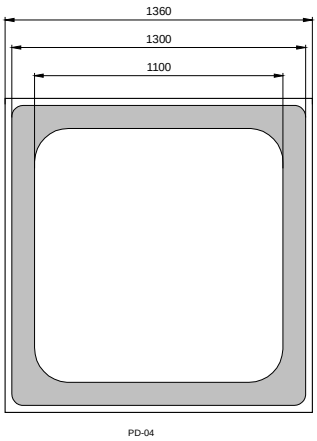
Photodiode-Chip EPC-440-1.4

Preliminary 11.04.207 rev. 04/07

Wavelength range	Type	Technology	Electrodes
UV-blue-green	Schottky Contact	GaP	P (anode) up



typ. dimensions (µm)

typ. thickness
300 µm

anode
gold alloy, 1.5 µm

cathode
gold alloy, 0.5 µm

Description

High spectral sensitivity in the blue and ultraviolet range, low dark currents, low cost chip with high degradation stability

Applications

special light barriers, sensors for flame control and automation

Miscellaneous Parameters

T_{amb} = 25℃, unless otherwise specified

Parameter	Test conditions	Symbol	Value	Unit
Active area		A	1.2	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	℃

Optical and Electrical Characteristics

T_{amb} = 25℃, unless otherwise specified

Parameter	Test conditions	Symbol	Min	Typ	Max	Unit
Dark current	V_R = 5 V	I_D		10	30	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}	<110		570	nm
Spectral bandwidth at 50%	V_R = 0 V	$\Delta\lambda_{0.5}$		180		nm
Shunt resistance	V_R = 10 mV	R_D	150	200		GΩ
Noise equivalent power	λ = 440 nm	NEP		$1.1x10^{-14}$		$W/\sqrt{Hz}$
Junction capacitance	V_R = 0 V	C_J		300		pF
Switching time (R_L = 50 Ω)	V_R = 5 V	t_r, t_f		1/20		ns

*Measured on bare chip on TO-18 header with *EPIGAP* equipment

Labeling

Type	Typ. I_D [pA]	Typ. S_λ[A/W]	Lot N°	Quantity
EPC-440-1.4				

Packing: Chips on adhesive film with wire-bond side on top

EPIGAP Optoelektronik GmbH, D-12555 Berlin, Köpenicker Str.325 b, Haus 201
Tel.: +49-30-6576 2543, Fax : +49-30-6576 2545

Typical responsivity spectrum