

Radiation	Type	Technology	Case
VUV - visible	Schottky contact	GaP	TO-39

Description:	
	<p>Wide bandwidth and high sensitivity from VUV up to the visible spectrum (150 nm - 550 nm), mounted in hermetically sealed TO-39 package with sapphire window</p>
Application:	
<p>Medical engineering (dermatology), output check of UV - lamps and oil or gas burner flame, measurement and control of ecological parameters, radiation control for a solarium, UV water purification facilities</p>	

### Absolute Maximum Ratings (Ta = 25°C)

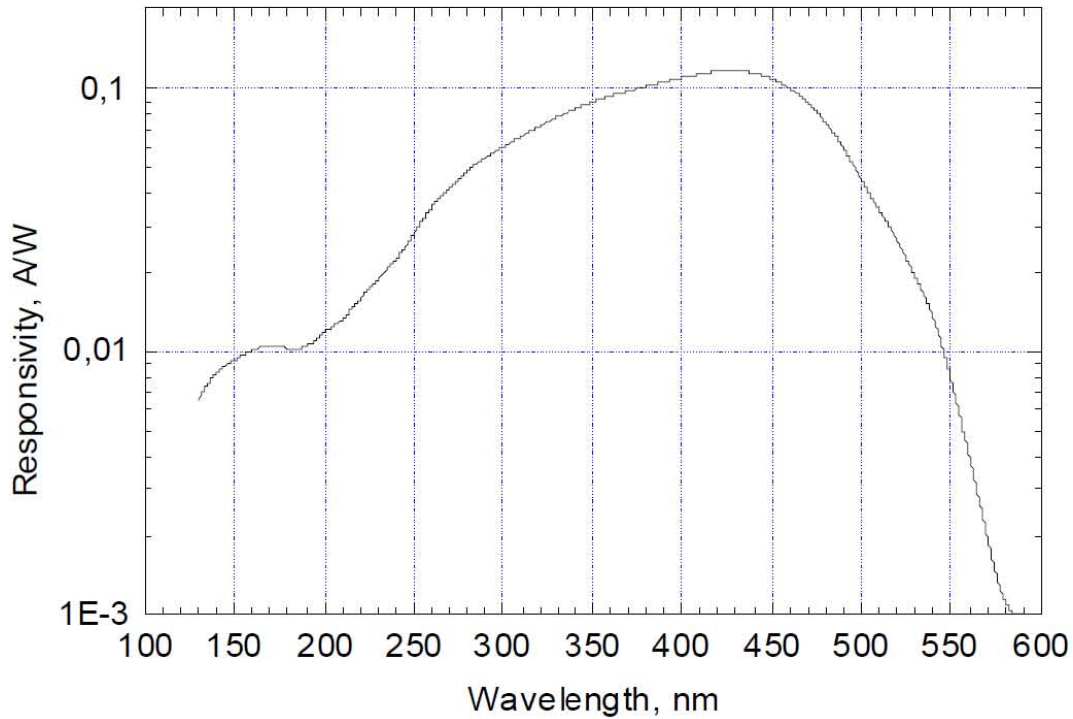
ITEMS	SYMBOL	RATINGS	UNIT
Active Area	A	4.8	mm <sup>2</sup>
Temperature Coefficient of Ip	TC(Ip)	7	%K
Operating Temperature Range	T <sub>amb</sub>	-40 to +125	°C
Storage Temperature Range	T <sub>stg</sub>	-40 to +125	°C
Acceptance Angle at 50% of S <sub>λ</sub>	φ	120	deg.

### Electrical & Optical Characteristics (Ta = 25°C)

ITEMS	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Voltage 1*	V <sub>r</sub>	I <sub>r</sub> =10μA	5	--	--	V
Dark Current	I <sub>d</sub>	V <sub>r</sub> =5V	--	15	40	pA
Peak Wavelength	λ <sub>p</sub>	V <sub>r</sub> =0V	--	440	--	nm
Responsivity at λ <sub>p</sub>	S <sub>λ</sub>	V <sub>r</sub> =0V	0.1	0.13	--	A/W
Sensitivity Range at 1% of S <sub>λ</sub>	λ <sub>min</sub> , λ <sub>max</sub>	V <sub>r</sub> =0V	150	--	550	nm
Spectral Bandwidth at 50%	Δλ <sub>0.5</sub>	V <sub>r</sub> =0V	--	180	--	nm
Shunt Resistance	R <sub>sh</sub>	V <sub>r</sub> =10mV	80	100	--	GΩ
Noise Equivalent Power	NEP	λ=440 nm	--	1.3 × 10 <sup>-14</sup>	--	W/√Hz
Specific Detectivity	D*	λ=440 nm	--	1.7 × 10 <sup>13</sup>	--	cm · √Hz · W <sup>-1</sup>
Junction Capacitance	C <sub>j</sub>	V <sub>r</sub> =0V	--	1000	--	pF
Photocurrent at λ=254 nm 1*	I <sub>ph</sub>	V <sub>r</sub> =0V E <sub>e</sub> =1 mW/cm <sup>2</sup>	--	2.5	--	μA

1\* for information only

**Typical responsivity**



We reserve the right to make changes to improve technical design and may do so without further notice. Parameters can vary in different applications. All operating parameters must be validated for each customer application by the customer.