

Wavelength	Type	Technology	Case
VUV	Schottky Contact	GaP	TO-39 + sapphire window

Description

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

Applications

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

Miscellaneous Parameters

T_{amb} = 25°C, unless otherwise specified

Parameter	Test conditions	Symbol	Value	Unit
Active area		A	4.8	mm ²
Temperature coefficient of I _D		T _C (I _D)	7.0	%/K
Operating temperature range		T _{amb}	-40 to +125	°C
Storage temperature range		T _{stg}	-40 to +125	°C
Acceptance angle at 50% S _λ		φ	120	deg.

Optical and Electrical Characteristics

T_{amb} = 25°C, unless otherwise specified

Parameter	Test conditions	Symbol	Min	Typ	Max	Unit
Breakdown voltage ¹⁾	I _R = 10 μA	V _R	5			V
Dark current	V _R = 5 V	I _D		15	40	pA
Peak sensitivity wavelength	V _R = 0 V	λ _p		440		nm
Responsivity at λ _p	V _R = 0 V	S _λ		0.17		A/W
Sensitivity range at 1%	V _R = 0 V	λ _{min} , λ _{max}	150		550	nm
Spectral bandwidth at 50%	V _R = 0 V	Δλ _{0.5}		180		nm
Shunt resistance	V _R = 10 mV	R _{SH}	80	100		GΩ
Noise equivalent power	λ = 440 nm	NEP		1.3x10 ⁻¹⁴		W/√Hz
Specific detectivity	λ = 440 nm	D*		1.7x10 ¹³		cm·√Hz·W ⁻¹
Junction capacitance	V _R = 0 V	C _J		1000		pF
Switching time (R _L = 50 Ω)	V _R = 5 V	t _r , t _f		1/60		ns
Photo current at λ = 254 nm ^{1,2)}	V _R = 0 V E _e = 1 mW/cm ²	I _{Ph}		2.5		μA

¹⁾for information only

²⁾measured with Hg-LP-VUV/UV-emitter as radiation source

Note: All measurements carried out with EPIGAP equipment

Labeling

Type	Lot N°	R _D (typ.) [GΩ]	Quantity
EPD-150-0-2.5 EPIGAP	Optoelektronik GmbH, D-12555 Berlin, Köpenicker Str.325 b, Haus 201 Tel.: +49 30 6576 2543, Fax: +49 30 6576 2545		1 of 2

Typical responsivity

EPD-150-0

