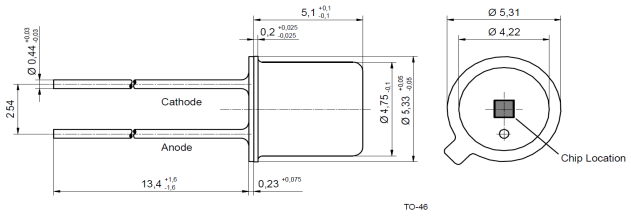
Marktech Optoelectronics

UV Photo Diode

Product No: **MTPD4400D-1.4**

Radiation	Type	Case
Ultraviolet - visible	GaP Schottky	TO-46, UV glass



Description:

Wide bandwidth and high spectral sensitivity in the UV and visible range (190 nm - 570 nm), mounted in hermetically sealed TO-46 package with UV-glass window

Applications

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

Absolute Maximum Ratings (Ta = 25°C)

ITEMS	SYMBOL	RATINGS	UNIT
Active Area	A	1.2	mm^2
Temperature Coefficient of I_D	TC(I_D)	7	%K
Operating Temperature Range	T_{amb}	-40 to +125	°C
Storage Temperature Range	T_{stg}	-40 to +125	°C
Acceptance Angle at 50% of S_λ	φ	50	deg.

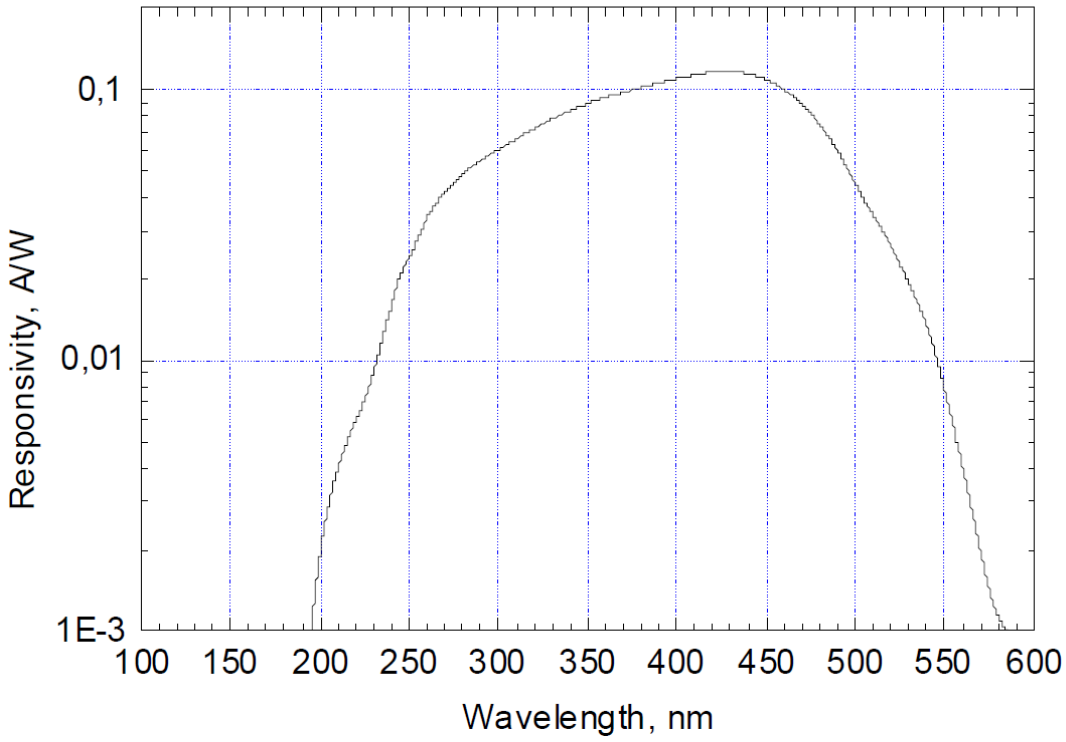
Electrical & Optical Characteristics (Ta = 25°C)

ITEMS	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Breakdown Voltage 1*	Vr	Ir=10μA	5	--	--	V
Dark Current	Id	Vr=5V	--	10	30	pA
Peak Sensitivity Wavelength	λ_p	Vr=0V	--	440	--	nm
Responsitivity at λp	S_λ	Vr=0V	0.1	0.13	--	A/W
Sensitivity Range at 1% of S_λ	λmin, λmax	Vr=0V	190	--	570	nm
Spectral Bandwidth at 50% of Sλ	Δλ0.5	Vr=0V	--	85	--	nm
Shunt Resistance	Rsh	Vr=10mV	150	200	--	GΩ
Noise Equivalent Power	NEP	λ=365 nm		1.1×10^{-14}		$W/\sqrt{Hz}$
Specific Detectivity	D*	λ=365 nm		1.0×10^{12}		$cm \cdot \sqrt{Hz} \cdot W^{-1}$
Junction Capacitance	Cj	Vr=0V	--	300	--	pF
Switching Time (R_L =50Ω)	t_r, t_f	Vr=5V	--	1; 20	--	ns
Photocurrent at λ=440 nm	Iph	Vr=0V E_e =1 mW/cm^2	--	1.55	--	μA

1* for information only 2* measured with filtered halogen lamp source

2014-04-07

Typical responsivity



RoHS COMPLIANT

Pb-Free

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.

2014-04-07