measurements for real data).

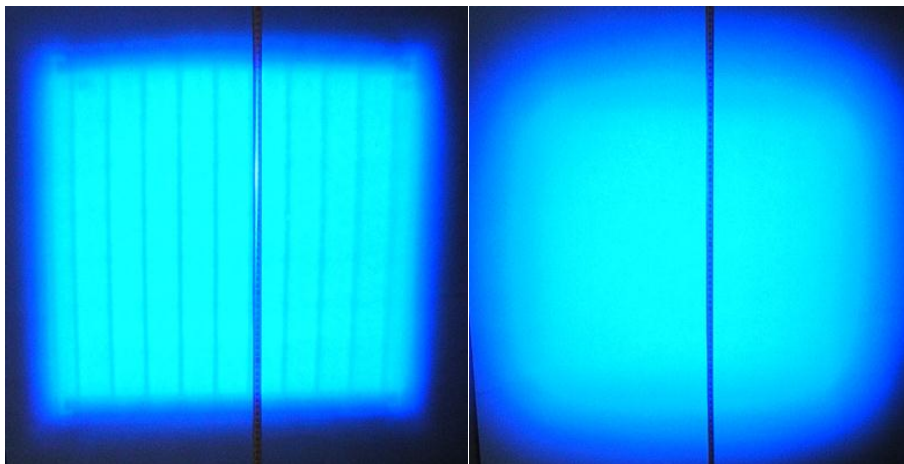


Fig 3: **UHP-Mic-LED-460**: Left – collimated output. Right – Slightly defocused output  
(Note: the image does not accurately represent the actual beam profile. See beam profile measurements for real data)

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### Beam Profile Measurements of UHP-Mic-LED Output

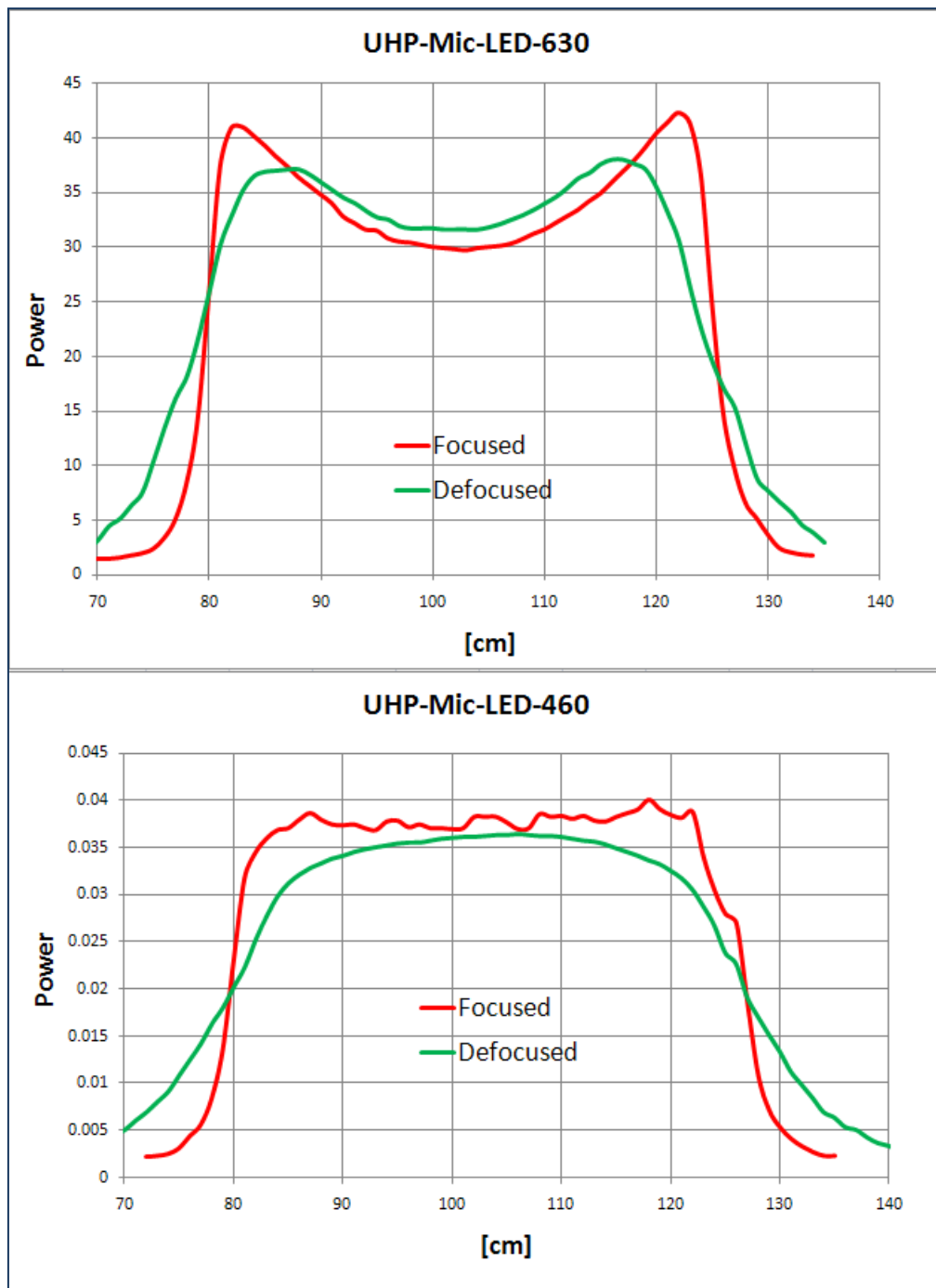


Fig 4: Beam Profile of UHP-Mic-LED-630 (upper) and UHP-Mic-LED-460 nm (lower).

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