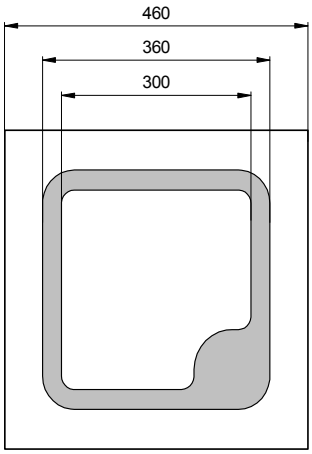
Photodiode-Chip EPC-470-0.5

Preliminary 11.04.2007 rev. 07/07

Wavelength range	Type	Technology	Electrodes
Blue, selective	Integrated filter	GaP	P (anode) up



typ. dimensions (µm)

typ. thickness
300 (± 40) µm

anode
gold alloy, 1.5 µm

cathode
gold alloy, 0.5 µm

Description

Narrow bandwidth and high spectral sensitivity in blue-green range (425…525 nm), low cost chip

Applications

Fluorescence detection, measurement systems, color sensors

Miscellaneous Parameters

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

Parameter	Test conditions	Symbol	Value	Unit
Active area		A	0.17	mm²
Temperature coefficient of I_{Ph}	T = -40…120°C	$T_C(I_{Ph})$	0.15	%/K
Temperature coefficient of I_D	T = -40…120°C	$T_C(I_D)$	1.05	1/K
Operating temperature range		T_{amb}	-40 to +125	°C
Storage temperature range		T_{stg}	-40 to +125	°C

Optical and Electrical Characteristics

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

Parameter	Test conditions	Symbol	Min	Typ	Max	Unit
Reverse voltage[3]	I_R = 10 µA	V_R	5			V
Dark current (E_e = 0 W/m²)	V_R = 5 V	I_D		5	30	pA
Central sensitivy wavelength	V_R = 0 V	λ_C	460	470	480	nm
Responsivity at λ_C[1]	V_R = 0 V	S_λ		0.18		A/W
Responsivity at λ_C[2]	V_R = 0 V	S_λ		0.30		A/W
Spectral range at 0.5 max.	V_R = 0 V	$\lambda_{0.5}$	425		525	nm
Sensitivity range at 1%	V_R = 0 V	λ_{min}, λ_{max}	380		570	nm
Spectral bandwidth at 50%	V_R = 0 V	$\Delta\lambda_{0,5}$		100		nm

[1]Measured on bare chip on TO-18 header

[2]Measured on epoxy covered chip on TO-18 header

[3]information only

Labeling

Type	Typ. I_D [pA]	Typ. S_λ[A/W]	Lot N°	Quantity
EPC-470-0.5				

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

*Note: All measurements carried out with *EPIGAP* equipment

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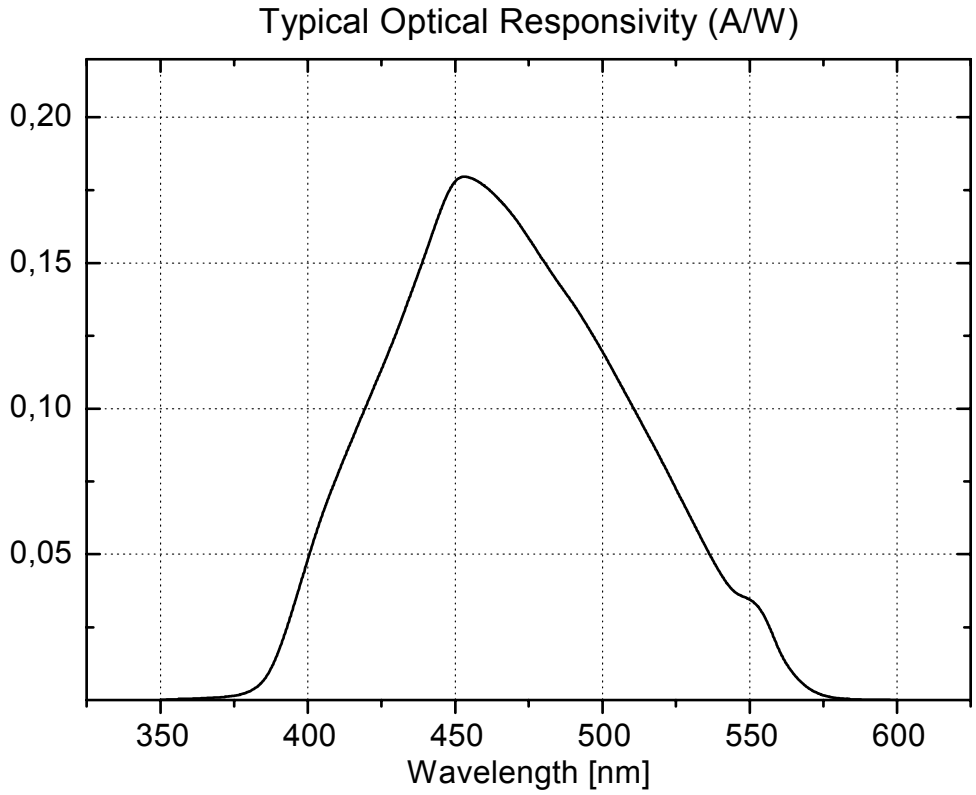
Typical Optical Responsivity (A/W)
0,20
0,15
0,10
0,05
350
400
450
500
550
600
Wavelength [nm]