ROITHNER LASERTECHNIK GmbH
WIEDNER HAUPTSTRASSE 76 1040 VIENNA AUSTRIA
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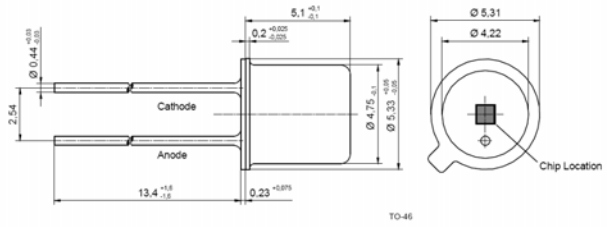
Photodiode

EPD-365-0-0.9

Preliminary 11.04.2007 rev. 03/07

Wavelength	Type	Technology	Case
UV	Schottky Contact	GaP	TO-46 + UG-11 filter



Description

Wide bandwidth and high spectral sensitivity in the UV range (245 nm - 400 nm), mounted in hermetically sealed TO-46 package with UG11 UV filter-glass window

Applications

Medical engineering (dermatology), output check of UV - lamps and gas burner flame, measurement and control of ecological parameters, radiation control for a solarium, UV water purification facilities

Miscellaneous Parameters

T_{amb} = 25℃, unless otherwise specified

Parameter	Test conditions	Symbol	Value	Unit
Active area		A	0.51	mm²
Temperature coefficient of I_D		$T_C(I_D)$	7.0	%/K
Operating temperature range		T_{amb}	-40 to +125	℃
Storage temperature range		T_{stg}	-40 to +125	℃
Acceptance angle at 50% S_λ		φ	50	deg.

Optical and Electrical Characteristics

T_{amb} = 25℃, 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		5	20	pA
Peak sensitivity wavelength	V_R = 0 V	λ_p		365		nm
Responsivity at λ_P	V_R = 0 V	S_λ		0.07		A/W
Sensitivity range at 1%	V_R = 0 V	λ_{min}, λ_{max}	245		400	nm
Spectral bandwidth at 50%	V_R = 0 V	$\Delta\lambda_{0.5}$		85		nm
Shunt resistance	V_R = 10 mV	R_{SH}	100	125		GΩ
Noise equivalent power	λ = 365 nm	NEP		1.9×10^{-14}		$W/\sqrt{Hz}$
Specific detectivity	λ = 365 nm	D*		3.8×10^{12}		$cm \cdot \sqrt{Hz} \cdot W^{-1}$
Junction capacitance	V_R = 0 V	C_J		120		pF
Switching time (R_L = 50 Ω)	V_R = 5 V	t_r, t_f		1/10		ns
Photo current at λ = 365 nm[2)]	V_R = 0 V E_e = 1 mW/cm²	I_{Ph}		0.13		µA

[1)] for information only

[2)] measured with common halogen lamp source and appropriate filter

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Typical responsivity