

SiC Hybrid UV Detectors „TOCON_nano“ for home and industrial combustion control



General Features



picture of TOCON_nano_switch

Overview

- Silicon Carbide (SiC) detector chip for extreme visible blindness of $>10^{10}$ and fast reaction time
- 100% compliance with EN298
- Detectors with 0...5V output or binary (flame = on/off) output
- sustainable production of the SiC chip material in Berlin/Germany

About the material Silicon Carbide (SiC)

SiC provides the unique property of near-perfect visible blindness, low dark current, high speed and low noise. These features make SiC the best available material for visible blind semiconductor UV detectors.

Products for Combustion Control

TOCON_nano (similar to Perkin Elmer UV10.T2E.10L)

The TOCON_nano is a TO39 SiC based hybrid UV sensor with 0...5V output. 1nW/cm² peak radiation results a voltage of approx. 280 mV.

TOCON_nano_switch – customized OEM product

The TOCON_nano_switch is a TO39 SiC based hybrid UV sensor with binary output. At the presence of a burner flame the output is 5V, at absence it is 0V. Reaction time is <10ms.

Sensitivity / Visible Blindness Tests Results

Sensitivity Test → TOCON_nano illuminated with a small tea candle

distance 1m = 25mV; distance 0,75m = 30mV, distance 0,5m = 60mV

Visible Blindness Test → TOCON_nano near a 100 W tungsten bulb with UV filter

distance 1cm = no signal