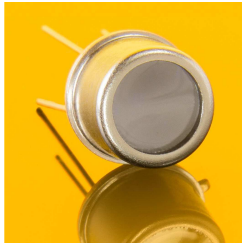


## General Features



### Properties of the TOCON\_blue1

- GaP detector for blue light radiation
- detection of incoherent blue light acc. to guideline 2006/25/EG
- $17 \mu\text{W}/\text{cm}^2$  peak radiation results a voltage of approx. 2 V
- RoHS compliant
- Applications: measurement of very low blue light irradiation, occupational safety

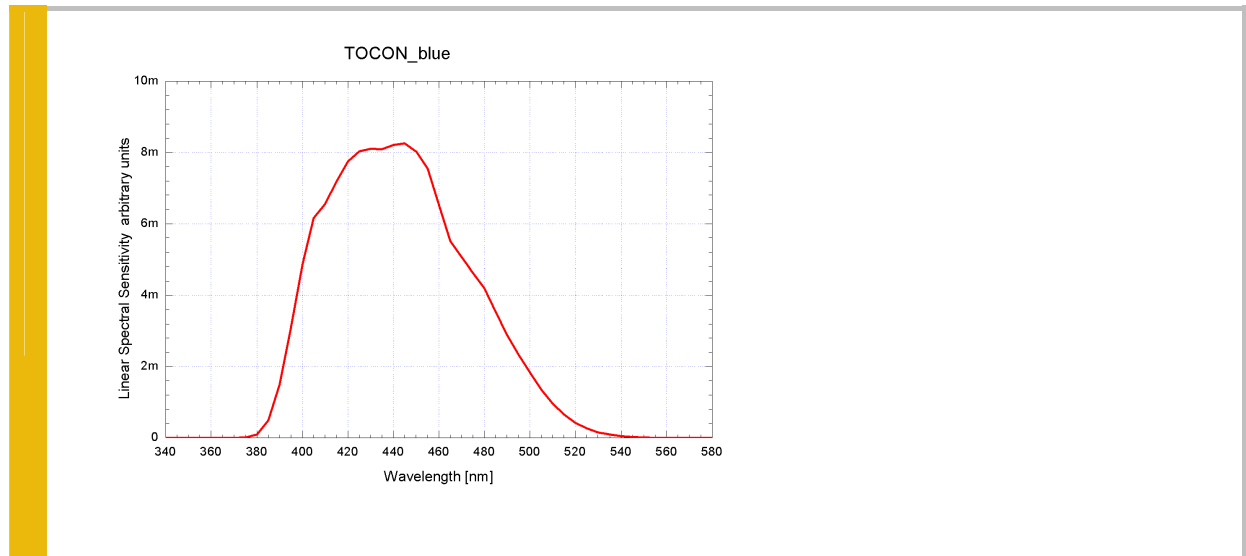
### The TOCON pre-amplified photodetectors

The TOCON devices are using modern hybride technology to cancel unwanted signal disturbances caused by moisture or electromagnetic radiation. The stable 0...5V output voltage can be directly connected to a SPC controller or a voltage multimeter. No external amplifier is needed.

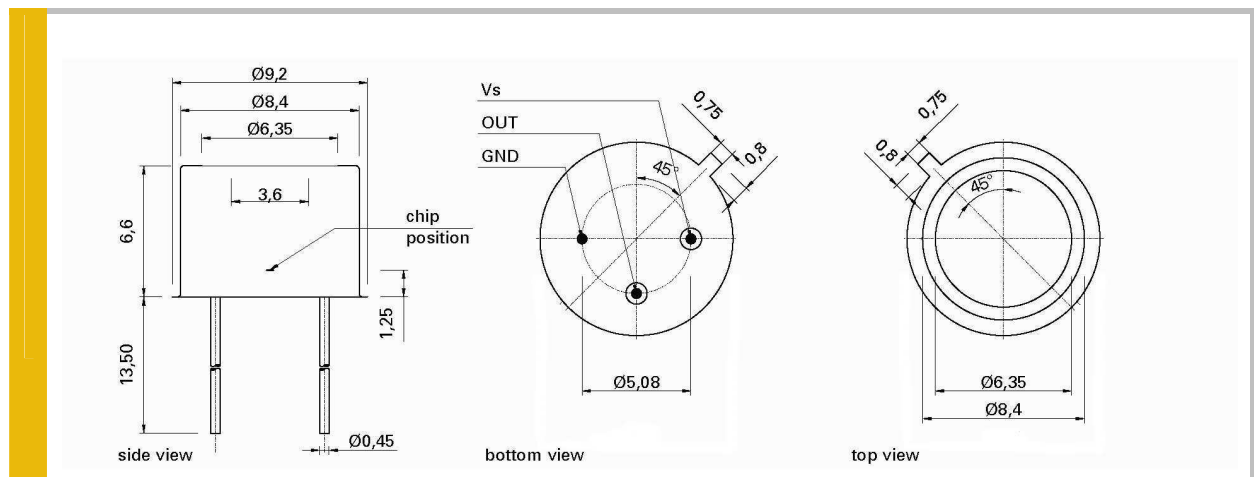
## Specifications

Parameter	Symbol	Value	Unit
<b>Maximum Ratings</b>			
Operating Temperature Range	$T_{\text{opt}}$	-25 ... +85	°C
Storage Temperature Range	$T_{\text{stor}}$	-40 ... +100	°C
Soldering Temperature (5s)	$T_{\text{sold}}$	300	°C
<b>General Characteristics (<math>T=25^\circ\text{C}</math>, <math>V_{\text{supply}}=+5 \text{ V}</math>)</b>			
Supply voltage	$V_{\text{supply}}$	2,5 ... 5,0	V
Saturation voltage	$V_{\text{sat}}$	$V_{\text{supply}}$	V
Dark offset voltage	$V_{\text{offset}}$	0,05	mV
Temperature coefficient of $V_{\text{offset}}$	$T_{\text{co}}$	<7	%/K
Current consumption	$I$	0,8	mA
<b>Spectral Characteristics (<math>T=25^\circ\text{C}</math>, <math>V_{\text{supply}}=+5 \text{ V}</math>)</b>			
Sensitivity at peak	$S_{\text{max}}$	120	mV/ $\mu\text{W}/\text{cm}^2$
Wavelength of max. spectral sens.	$\lambda_{\text{max}}$	445	nm
Sensitivity range ( $S=0,1 \cdot S_{\text{max}}$ )	-	390 ... 515	nm

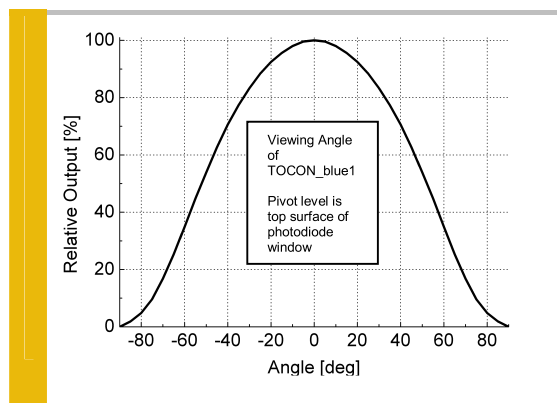
## Spectral Response



## Drawing



## Field of View



## TOCON Product Portfolio

Selection of TOCONs for blue light radiation:

Option	Approx. min irradiance	Approx. max irradiance ( $V_{supply} = 5V$ )
TOCON_blue1	4,2 nW/cm <sup>2</sup>	43 $\mu$ W/cm <sup>2</sup> this device
TOCON_blue2	42 nW/cm <sup>2</sup>	430 $\mu$ W/cm <sup>2</sup>
TOCON_blue3	420 nW/cm <sup>2</sup>	4,3 mW/cm <sup>2</sup>
TOCON_blue4	4,2 $\mu$ W/cm <sup>2</sup>	43 mW/cm <sup>2</sup>
TOCON_blue5	42 $\mu$ W/cm <sup>2</sup>	430 mW/cm <sup>2</sup>
TOCON_blue6	420 $\mu$ W/cm <sup>2</sup>	4,3 W/cm <sup>2</sup>

TOCONs are also available with other spectral sensitivity (UV broadband, UVA, UVB, UV-Index, UVC).

## Upgrades

### TOCON housings for easy mounting of the TOCON\_blue1

#### TOCON\_housing



#### Advantages of the TOCON\_housing

- Easy to mount and connect
- Robust stainless steel M12x1 thread body, length 32 mm
- Integrated sensor connector (Binder 5-Pin plug)
- Comes with 2 m connector cable

#### TOCON\_PTFE\_housing



#### Advantages of the TOCON\_PTFE\_housing

- Easy to mount and connect, cleanable
- Dirt-repellant, water proof at wetside (IP 68)
- Teflon (PTFE) M12x1 thread body, length 31 mm
- Wide field of view
- Integrated sensor connector (Binder 5-Pin plug)
- Comes with 2 m connector cable

*The PTFE housing reduces the signal output by 95 %.*

### Sensor Monitor 5.0 for monitoring, datalogging and process control with TOCON\_blue1



The **Sensor Monitor 5.0** series are measurement and control modules for monitoring and automation of irradiation processes. They display radiation, dose and state information.

A selection of devices with one or two channels, optional USB & RS232 data output and computer software is offered.

### UVMICROLOG for datalogging and permanent measurements with TOCON\_blue1



The **UVMICROLOG** is designed for logging of blue light radiation, temperature, pressure and acceleration. Sophisticated microcontroller technology allows up to 3 months of permanent measurement and logging without battery charging. The unit can be mounted with a belt or screws.