



## EPD-470-1-0.9

Wavelength	Type	Technology	Case
Blue-Green	SMD	GaP	SMD 1206

Description	
Applications	
Alarm systems, light barriers, special sensors for automotive industry	

### Miscellaneous Parameters

$T_{amb} = 25^{\circ}\text{C}$ , unless otherwise specified

Parameter	Test conditions	Symbol	Value	Unit
Active area		A	0.62	mm <sup>2</sup>
Temperature coefficient of $I_D$		$T_{CI_D}$	5	%/K
Operating temperature range		$T_{amb}$	-20 to +85	°C
Storage temperature range		$T_{stg}$	-40 to +125	°C

### Optical and Electrical Characteristics

$T_{amb} = 25^{\circ}\text{C}$ , unless otherwise specified

Parameter	Test conditions	Symbol	Min	Typ	Max	Unit
Breakdown voltage <sup>1)</sup>	$I_R = 10 \mu\text{A}$	$V_R$	5			V
Dark current	$V_R = 5 \text{ V}$	$I_D$		5	30	pA
Peak sensitivity wavelength	$V_R = 0 \text{ V}$	$\lambda_p$	460	470	480	nm
Responsivity at $\lambda_p$	$V_R = 0 \text{ V}$	$S_\lambda$		0.3		A/W
Sensitivity range at 1% <sup>1)</sup>	$V_R = 0 \text{ V}$	$\lambda_{min}, \lambda_{max}$	385		565	nm
Spectral bandwidth at 50%	$V_R = 0 \text{ V}$	$\Delta\lambda_{0.5}$		100		nm
Shunt resistance	$V_R = 10 \text{ mV}$	$R_{SH}$	70	100		GΩ
Noise equivalent power	$\lambda = 470 \text{ nm}$	NEP		$4.4 \times 10^{-15}$		W/ $\sqrt{\text{Hz}}$
Specific detectivity	$\lambda = 470 \text{ nm}$	$D^*$		$1.8 \times 10^{13}$		$\text{cm} \cdot \sqrt{\text{Hz}} \cdot \text{W}^{-1}$
Junction capacitance	$V_R = 0 \text{ V}$	$C_J$		150		pF
Switching time ( $R_L = 50 \Omega$ )	$V_R = 1 \text{ V}$	$t_r, t_f$		200		ns

<sup>1)</sup>for information only

