

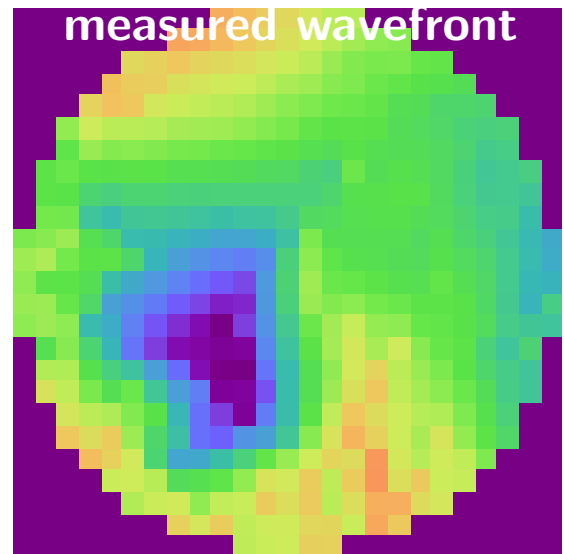
# **MZA** Mixed-Air Turbulence Generator

A **turbulence generator** is a device that applies *dynamic aberrations* to light, acting like real turbulence in the atmosphere. MZA's **Mixed-Air Turbulence Generator** creates turbulence inside a compact chamber. Inside this chamber, room-temperature air and heated air are mixed together, and convection naturally produces fully developed turbulent flow. If non-uniform turbulence is desired, multiple turbulence generators can be placed in the optical path.

A turbulence generator can be placed in your lab setup so you can conduct real-time testing without the complications of outdoor range tests. Our systems come with Thorlabs cage plates for easy integration of relay optics. Each unit includes a standalone temperature controller.

## **Specifications:**

- Aperture up to 1.5 in
- Chamber size is 4.7 in × 6 in × 9.5 in
- Max temperature of 60° C
- Fried parameter  $r_0 \geq 7$  mm
- Greenwood frequency  $f_g \leq 35$  Hz



## Unique Advantages

- Inexpensive
- Real-time, dynamic
- Adjustable turbulence
- Broadband effects
- Compact, modular design

## Applications

- Passive & active imaging
- Astronomical imaging
- Free-space optical communication
- Directed energy
- Adaptive optics

We will deliver standard or custom models. Larger apertures and smaller Fried parameter values are available with custom effort. Call for pricing: **937-684-4100**.